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Cultic Niches in the Nabataean Landscape: A Study in the Orientation, Facade Ornamentation, Sanctuary Organization, and Function of Nabataean Cultic Niches

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Cultic Niches in the Nabataean Landscape: A Study in the Orientation, Facade Ornamentation, Sanctuary Organization, and Function of Nabataean Cultic Niches

by

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GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

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This thesis has been read by each member of the following graduate committee and by majority vote had been found satisfactory.

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BRIGHAM YOUNG UNIVERSITY

As chair of the candidate's graduate committee, I have read the thesis of Holly A. Raymond in its final form and have found that (1) its Format, citations and bibliographic style are consistent and acceptable and fulfill University and department style requirements; (2) its illustrative materials including Figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

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ABSTRACT

**Cultic Niches in the Nabataean Landscape:
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Niches are common features in the Nabataean landscape (Healey 2001; Starcky 1966: cols. 1008-10; Patrich 1990:50-113). From their frequent appearance in the archeological record, it is evident that the Nabataeans placed great importance on these cultic features. However, very little is known about them. The purpose of this study was to find and record Nabataean cultic niches in a field survey and then to interpret these niches as part of a research design that proposed purposes of niche variation in construction, orientation, and placement of niches on the landscape. My research addresses several neglected issues in the study of cultic niches in Nabataean religion. Robert Wenning has stated there is a need "to research the elements and details of niches in order to understand which detail or combination of elements indicates a specific function or points to an individual deity or certain divine aspect" (Wenning 2001:88). With this research, I hope to determine whether or not certain characteristics of niches can show preferred orientations, indicate a specific function, determine how sanctuaries containing niches were organized, show preferred niche façade ornamentation, or aid in the potential identification of deities.

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1 INTRODUCTION

"We should neither separate the betyl from its niche nor the niche from its place and surroundings. Further, we have to find a meaning for the function of each niche. What is needed, therefore, is research on all available data and an interpretation of these data using a structuralist approach" [Wenning 2001:87].

Niches are common features in the Nabataean landscape (Healey 2001; Starcky 1966: cols. 1008-10; Patrich 1990:50-113). They are found carved into the hillside, along processional routes, in temples, tombs, *biclinia*, *triclinia*, domestic structures, high places, and sanctuaries. From their frequent appearance in the archeological record, it is evident that the Nabataeans placed great importance on these cultic features. Niches are especially common in the Nabataean capital of Petra. Robert Wenning (2001) has noted that little scholarly interest has been paid to the various characteristics of niches, and although niches are a common feature in Nabataean sites, very little is known about them. Given their frequent appearance in Nabataean contexts a more comprehensive survey and study of Nabataean niches would certainly contribute to current knowledge of Nabataean religious life. Concerning niche facades, Wenning comments that:

> All the details of *betyls*, niches, framings, and installations demonstrate that the Nabataean votive niche is complex and not as simple as it may appear at first glance. The more elaborated niche emphasizes the importance of the venerated deity and also may reflect the status of the donor. But the various combinations are not simply accidental decoration [Wenning 2001:88].

My research addresses several neglected issues in the study of cultic niches in Nabataean religion. Wenning has stated there is a need "to research the elements and

details of niches in order to understand which detail or combination of elements indicates a specific function or points to an individual deity or certain divine aspect" (Wenning 2001:88). With this research, I hope to determine whether or not certain characteristics of niches can indicate a specific function, show preferred orientations, determine how sanctuaries containing niches were organized, show preferred niche façade ornamentation, or aid in the potential identification of deities. In order to determine this, I will be specifically looking at characteristics of niches, such as their orientations, their relationships (if any) to the *betyls* or interior niches housed within them, their facades, architectural features that are associated with niches, and the placement of niche sanctuaries on the landscape. Each of these issues will be discussed in depth below in my research objectives.

DEFINITIONS

It is necessary, before delving into the topic, to first define six terms that will be used frequently throughout the paper.

Niches

Niches are carved installations that often served as a receptacle for *betyls* (see below) or votive offerings to various deities (Figure 1.1). It has been suggested by Wenning that niches may have served as a type of sanctuary for the *betyl*, as he notes, "in two petroglyphs the *betyl* is framed by palms depicting a sanctuary" (2001:88). Patrich notes that:

> Generally a stele appears within a niche, although there are instances in which one appears on its own. The niche may be rectangular, gabled, or arcuated; undecorated, or engraved, with assiduous attention paid to such details as pilaster, entablature, pediment, and arch. (The craftsmanship of some of the niches is highly developed, as at Petra, for example, in the niche in the ed-Deir ridge and in the niche in the Siq.) In addition to the single stele, there are also examples of stelae grouped in a niche [Patrich 1990: 75].

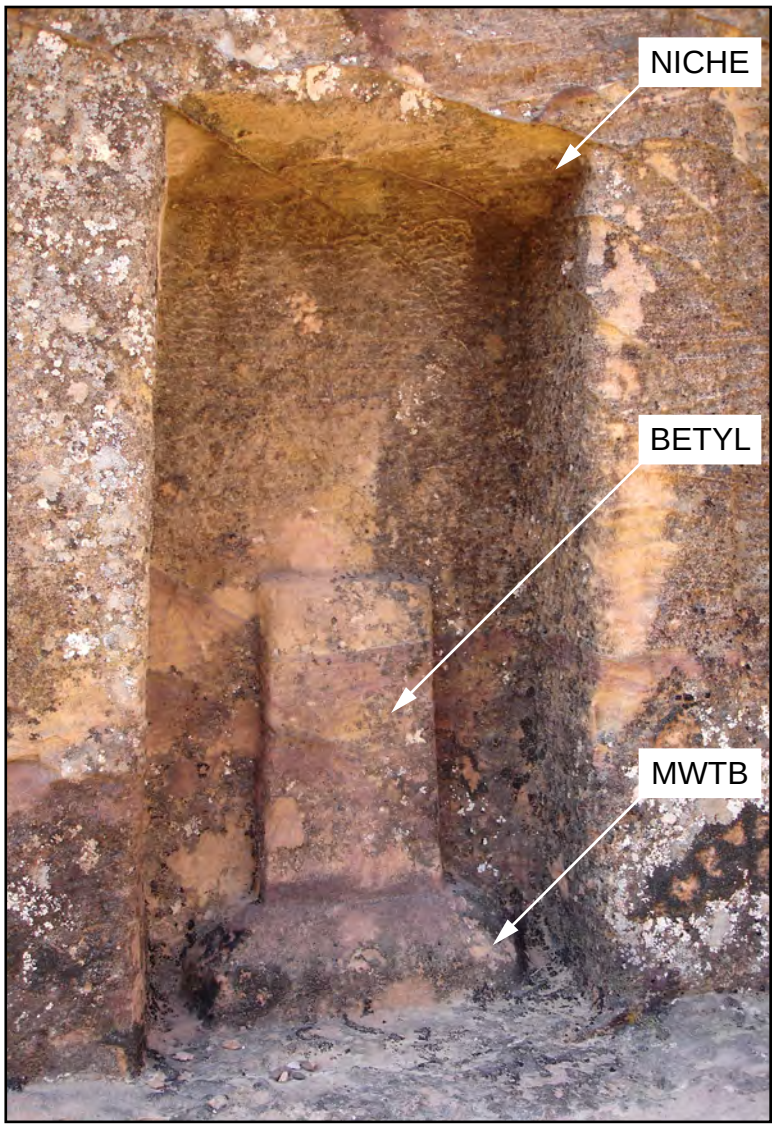

Figure 1.1. Niche, *betyl*, and *mwtb.*

Betyls

The Nabataeans practiced what is called aniconism, which means that they were reluctant to represent their gods in human form. Wenning provides the following definition of aniconism: "Aniconism means that rather than using figural images as objects of worship, symbolic forms such as standing stones are taken as the representation of the deity" (Wenning 2001:79). *Betyls* are stone idols of varying sizes and shapes that sometimes have carved features that were meant to represent and symbolize a deity (Figure1.1). *Betyls* sometimes occur carved within a niche, but they can also be free-

standing or portable. Some betyls have stylized facial markings, such as star-like eyes, square eyes, rectangular noses, etc., and these stelae are known as eye idols. There are rectangular or square slots in the bases of some niches, and scholars have assumed that these were used to insert portable *betyls*. John Healey states that "the Nabataean favoring of *betyls* is connected with the north Arabian roots of some aspects of Nabataean culture" (Healey 2001:156). The stones were regarded as the container of the god (Dussaud 1955: 41 n.3). Maximus of Tyre (120 BC to AD 25) reports: "The Arabians revere a god, but which god I know not; their image, which I have seen, was a square stone" (trans. Trapp 1994;1997). The worship of stones was also practiced in Greece, according to Pausanias (Healey 2001:157). The Nabataean practice of representing deities as rectangular-cut blocks of stone is, as Patrich states, "as old as the beginning of the art of rock carving at Petra" (Patrich 1990:95). Patrich also supposes that the practice of representing deities as blocks of stone had been an ancient tradition of the tribes before their inception as a state society (Ibid.). In this thesis, the terms *betyl* and *stele* are used synonymously.

Nephesh

A *nephesh* was the Nabataean funerary stela, pyramidal in shape that was carved in the rock symbolizing the presence of the dead individual as a kind of memorial marker (Figure 1.2). A *nephesh* differs from a *betyl* in that it was constructed to represent the dead; as opposed to the *betyl*, which was built to represent deity. Scholars can make this differentiation based on the iconographic evidence, as well as epigraphic evidence. To illustrate this, Patrich has commented that ". . . at Petra, the *nefesh* resembles a pointed or concave cone ending in a sort of spout or blossom – a shape totally different from that of the stelae idols. The difference is further attested to by the identifying inscriptions that occasionally accompany them" (Patrich 1990:70). Wenning notes that the Semitic

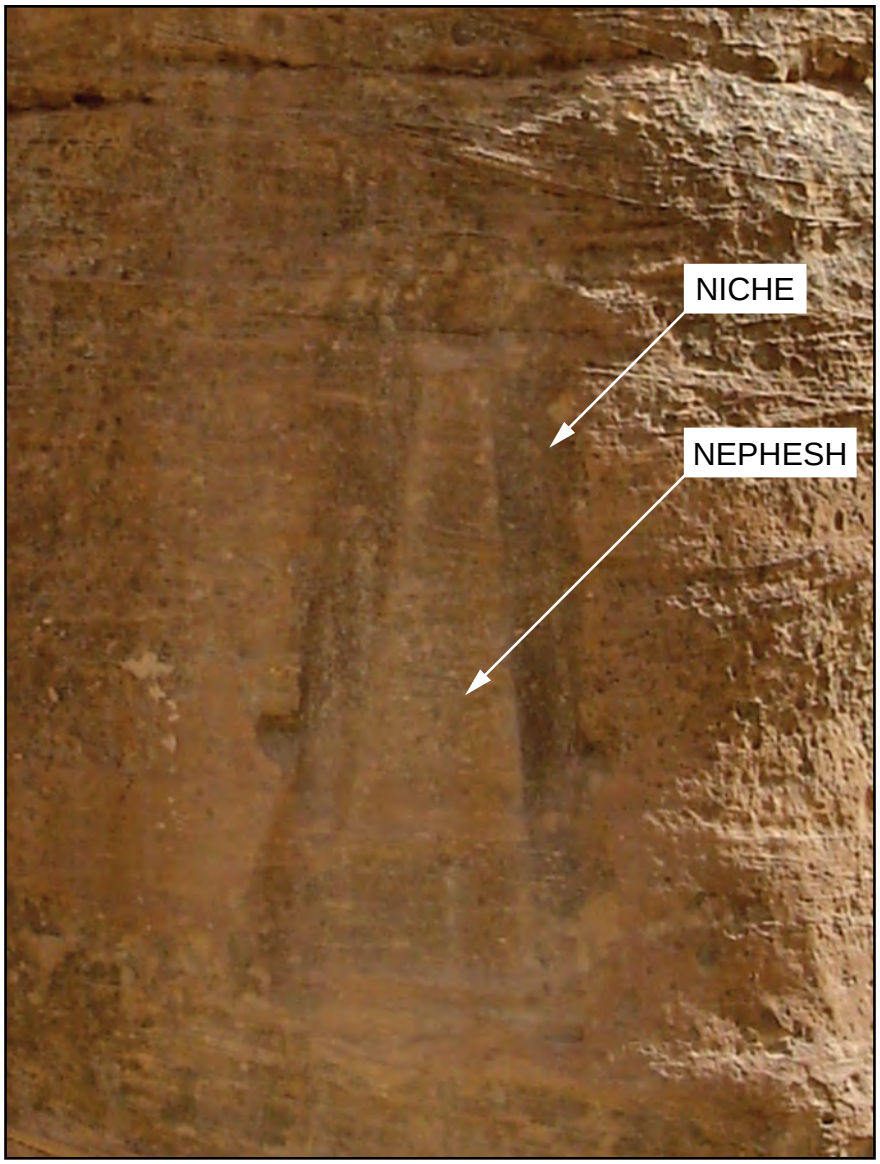

Figure 1.2. *Nephesh.*

word *npsh* translates as "life, person" (Wenning 2001:87). According to Patrich's studies, a *nephesh* is sometimes found inside of a burial chamber, although it is sometimes also found unconnected with the tomb (Patrich 1990:70).

Mwtb'

Some *betyls* at Petra are shown with a throne, raised platform, or base, called a *mwtb'* (pronounced 'mot'ba'), however, most stelae are represented without one. Dalman counted ninety-three stelae with bases, fifty-five of which were in bas relief, thirty-seven

were recessed, and one which was incised (Dalman 1908:70). Patrich notes that when a stele is depicted on a simple base, "the base may be as much as half the stele's height" (1990:76). Dalman counted twenty-one such stele with *mwtb'* at Petra, thirteen of which were in bas relief, six were recessed, and two were incised (Dalman 1908:71). Seven stelae with an elaborate *mwtb'* were counted by Dalman, and these occurred both in bas relief and recessed (Ibid). The distinction that the Nabataeans made between the stele and the *mwtb'* is that the stele is a representation of the god, while the *mwtb'* and the altar are sacred objects that symbolize the throne of the god (Healey 2001).

Patrich discussed the various forms in which *mwtb'* are depicted. The *mwtb'* is most frequently represented in its simple form (see Figure1.1). However, the *mwtb'* can also be depicted with horn-like projections; as a cubic structure with a staircase; and with an elaborated raised platform (Patrich 1990:91). Above the House of Dorotheos at Petra, there is a niche carved into the cliff face that contains the carved representation of a chair with a back. Thrones such as the one above the House of Dorotheos have been found in Phoenicia and these are associated with the goddess Astarte at Sidon (Patrich 1990:92).

Biclinia and Triclinia

A *biclinium* (*biclinia* – plural) is a seating area consisting of two benches, usually placed across from one another (Figure 1.3). *Biclinia* were used in the Greco-Roman world as feasting areas. In the Nabataean Kingdom, *biclinia* were often associated with funerary complexes and were used for funerary banquets. *Triclinia* (*triclinium* – singular) are seating areas that are comprised of three benches (Figure 1.4). *Triclinia* were used in the same fashion as *biclinia*. Oftentimes, niches and/or *betyls* were carved into the back walls of *triclinia* or *biclinia*.

PREVIOUS RESEARCH

In 1908 Gustav Dalman conducted an intensive survey of Petra and recorded *betyls* and niches that were later put into a catalog in which he identified and developed a *betyl* typology (Dalman 1908). Others, such as Jaussen and Savignac (1909:437-438) and Starcky (1966: col. 1009) revised Dalman's classification. In 1988, Marie-Jeanne Roche conducted a survey in select areas of Petra. The main objective of her study was to compile a catalog of the cultic niches of Petra. Roche's study differed from Dalman's in that she focused on the cultic niches in select areas of Petra, taking measurements as well as pictures and/or drawings of the niches, and she was able to add niches that were not previously recorded in Dalman's survey. With all of her research, Roche compiled a catalogue of known niches, including the niches recorded by Dalman, in select areas in Petra. My field survey and recording process differs from Roche's, in that in addition to

Figure 1.3. *Biclinium.*

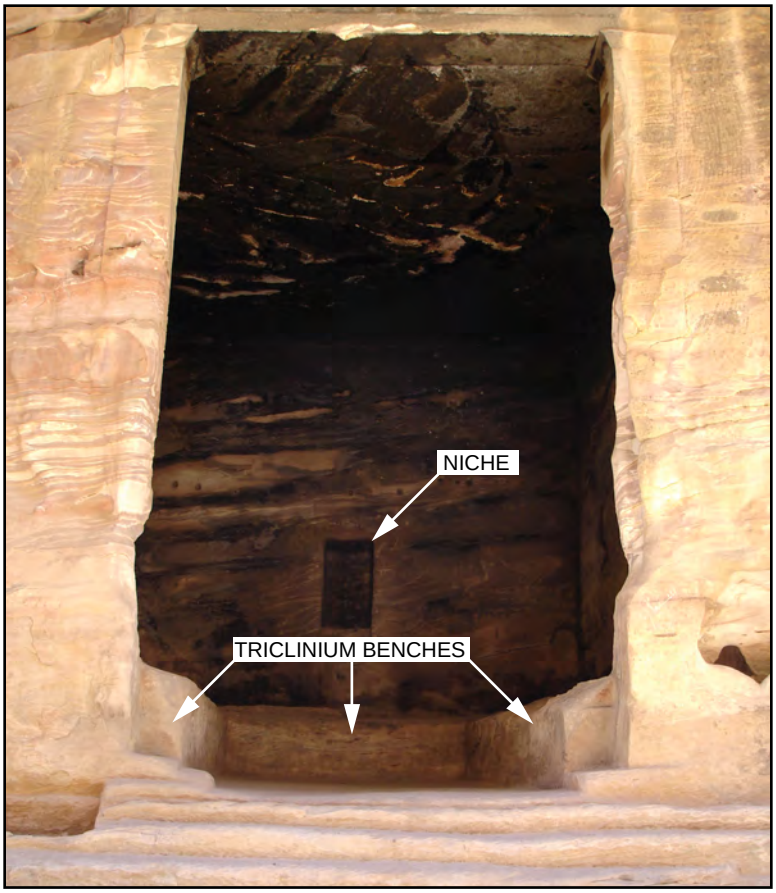

Figure 1.4. *Triclinium*.

the variables that Roche recorded (such as the general location of each niche, the size of each accessible niche, and photographs of each niche), I recorded the GPS coordinates for each niche when possible, the shape, cardinal orientation, façade ornamentation, and features such as *biclinia*, *triclinia*, stairs, platforms, libation pools, cisterns, and water channels that are associated with niches. In Judith McKenzie's 1990 publication, *The Architecture of Petra*, McKenzie recorded the architectural details of notable niches that had been previously recorded by Dalman, Jaussen, Savignac, Starcky, and Roche so that she might group these niches, as well as the monumental architecture of Petra into chronological and architectural categories. My research differs from McKenzie's in that I focus on making specific typologies to define the different stylistic types of niche façades, niche sanctuary types, as well as the different functions that niches served.

Joseph Patrich, in his 1990 publication provided a detailed *betyl* typology and an in-depth discussion pertaining to deity identifications for *betyls* in niches that contained identifiable iconography. While Patrich (1990) provided a detailed *betyl* typology, I will create typologies specifically for niches, such as a stylistic typology and a functional typology based on criteria that I define in my research objectives (see below). In 1995 Robert Wenning and Helmut Merklein began a survey in the eastern area of Petra of the votive niches and *betyls* at Petra. This study was part of a larger project "Die Gotter der Nabataer," which added an additional two hundred and thirty four niches to Dalman's initial survey which only counted two hundred and ninety five votive niches, for a total of five-hundred and twenty-nine niches, located in the eastern parts of Petra. Wenning and Merlklein's survey is not yet published (Wenning 2001:79). Another survey, the *Petra Mapping Project* was carried out by the American Center for Oriental Research in conjunction with the Hashemite University. In this survey, all notable monuments, including niches in Petra were recorded. The results of this survey should be available in the summer of 2008.

RESEARCH OBJECTIVES

There are five main objectives to my research. The first objective is to determine whether or not the Nabataeans preferred sacred or standardized orientations for cultic niches. Oftentimes, the cardinal or geographical orientations of certain structures or features, especially those with religious connotations, seems to be meaningful. The second objective is to examine *betyl* or interior niches and their shapes, and then compare these to the outer niche shape to determine whether or not a certain beytl type is typically associated with a particular niche shape. I hope to determine whether or not the shape of the *betyl* or niche aides in the identification of the deity for whom the niche was built. The third objective of this study is to contextualize the niches in relation to built features

such as *biclinia*, *triclinia*, stairs, platforms, cisterns, water channels, and libation pools, and use these features to discuss the various cultic niche "sanctuaries" that were recorded in the BYU 2007 field survey. This section includes information on niche sanctuaries that I identified based on Colin Renfrew and Paul Bahn's model for identifying cultic activity archaeologically, and how this space is separated from profane space. I discuss the various architectural features, such as *biclinia*, *triclinia*, stairs, steps, platforms, libation pools, cisterns, and water channels that are associated with niches, and how these features are organized in Nabataean cultic space. The fourth objective is to explore how niches may have functioned in Nabataean sanctuaries. The fifth and final objective is to create a stylistic typology that is based on the architectural details of niche facades. This typology was generated from niches containing facades recorded in the 2007 ground survey of Wadi Mataha, Beidha, Saad al-Ma'jan, Bab as-Siq, and the processual route to ad-Deir. In addition to these niches, I also included niches from Mada'in Saleh that were not a part of my 2007 ground survey of Petra. I will not include the niches recorded by Dalman, Jaussen, Savignac, Starcky, or Roche in my analysis, because some of the variables that I require for analysis were not always reported in their surveys. However, there are some cases where I recorded the same niches as Dalman, Jaussen, Savignac, Starcky, or Roche in the field survey, and these are included in the analysis. Where I could identify a niche that was previously recorded, I made a record of it in my field data in Appendix A.

RESEARCH METHOD SUMMARY

In 2007, students from Brigham Young University conducted a field survey in a few select areas of Petra that included four well-defined areas of Wadi al-Mataha, as well as Sadd al-Ma'jan, Wadi as-Siq, and the processional route leading to ad-Deir (see figure 1.5). These areas were chosen because they provide a variety of cultural contexts in which niches occur. Wadi as-Siq, as well as the trail to ad-Deir once served as

processonal routes for the Nabataeans, and Sadd al-Ma'jan contains many cultic niches, indicating that it was once of religious significance to the Nabataeans. Beidha and Wadi al-Mataha were chosen because of the many funerary complexes located there, including the tombs, *biclinia*, *triclinia*, sanctuaries, and cisterns.

In addition to providing a variety of cultural contexts in which the niches occur, the surveyed areas also provided a variety of geographical contexts. For instance, Sadd al-Ma'jan and Wadi as-Siq are both narrow slot canyons. Beidha also provided another canyon in which niches were constructed. Jabal ad-Deir, with its cliff faces provided a geographical context for niches along a mountain side. The major drainage of Wadi al-Mataha and the north-west facing cliff face of Jabal al-Khubtha comprise Area A. Areas B, C, and D in Wadi al-Mataha contain minor wadis that drain into the major Wadi al-Mataha. The topography of Areas B, C, and D in Wadi al-Mataha are also comprised of rock outcroppings and small valleys. See Chapter Five for a more complete discussion concerning the topography of the areas that were surveyed.

In the previous research conducted by other scholars, including the field surveys, only the location, pictures, and occasionally, the measurements of niches were noted. It was thus necessary to perform my own survey of Wadi al-Mataha and the other selected areas of Petra, in order to record the variables that I wish to include in my data and consider in my own research. In the BYU 2007 field survey, I located each niche with a global positioning system when possible, using the European Datum 1950. In addition, I also noted the size (for the niches that were at an accessible height), shape, cardinal orientation, *betyl* or interior niche presence, iconography, façade ornamentation, and architectural features such as stairs, steps, platforms, *triclinia*, libation pools, cisterns, and/or water channels associated with the niches. For the niche sanctuaries, I noted how they were arranged geographically in relation to the surrounding landscape.

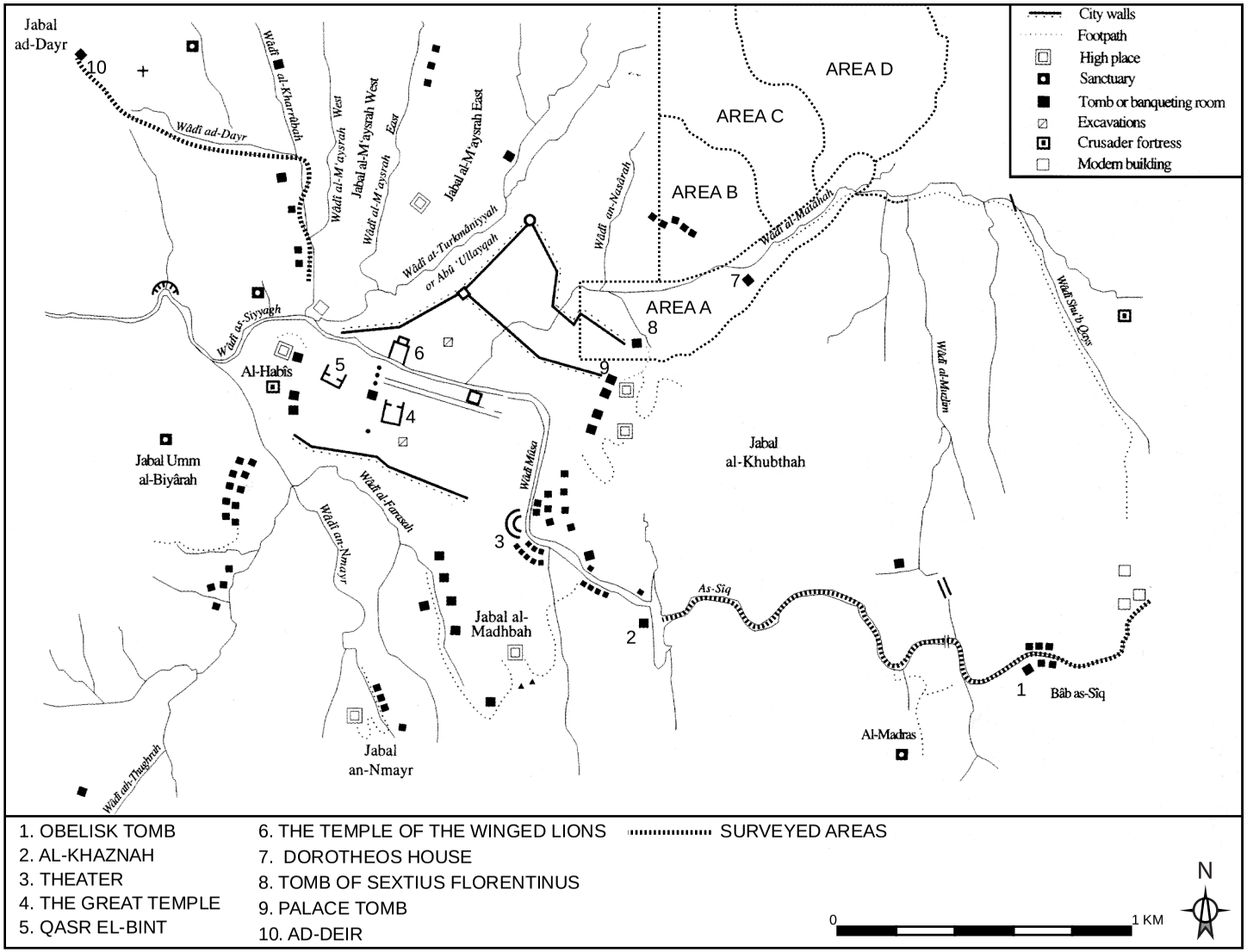

Figure 1.5. Map of Petra (Ruben 2004: 153). Note surveyed areas.

While previous niche research has focused on merely creating a catalogue of niches, I will answer a number of questions using my survey results. These questions pertain to 1.) niche orientation; 2.) possible relationships between niches and *betyls*, 3.) how niches were organized in sanctuaries; 4.) possible niche functions; and 5.) the different types of niche façade ornamentation. In addressing these neglected issues, I hope to better understand the function, construction, and placement of cultic niches in the Nabataean landscape.

THESIS ORGANIZATION

I begin this thesis by introducing the topic, defining terms, and presenting my research methods and objectives. In the second chapter I will provide a brief historical summary of the Nabataeans and their settlement in the Transjordan and Negev areas, and the establishment of Petra. This information is presented to provide a context for the time and place in which the Nabataeans lived, and the setting in which niches were constructed. In the third chapter, I will describe the attributes, iconography, and sanctuaries of local and foreign deities worshipped by the Nabataeans, particularly at Petra. This information will help in the identification of deities worshipped at Nabataean cultic niches. In the fourth chapter, I review the various contexts in which niches were built. These include *biclinia*, *triclinia*, open-air sanctuaries, high places, tombs, temples, and processional routes.

I will present the results of the ground survey of the Petra area and the analysis of the niches, including my proposed functional and stylistic typologies next, in the fifth chapter. Chapter five will contain several sections. One section will provide an overview of the geographical context of the surveyed areas, the sampling and survey methods that were employed in the survey, as well as detailed descriptions of the variables that were recorded in the survey. The next section will contain the results of the survey, niche

analysis, and an interpretation of the data, including statistics, when applicable, to support my conclusions. I will discuss niche orientation, *betyl* and interior niche presence and their relationship (if any) with outer niches, as well as my proposed functional typology of niche sanctuaries and stylistic typology of niche facades.

I will conclude with a summary of the results of the field survey and niche analysis, as well as the limitations of this study, and finally, suggestions for further niche studies will be presented.

2 NABATAEAN HISTORY AND TRADE

NABATAEAN HISTORY

Introduction

The purpose of this historical background is to provide a context for the time and place in which the Nabataeans lived, and the setting in which they constructed their cultic niches. Discussing the origins of the Nabataeans may also help in the understanding of the architectural, iconographical, and religious influences that inspired the Nabataeans to construct their religious structures in the manner that they did. Also, having a basic knowledge of the trade routes and those with whom the Nabataeans traded can help in the understanding of foreign influences on Nabataean religion and architecture. A brief overview of the discussions provided here concerning Nabataean history, trade, and foreign influences will be given to provide an overview for the topics discussed in this thesis. For more complete discussions on these topics, see Bowersock 1983; Graf 1990 and 2003; Healey 1993 and 2001; Johnson 1987; Lawlor 1974; Negev 1977; Schmid 2001a; and Starcky 1966: cols. 900-24.

The Nabataeans rose to power, both politically and economically, out of obscurity in what is now present-day Jordan. What began as a society of nomadic pastoralists later evolved into a powerful kingdom that controlled the trade routes from India to Rome. The Nabataean Kingdom at its political zenith stretched “from then north to the south … encompassed the regions south of Damascus in the Hauran of southern Syria to Hegra in northwestern Saudi Arabia. From the east, it extended from Dumat al-Jandal

in the Wadi Sirhan in northern Saudi Aribia to the eastern Delta of Egypt in the west" (Graf and Sidebotham 2003:69-70). See Figure 2.1 for the extent of Nabataean sites. Petra, located in modern-day Jordan was the initial capital of the Nabataeans during the height of Nabataean control over the lucrative trade routes to the East. Bosra became the capital in the later decades of Rome's absorption of the Nabataean Kingdom. As the Nabataeans increased in social complexity, they evolved into a monarchy that lasted from approximately 168 BC to AD 106. The Nabataean Kingdom came to an end in AD 106 when the Roman Emperor Trajan annexed it as part of the Roman Province of Arabia. Without accurate primary sources, it is difficult to know exactly how the Nabataeans gained their power, or specific details concerning their lifestyle or religious practices. Primary accounts of the Nabataeans are available from foreign, not Nabataean sources, making it difficult to know how much of what we have from these sources is accurate.

Historical Sources

Due to the paucity of original documentation, relatively little is known about the Nabataean Kingdom. What information is available to archaeologists and historians comes from archaeological evidences via material culture, inscriptions, iconography; and from classical historical documents contemporary with the Nabataean period written by Strabo (died c. 97 BC), Diodorus Siculus (died in 20 BC), and Flavius Josephus (died c. AD 97). None of these ancient historians gained their information regarding the Nabataeans first-hand. Instead, they relied on the accounts of others. Diodorus Siculus, for example, is the first to mention the Nabateans historically. However, he used the accounts of Hieronymus of Cardia, a Greek historian who is thought to have accompanied the Greek entourage in 312 B.C. which brought the Nabataeans in closer contact with Hellenism (Healey 2001:26).

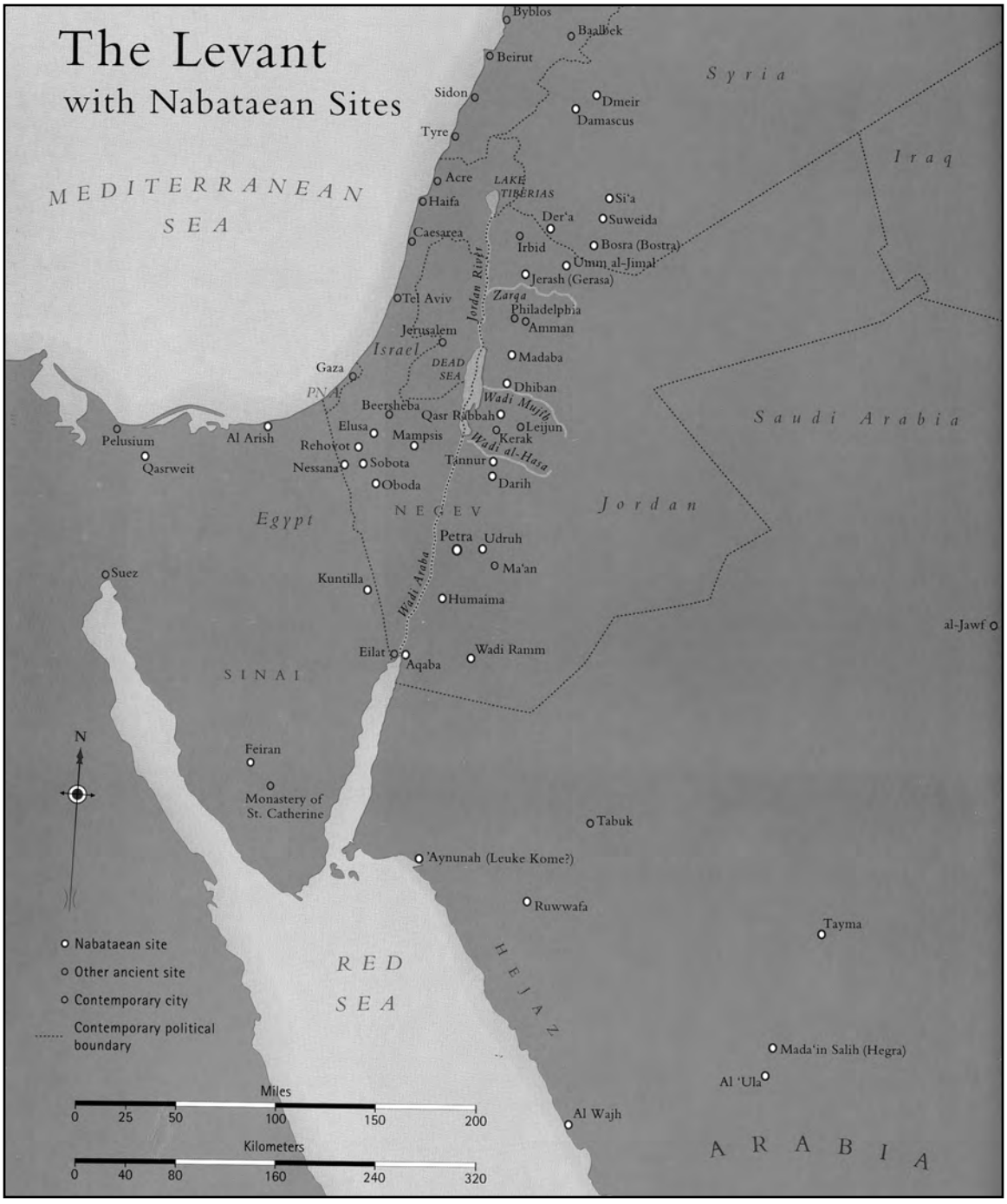

Figure 2.1. Map of the Nabataean Kingdom and sites (Bowersock 2003:18).

Early History and Settlement Patterns

Diodorus, using information provided by Hieronymus of Cardia, describes the Nabataeans' lifestyle in this manner:

> They live in the open air, claiming as native land a wilderness that has neither rivers nor abundant springs from which it is possible for a hostile army to obtain water. It is their custom neither to plant grain, set out any fruit-bearing tree, use wine, nor construct any house; and if anyone is found acting contrary to this, death is his penalty. They follow this custom because they believe that those who possess these things are, in order to retain the use of them, easily compelled by the powerful to do their bidding. Some of them raise camels, others sheep, pasturing them in the desert…the Nabataeans far surpass the others in wealth although they are not much more than ten thousand in number; for not a few of them are accustomed to bring down to the sea frankincense and myrrh and the most valuable kinds of spices, which they procure form those who convey them from what is called Arabia Eudaemon. They are exceptionally fond of freedom; and whenever a strong force of enemies comes near, they take refuge in the desert… They… use as food flesh and milk and those of the plants that grow from the ground which are suitable for this purpose; for among them there grow the pepper and plenty of the so-called wild honey from trees which they drink mixed with water [Diodorus II, 48, I; XIX, 94, 2-4, 9-10].

John F. Healey speculates that these reports by Diodorus give a fairly accurate picture of the Nabataeans in their early history. Healey makes a note that, in their later history, the Nabataeans were much less nomadic. However they still probably preferred to live in tents, even in the period of monumental architectural construction (Healey 2001:27). From Diodorus's description, scholars are able to deduce that the Nabataeans were fiercely independent, freedom loving individuals who, in the early stages of their development, did not allow themselves to be burdened down by material possessions in order to avoid the attention of their powerful neighbors. Stephen G. Schmid states that this description "contains all the typical characteristics of nomads, including laws forbidding them to build houses, cultivate plants, practice agriculture, and so on" (Schmid 2001a:367). Schmid continues to describe how Diodorus's information, taken from the previous account of Hieronymus of Cardia, presents two problems concerning the history and archaeology of the Nabataeans. The first is attempting to determine where the Nabataeans were before 312 BC and their contact with Hellenistic Greek forces, and the

second is attempting to trace them after 312 BC. Given the present known archaeological remains, material culture for the Nabataeans does not appear until c. 100 BC (Ibid).

Origins

The origin of the Nabataeans remains obscure, although Healey states that "Their earliest settlements were in southern Jordan and Palestine, though they may ultimately have come from the East . . ." (Healey 2001:25; Resto 1999). Healey briefly mentions the possibility that the Nabataeans were descended from the Biblical Edomites, and states that "…an argument can also be made for the view that they are simply a later transformation of the earlier people of southern Jordan, the Edomites" (Healey 1993:14). John Bartlett supports the idea that the Nabataeans were descendents of the Edomites (Bartlett 1979; 1990). Graf (1990) suggests the Nabataean originated in the marginal areas to the north of Saudi Arabia (Graf 1990; Healey 2001).

Ancient sources, such as Josephus, refer to the Nabataeans as Arabs (Josephus trans. W. Whinston). However, as Healey notes, this can be interpreted in broad terms, referring to possible origins in "the fringe areas of the Fertile Crescent from Nabatea to Hatra. In others the term is very specific, referring to particular regions within established states . . ." (Healey 2001:25). Healey cites linguistic evidences for an Arabian origin for the Nabataeans (Healey 2001). Besides linguistic evidence, there are also strong indications that Nabataean religion was heavily influenced by Arabian tradition (Ibid.).

Stephen Schmid sees the Nabataeans migrating "from the northern or northeastern part of the Arabian Peninsula around the middle of the first millennium BC" (Schmid 2001a:368), and provides some archaeological evidence for this:

It is precisely on the southern shores of the Arabian-Persian Gulf and in Iran that

very similar painting on pottery is found, dating from the second millennium BC to the fourth century BC. Moreover, some Nabataean pottery forms clearly seem to be based on Mesopotamian, north Arabian even Iranian prototypes (Ibid.).

Other scholars feel that the Nabataeans may have come from Mesopotamia, and then migrated westward. This assumption is based on accounts from the annals of two Assyrian kings that mention a rebellious tribe known as the *Nabatu*. Other indicators that the Nabataeans may have originated from Mesopotamia come from linguistic evidence linking the later Nabateaean Arabic with the Arabic dialect of Mesopotamia in the Neo-Assyrian period (Graf 1990:45-75). The origin(s) of the Nabataeans thus remains hotly debated among scholars.

NABATAEAN TRADE

Nabataean Trade and its Role in Nabataean Cultural and Political Complexity

The Nabataeans eventually controlled major trading routes that extended "to the Persian Gulf, southern Arabia, Egypt, and even the central Mediterranean" (Figure 2.2) (Graf and Sidebotham 2003:70). In attempting to determine the reasons for the Nabataeans shifting from a nomadic lifestyle to a sedentary one, Schmid believes that they did so to remain competitive in trade (Schmid 2001a:370). The Nabataeans traded bitumen, a natural tar-like product that was harvested from the Dead Sea, as well as exotic trade items such as aromatics, frankincense, myrrh, balsam, ladanum, and other various forms of incense (Healey 2001; Bowersock 1983; Johnson 1987). The Nabateans also provided services to travelers such as watering facilities, caravansaries, and safe passage through Nabataean controlled lands to those who were willing to pay appropriate taxes and fees (Johnson 1987). In their prime, the Nabataeans controlled trade routes that spanned as far as Rome in the West to India in the East. With ties to such diverse cultures, the Nabataeans were exposed to many different forms of architecture, art, and

religion. Such exposure had a powerful impact on Nabataean culture, as they eclectically borrowed architectural and artistic styles, and incorporated them into their own buildings, sculptures, paintings, and even religious iconography.

Schmid argues that the earliest material culture that can be attributed directly to the Nabataeans does not occur until c. 100 BC (Schmid 2001a). This material culture included coins minted by Aretas II (120/10-96 BC) or Aretas III (87/84-62 BC); and ceramics consisting of Eastern terra sigillata and Nabataean fine ware. The sophisticated nature of these artifacts however, indicates that the Nabataeans had been involved in the development of settled arts long before 100 B.C. (Cynthia Finlayson, personal communication 2007). The style of the coins and the Nabataean fine ware exhibits Hellenistic elements, and in addition to this, the coins contain Greek inscriptions, thus showing an obvious Hellenistic influence (Schmid 2001b). Schmid also mentions that the minting of coins is, in itself, an indicator of some form of infrastructure (Ibid). Schmid also points out that the title of 'king' signifies that at least by the early first century BC, there was a major structural change in Nabataean society from that of nomadic to a more sedentary lifestyle which demanded a fixed and concentrated ruling position with political power and control (Schmid 2001a: 368).

Strabo gives a detailed account of the Nabataean way of life during the late first century BC, and the early first century AD:

> Petra is always ruled by some king from the royal family; and the king has as Administrator one of his companions, who is called 'brother.' It is exceedingly well-governed; at any rate, Athenodorus, a philosopher and companion of mine, who had been in the city of the Petraeans, used to describe their government with admiration, for he said that he found both many Romans and many other foreigners sojourning there, and that he saw that the foreigners often engaged in lawsuits, both with one another and with the natives, but that none of the natives prosecuted one another, and that they in everyway kept peace with one another. The Nabataeans are a sensible people, and are so much inclined to acquire

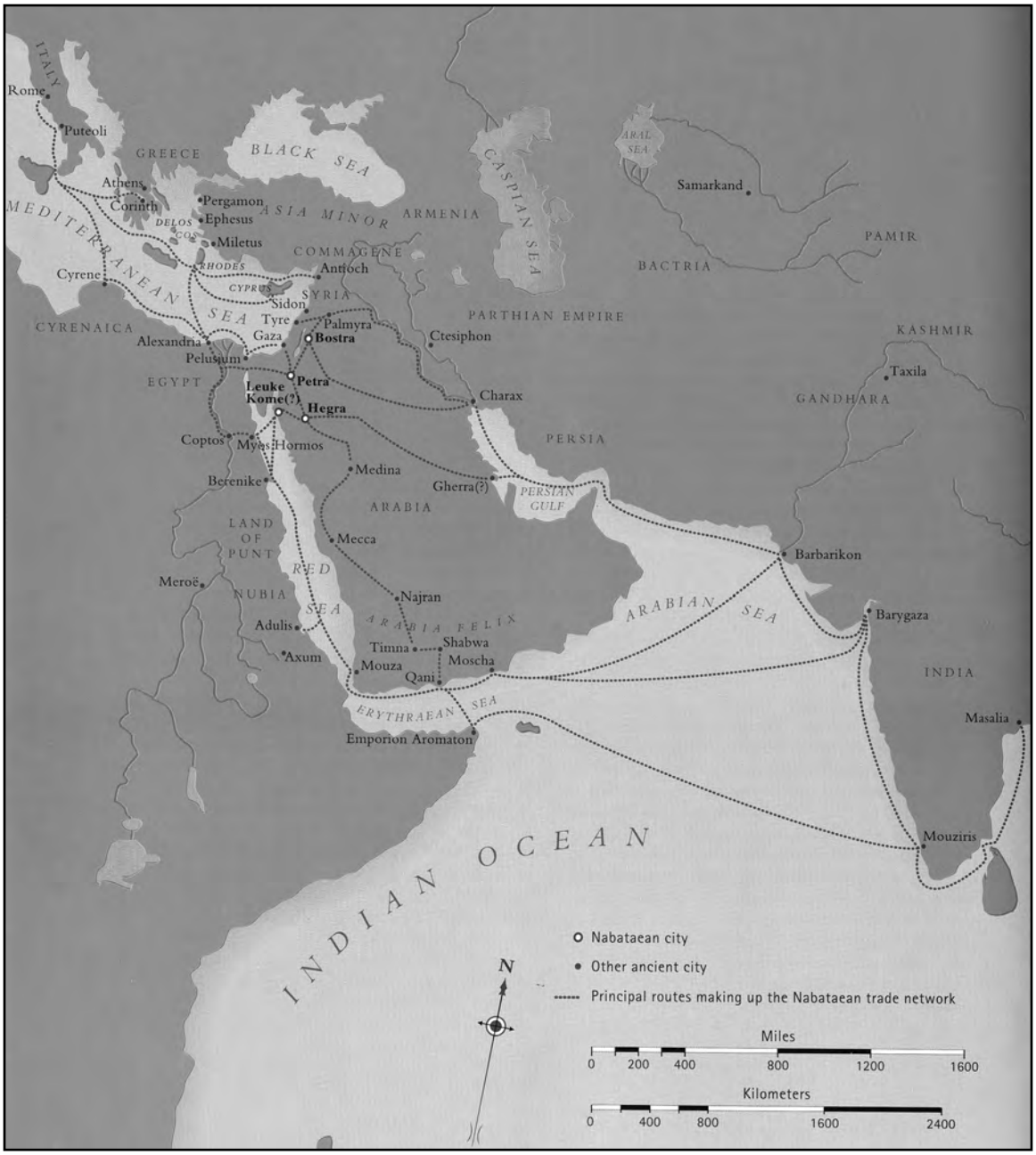

Figure 2.2. Nabataean Trade Routes (Graf and Sidebotham 2003:66).

possessions that they publicly fine anyone who has diminished his possessions and also confer honours on anyone who has increased them. Since they have but few slaves, they are served by their kinsfolk for the most part, or by one another, or by themselves; so that the custom extends even to their kings. They prepare common meals together in groups of thirteen persons; and they have two girl-singers for each banquet. The king holds many drinking-bouts in magnificent style, but no one drinks more than eleven cupfuls, each time using a different golden cup. The king is so democratic that, in addition to serving himself, he sometimes even serves the rest himself in turn. He often renders an account of his

> kingship in the popular assembly; and sometimes his mode of life is examined. Their homes, through the use of stone, are costly; but, on account of peace, the cities are not walled. Most of the country is well supplied with fruits except the olive; they use sesame-oil instead. The sheep are white fleeced and the oxen are large, but the country produces no horses. Camels afford the service they require instead of horses. They go out without tunics, with girdles about their loins, and with slippers on their feet – even the kings, though in their case the colour is purple. Some things are imported wholly from other countries, but others not altogether so, especially in the case of those that are native products, as, for example, gold and silver and most of the aromatics, whereas brass and iron, also purple garb, sturax, crocus, costaria, embossed works, paintings, and moulded works are not produced in their country. They have the same regard for the dead and for dung, as Heracleitus says: 'Dead bodies more fit to be cast out than dung'; and therefore they bury even their kings beside dung-heaps. They worship the sun, building an altar on top of the house, and pouring libations on it daily and burning frankincense [Strabo, *Geography*. 16.4.26].

Healey stresses that the idea that the Nabataeans treated their dead in a casual way is plainly wrong, and the many elaborate rock-cut tombs lining the wadis surrounding Petra evidence this cross-cultural misperception (Healey 2001).

There is a clear difference between Diodorus's early description of the Nabataeans taken from Hieronymus of Cardia in 312BC, and Strabo's account of the Nabataeans during the late first century BC and the early first century AD. In Diodorus's description, the Nabataeans were forbidden to plant grain, construct houses, or to have many possessions. In Strabo's later account, the Nabataeans were encouraged to have many possessions, and also at this time, large monumental structures and elaborate tombs were being hewn out of the cliff faces.

Schmid devotes a significant portion of his writings to Nabataean architecture, with an emphasis on houses and temples (Schmid 2001a). He asserts that it is around the late first century BC, and the early first century AD that the Nabataean architecture becomes monumental (Ibid.). Schmid also reports that from the houses excavated at Petra, the earliest ones date to this time period (Ibid.). Strabo states that the houses were costly and built of stone (Strabo, *Geography* 16.4.26). These houses differ in size and

ornamentation, showing a clear distinction in social classes. Schmid concludes that based on this evidence, the Nabataeans probably enjoyed the same kind of lifestyle as those who lived in many regions of the Mediterranean world during the same time period (Ibid.).

Nabataean Trade and its Influence in Nabataean Religion and Architecture

Schmid asserts that based on the ornamentation, shape, structure, and ground plan of the houses and temples in the late first century BC, there are strong indications that the Nabataeans were influenced heavily by Hellenistic houses in the Near East (Schmid 2001a:374). The peristyle courtyard, huge cisterns under the main courtyard, and various open areas that allowed light and fresh air to circulate into the inner rooms evidence this. In some cases, the courtyards are decentralized. In both Mesopotamian and Egyptian temples, there were often stairs that led to the roofs of the structures. In Egypt during Pharaonic and Hellenistic times many temples have large staircases or ramps that lead to the roofs. This is also the case for many Nabataean temples (Schmid 2001a:379). Nabataean temples have also been compared to Ptolemaic temples because of the practice of building a shrine within a shrine, which is common in both temple types (Ibid.). This practice can also be seen in niche construction, as occasionally, interior niches are carved within the outer niche, thus giving the niche several dimensions, which created a shrine within a shrine. Concerning influences on Nabataean architecture from Ptolemaic Egypt, Schmid states that:

> . . . it is worth mentioning that all characteristics of Nabataean temples, that is, the corridor or passageway in the inner building, the steps leading to a platform or to the roof, and the courtyard in front of the temple, can be found in prototypes from Hellenistic Egypt. In general, the manifold influence from Ptolemaic Egypt, especially on the huge tomb facades of Nabataean Petra shows that a cultural interchange existed, regardless of the economic and political differences and

quarrels [Schmid 2001:379].

Temples in northern Nabataea show a Syrian and Roman influence because of the long rectilinear ground plan that emphasizes the front of the building by adding large steps. Other shared characteristics include "huge courtyards with porticoes in front of the temple proper" (Schmid 2001a:379). Courtyards in front of the temple are characteristic of Roman temple plans, and this architectural feature is consistent with some Nabataean temples. Schmid also discusses South Arabian influences on Nabataean temples. Architectural features common with temples in both areas include "the tripartite backside of the buildings, the inner courtyard, the additional shrine, and the general quadratic aspect" (Ibid.).

The Nabataeans, who rose out of obscurity as nomadic pastoralists, would eventually come to control a kingdom encompassing Damascus in modern-day Syria to the north, Hegra in modern Saudi Arabia to the south, Dumat al-Jandal in modern-day Saudi Arabia to the east, and the eastern Delta in modern-day Egypt to the west. The Nabataeans controlled trade routes spanning from India to Rome, including other areas such as the Persian Gulf, southern Arabia, and Egypt. The Nabataeans, as traders, were exposed to many different cultures, but were especially influenced in their art, architecture, and religion by the Ptolemaic Egyptians, the Romans, the Hellenistic Seleucids, and the Greeks. Although the Nabataeans were heavily influenced by these cultures, they still maintained their own unique 'Nabataean' style, which can also be seen in their art, architecture, and material culture. Nabataean religion was also heavily affected by foreign influences encountered during trading expeditions. Foreign deities worshipped by the Nabataeans included Osiris, Serapis, Dionysus, Zeus, Baal, Aphrodite, and Isis. In chapter three I will discuss these foreign deities as well as the local Nabataean deities in detail.

3 NABATAEAN DEITIES

ATTRIBUTES, REPRESENTATIONS, AND FOREIGN INFLUENCES

Introduction

It is necessary to provide this discussion concerning Nabataean deities, their attributes, representations, and foreign influences, because it provides a basis for understanding the various deities that were worshipped within cultic niches. The Nabataeans had their own unique pantheon of deities, the roots of which can be found in the southern Arabian tradition. John Healey notes that "Nabataean religion (and art) owes something to southern Arabia and much to a distinctive religious culture of north-west Arabia (in which there are hints of features in common with ancient Israel and Judaism)" (Healey 1993:37). Concerning Nabataean deities, Healey also notes that Nabataean religion is largely untouched by the Mesopotamian tradition. None of the Nabataean gods have close counterparts in Mesopotamia (Healey 1993).

In this chapter, I discuss Dushara, Al-Kutba, Qos, Shay al-Qaum, Al-Uzza, Manat, Allat, Allat and Athena, and Atargatis. The Nabataeans were heavily influenced by foreign religions, and because of this, they oftentimes would combine attributes of foreign deities with the attributes of their local deities. This phenomenon can be seen especially with Dushara, who was assimilated with foreign deities, resulting in the following deity pairings: Dushara-A'ra, Dushara-Dionysus, Dushara-Zeus, Dushara and Helios, Osiris, and Serapis, and Ruda-Dushara. These deity assimilations will also be discussed. For each of these deities, I discuss their attributes, their sanctuaries

and temples, and how they are depicted as stele. This chapter is meant to provide a brief overview of Nabataean deities. For a more comprehensive discussion concerning Nabataean deities and religion, see Healey (2001), Zayadine (2003), Patrich (1990), and Glueck (1965).

NABATAEAN DEITIES

Dushara

Dushara was the principle deity worshipped by the Nabataeans, however, scholars are not sure if Dushara was a god of vegetation, the sun, the storm, mountain tops, nomadic life, or a deity that encompassed all of these attributes at the same time (Healey 2001; Zayadine 1989; Buhl 1913; Starcky 1966; Beeston 1968; Lane1863-93; Cynthia Finlayson, personal communication 2007). Dushara was a local deity of southern Jordan, Healey takes his name to be an epithet, as he explains that Dushara's name, in the putative Arabic, Du al-Shara(t) translates as "the one of the Shara(t) mountains," which are located to the east of Petra (Healey 2001:86-87). In Arabic, "shara" translates as a road, tract of land, or mountain, and is sometimes used in the context of sacred land (Healey 2001; Buhl 1913; Starcky 1966: 986-88). It can also be referred to as "colocynth, spreading plant" which probably identifies him as a vegetation deity (Healey 2001; Beeston 1968). Zayadine suggests a possible meaning connected with luxuriant vegetation and wild animals (Healey 2001; Zayadine 1989:115). In another reference he is referred to as "men of the thicket/tangle wood" (Healey 2001; Beeson 1968; Bosworth 1984). His name could mean the same as *hima* or *haram* (Healey 2001; Gawlikowski 1990:2663). Dushara is identified as the "God of Gaia" in two inscriptions, one from the Negev and the other from Dumat al-Jandal in Wadi as-Sarhan (Zayadine 2003:59). Gaia was the ancient name for the modern-day town of Wadi Musa. An early Islamic description of Dushara places him at the foot of a mountain near a stream rather than a god of the mountaintop (Healey 2001:89). In Nabataean inscriptions, Dushara has

several titles, such as “Lord of the Temple,” “Lord of heaven and Earth,” and “God of our lord (the king)” (Zayadine 2003:59). Because of several inscriptions where Dushara is associated with kings, he is also considered to be the dynastic deity (Ibid). Nabataean ideology incorporated both the morning and evening stars (the dividers of night and day) into a concept of the divine. Inscriptions also refer to Dushara as “The one who separates night from day” implying that Dushara is also an astral god. This epithet comes from an inscription from Hegra that is dated to AD 4 and associates Dushara with the rising sun, Mercury, or Ruda-Mercury, all of which appear at dawn and sunset, separating the day and the night (Lidzbarski 1915:268-68; Starcky 1966: cols 990-92; Healey 2001:93-94).

Representations of Dushara

Latin and Greek writers from the first to forth centuries AD referred to the images of the Arabian deity as a “stone,” a “shapeless stone,” or a “square stone.” An inscription from Tell ash-Shuqafiya in the Egyptian Delta dated to 34 BC states that Wahb’allahi, a Nabataean erected a quadrangular shrine with an inscription that says “This is the shrine which Wahb’allahi son of … made for Dushara, the god who is in Daphne . . .” (Jones et al. 1988:47-57; Healey 2001:91). Dushara is described in the *Souda,* a Byzantine lexicon as:

> Theusares- that is, the god Ares at Petra in Arabia. The god Ares is worshipped by them, for him they honour above all others. The image is a black stone, square and unshapen, four feet high by two feet broad. It is set on a base of wrought gold. To this they offer sacrifice and for it they pour forth the victims’ blood, that being their form of libation. The whole building abounds in gold and there are dedications galore [Patrich 1990:51].

Although the *Souda* was compiled towards the end of the tenth century C.E., scholars believe that it was based on earlier sources (Patrich 1990:50). Other ancient authors in the second and fourth centuries C.E. have also recorded that the Arabians worshipped a god that was represented as a slab of stone (Healey 2001).

Patrich discusses the instances where *betyls* within niches at Petra were carved with a rounded top (Figure 3.1) (Patrich 1990:87). Patrich explains that such stelae were representations of Dushara. Similar depictions of rounded-stelae are also found on coins from Adraa (modern-day Der'a in southwestern Syria) and Bostra, located in southern Syria that date to the Roman period. These coins identify Dushara as "Dusares the God of the people of Adraa" (Healey 2001; Patrich 1990:70-71). One notable rounded *betyl* can be found in the Siq at Petra. At Adraa, Dushara is not depicted in the common rectangular *betyl* shape, but is depicted as an oval *betyl* on an elevated platform. Similar depictions can be found on coins form Adraa during the Roman period. The same depiction of Dushara is found in Petra next to inscriptions made by pilgrims from Adraa. Patrich suggests that because of the continuity of the depictions of Dushara by people from Adraa, that the oval *betyl* is the convention for representing the Adraa Dushara (Patrich 1990:99).

Coins Depicting the Mwtb and Dushara

Coins from Adraa, Bostra, Charachmoba (modern-day Karak), and Medaba (Figure 3.2) show depictions of *betyls* representing Dushara located on top of raised platforms, each reached by a stairway. The coins often depict Dushara as a *betyl* or three *betyls* (Healey 2001; Patrich 1990). Patrich 1990 makes a comparison between the seat of the god and the platforms on the coins. Patrich explains that the *mwtb*:

> . . . as the seat of the god, it has its own sanctity, independent of the god's, like that of a temple. A concept of this already existed in the Addakian [term] *subtu*, which means both "the house" and "the seat" of the god. More specifically, it is the name of a base of definite shape on which the symbols of the gods were placed and in front of which ceremonies of adoration were held [1990:58-59].

All of the stelae are elongated and slightly rounded at the top. The coin of Bostra shows

two individuals on the platform, one on either side of the stelae, which provides some clues as to ritual activity. Joseph Patrich suggests that "the two individuals shown on the coin are engaged in the blood libation mentioned in the *Suidas* Lexicon or some other ritual connected with the Dushares cult" (Patrich 1990:74). A coin from Charachmoba also depicts an individual, shown in a kneeling position in front of three stelae. Such representation illustrates the Nabataeans' preference for worship of deities located on platforms that were reached by stairs or ladders. Strabo describes the following practice among the Nabataeans: "They worship the sun, building an altar on top of the house, and pouring libations on it daily and burning frankincense" (Strabo, *Geography* 16.4.26).

Figure 3.1. *Betyl* with rounded top depicting Dushara of Adraa.

Dushara-A'ra, the God of Bosra

A'ra was a Syrian god and the local god of Bosra. Healey asserts that "…the identification may be connected with the shift of the Nabataean administrative capital from Petra to Bosra" (Healey 2001:98; Starcky 1966: cols 988-90). Healey bases this claim on evidence that has been compiled from the Hawran to Hegra (Healey 2001). Dushara-A'ra appears in both *betyl* and human form. In his human form, he is depicted as an Arab rather than a Roman and was depicted on a coin minted in AD 177 as a youthful man with a wreath around his head with the legend, 'Bostrenon Dusares' (Dushara of the Bostrans) (Healey 2001:99). Both Nabataean and Roman influences can be seen in this depiction. In AD 244, the same depiction of the god appears on a coin from the reign of the Emperor Philip (Ibid.).

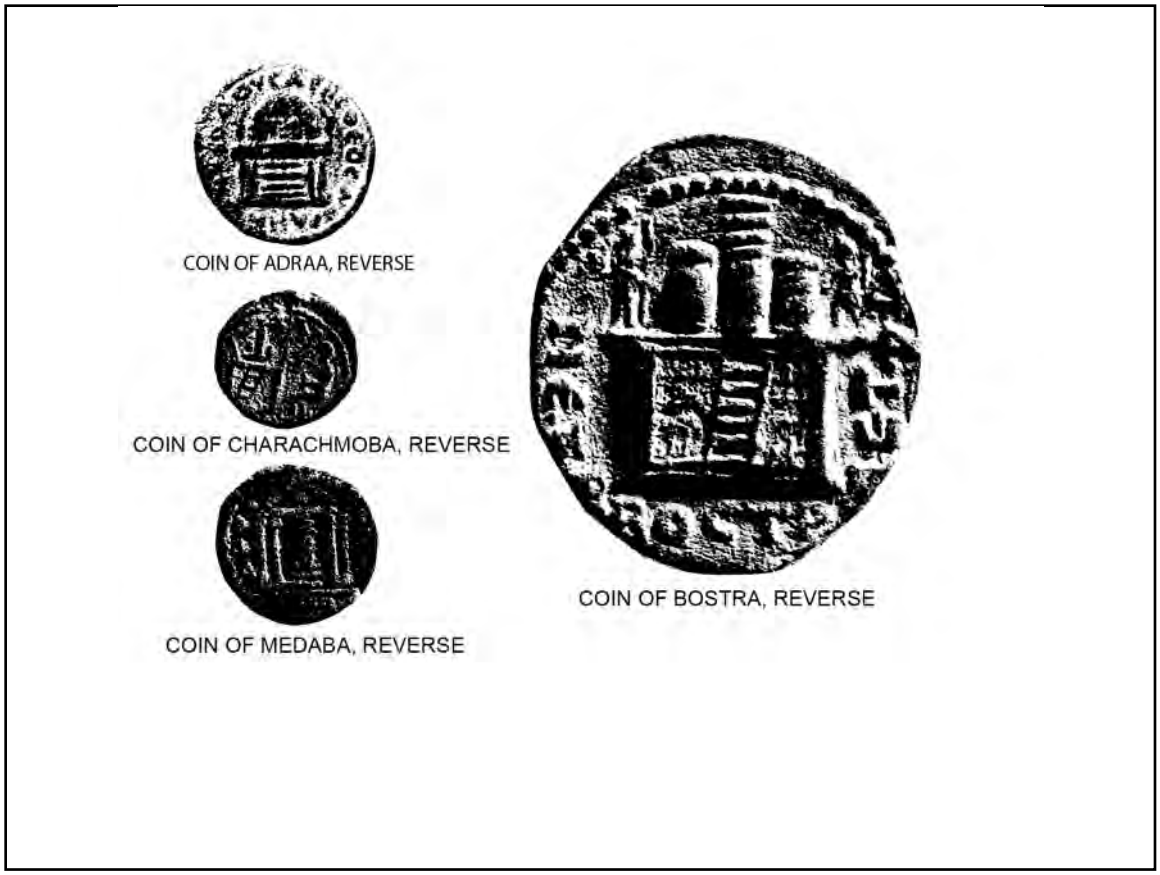

Figure 3.2. Coins depicting sanctuaries with Dushara (Patrich 1990: Ill.14-17).

Offerings to Dushara-A'ra

There are several inscriptions that are dedicated to Dushara-A'ra in the Nabataean Kingdom. One such inscription from Hegra and dated to A.D. 39/40 reads "This stele Shakuhu basr Tura made for A'ra who is in Bosra, god of Rabel; in the month of Nisan, the first year of king Maliku" (Healey 2001:98). Another one reads "This stele Mun'at bar Gadiyu dedicated to Dushara-A'ra, god of our lord, (god) who is in Bosra" (Ibid). An inscription carved onto a basalt block found at Bosra dated to A.D. 148 reads "This is the stele Yamlik bar Mashiku dedicated to Dushara-A'ra" (Ibid). Healey notes that the following inscription could be related to the previous one "This is the stele Mashiku bar 'Awida made for Dushara (Greek Dushara/A'ra)" (Ibid).

Dushara and Dionysos

There are several Greek sources from Herodotus that mention Dushara's identification with Dionysus and these derive from the northern areas of Nabataea. Dushara is depicted on the coin of Bosra during the reign of Commodus which depicts Dushara in human form with iconography, such as flowing hair that is specific to Dionysus (Healey 2001:99). The association with Dionysos is known in later Nabataean periods, but is questionable during the earlier eras because this association is not supported by evidence. At Petra in the temenos of the Qasr el-Bint, there is also a sculpted relief that scholars believe depicts Dushara-Dionysus (Healey 2001:100; Mittmann et al. 1987:222-23; no. 209; Zayadine 1989:116). There is also a niche and *betyl* with a human head adorned with vine leaves above it in a medallion-shaped recess that, because of the iconography (flowing hair, vine leaves, etc.) possibly represents Dushara-Dionysos in Wadi Farasa Zayadine 1975:336-337). See Figure 3.3 for a photograph of Dushara-Dionysos in Wadi Farasa. Philip Hammond, however, interprets this image as female (Hammond 1968).

Healey cites an example of a Dionysian figure of Dushara in one of the Petra terracotta figurines (Healey 2001:100). In addition to these examples, there are depictions of a god with flowing hair, etc. that may be attributed to Dushara-Dionysus, in Khirbet et-Tannur (Glueck 1965:313). Healey believes that the wine drinking rituals in *triclinia* may have Dionysian influence (Healey 2001:100).

Dushara and Zeus

Dushara and Zeus were both supreme beings; therefore their association together is understandable, given the tendency for Nabataeans to incorporate foreign deities and attributes of deities into their own pantheon. Healey notes that given the importance of Zeus during this time, it shouldn't be surprising that Zeus and Dushara had many connections (Healey 2001:101; Starcky 1966:col.990; Teixidor 1977:82-85). In some texts, Dushara and Zeus are referred to as the same deities. Healey cites several epigraphic examples where Dushara and Zeus are paired, and some of these come from the Qasr el-Bint at Petra (Healey 2001). In addition to the epigraphic evidence, iconography from Khirbet et-Tannur depicts Dushara-Zeus-Hadad (Healey 2001). Strabo (16.1.11) notes that the Arabians worshipped Zeus and Dionysos.

Dushara and Helios

Healey notes that because of evidence pointing to a connection with the sun, such as a Greek inscription from Suweidah that links Dushara and Helios, that "Dushara was perceived, at least by some as a sun god" (Healey 2001:102). The inscription from Suweidah states "…priest of the god Dusares … unconquered, he set up…" (Healey 2001:102). Healey believes that because the term 'unconquered' often refers to Helios, that in this case, it must also refer to Helios and Dushara, thus connecting the two gods. Iconographic evidence for this connection comes from a relief representing a sun god

from the Qasr el-Bint, although this is questionable (Healey 2001:103). Dushara is referred to in the Panarion (51,22,11) by Epiphanius of Salamis (c.315-403) as being re-born to a virgin sun-goddess, implying that Dushara was presumably associated with the sun. This re-birth is celebrated at the winter solstice (trans. Williams 1994:51; Healey 2001). According to this text, the cult took place in Petra, Elusa, and Alexandria (Ibid).

Strabo wrote that the Nabataeans "worship the sun, building an altar on the roof and pouring libations to it daily and burning frankincense" (Strabo, *Geography*. 16.4.26, translated by Jones 1930:368-369). According to Healey this practice is probably for the worship of Dushara as opposed to worshipping their ancestors, assuming that Strabo

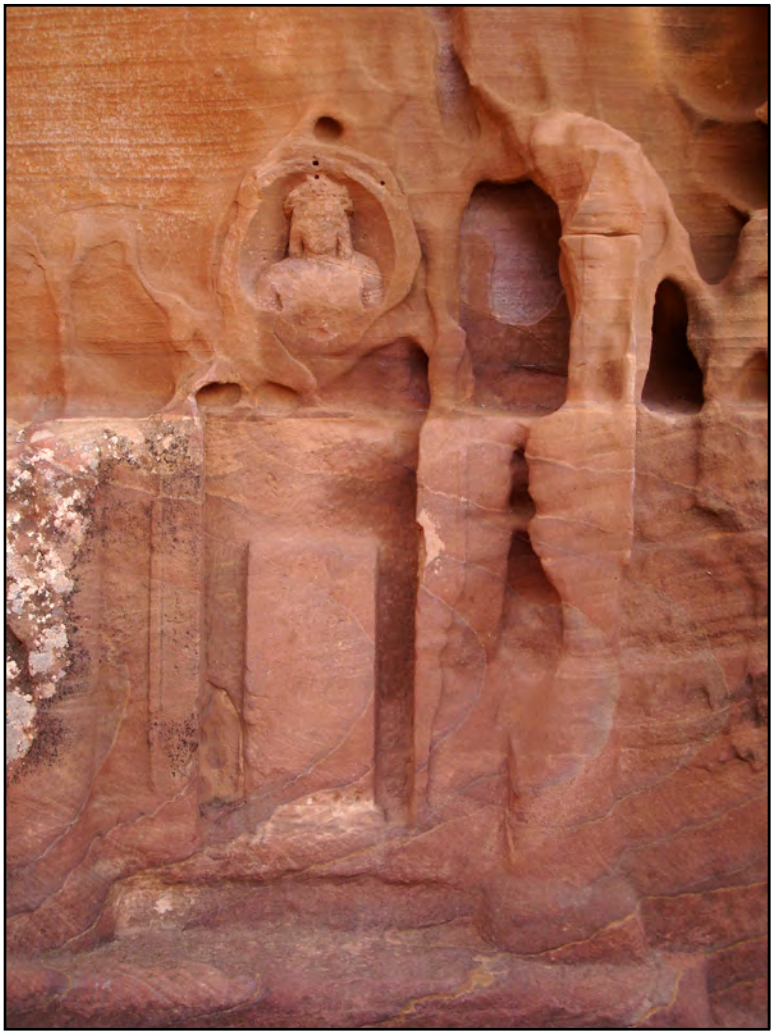

Figure 3.3. Dushara-Dionysus.

was referring to the Nabataeans' main cult (Healey 2001:103). Healey notes that many temples had stairs which allowed access to the roof, and this is probably what Strabo was referring to (Ibid.). However, it is not unreasonable to assume that the Nabataeans also worshipped from the privacy of their own homes. In a survey conducted by U. Avner in the 'Uvdah Valley and other regions in Israel's Negev Desert, he found many tent sites with erected *betyls* behind them, presumably for private worship of deity (Avner 1984). In addition to staircases leading to the tops of temples and homes for the worship of the sun, many niches found in my survey were carved with associated staircases (see Chapter Five for further discussion).

Dushara, Osiris, and Serapis

Dushara is also linked with the Egyptian god of the underworld, Osiris, the consort of Isis. Because Dushara was associated and paired with major foreign deities such as Dionysus and Zeus, it is natural that the Nabataeans also chose to associate Dushara with Osiris. Like Dushara, Osiris evolved and was merged with Dionysus and Serapis in the Hellenistic and Roman periods in Egypt (Cynthia Finlayson, personal communication 2008). An Osiride statuette was found in the Temple of the Winged Lions, which Philip Hammond suggests is a possible diffusion of the "Osirian cult" (Meza 1996:167; Hammond 1977-1978:81-101). The Nabataeans traded heavily with Ptolemaic Egypt, because the trade routes into Egypt were stable, as the Egyptians were not in political turmoil. The Egyptians had much more control over the Negev and Sinai, therefore, the Nabataeans were much more likely to conduct trade with Ptolemaic Egypt, especially at Alexandria. Additionally, the Ptolemies may have had control over Nabataean trade routes. Because of this heavy interaction with Egypt, the Nabataeans were heavily influenced by Ptolemaic Egyptian culture (Cynthia Finlayson, personal communication,

2008).

Ruda and Dushara

The Greek Herodotus identifies Ruda as "Orotalt" in the fifth century BC as one of the only gods that the Arabs recognized (Histories III, 8:ed. Rosen 1987). However, Ruda is not recognized as a Nabataean god, as Healey points out, his name has not been found on any Nabataean inscriptions or Nabataean personal names (Healey 2001:94). Healey, however notes that there is a problem concerning the gender of Ruda because of iconographic and epigraphic accounts that give Ruda some feminine traits (Healey 2001:94-95).

Al-Kutba

The gender of al Kutba has been debated by scholars (Healey 2001). Al-Kutba's name derives from the Arabic root KTB, which Zayadine describes as "written in the elative form, meaning "the great He scribe" (Zayadine 2003:60). There is an inscription at Wadi as-Siyyagh at Petra that reads "In front of al-Kutba, this very god" (Ibid). Zayadine proposes that because of this inscription and because of the origins of al-Kutba's name, that this deity's gender is male (Ibid). Others, such as J.T. Milik and J. Starcky (1975) also agree that al-Kutba is a male deity. Healy assumes that since each of the *betyls* in 'Ain Shellaleh at Wadi Rumm is similar in decoration, that the pair could be female (Healey 2001:120). Healey also cites Patrich who has noted that "the eye idols specifically represent al-Uzza and another goddess of the al-'Uzza type. Al Kubta would then have to be female" (Healey 2001:120; Patrich 1990:187) as "an Arab goddess" in Syriac literature from Edessa in the third to eighth centuries; but there is no concrete evidence for femininity in inscriptions within the Nabataean Kingdom. In another inscription from Petra, Al-Kutba is referred to as a male deity.

Like Dushara, al-Kutba is also associated with Gaia. He is identified with the Graeco-Roman Hermes-Mercury, the Egyptian Thoth, Assyrian Nabu, Palmyrene Arsu, and Arabian Ruda (Zayadine 2003). Because of these associations, he is described as the scribe of the gods and the patron of writing. Al-Kutba's association with Hermes-Mercury may have endowed him with the role of "the patron of divination, travel, trade, music, and the evening star" (Zayadine 2003:60). An inscription that accompanies two *betyls* carved in relief with schematic star-like eyes separated by a rectangular band at the spring sanctuary of Ain ash-Shalaleh in Wadi Ramm pairs al-Kutba and al-Uzza. This inscription reads "Al Kutba who is in Gaia al-'Uzza" (Healey 2001:120). Fawzi Zayadine has speculated that the "the association of al-Kutba and al-'Uzza alludes, no doubt, to the two gods as evening and morning stars" (Zayadine 2003:60).

Niches, Betyls, and Sanctuaries Venerating Al-Kutba

In the rock sanctuary of 'Ain Shellaleh in Wadi Rum there are two niches with a *betyl* relief in each. They were carved side-by-side. One of the *betyls* represents "al-Kutba who is in Gaia . . ." and the other represents al-Uzza (Healey 2001:190-121). Both of these *betyls* have schematic star eyes and a raised rectangular band for a nose. If not for the inscription accompanying these *betyls*, it would be very difficult to tell them apart. The niche containing the image of al-Kutba is rectilinear, while the niche containing the image of al-Uzza is arched, and this may suggest that perhaps certain shapes were sacred to certain deities. Possible relationships between the *betyl* shape and niche shape will be explored in Chapter Five. There are many sculptures that represent al-Kutba's equivalent, Hermes-Mercury at Petra, Khirbet et-Tannur, and Khirbet edh-Dharih (Zayadine 2003). At the temple dating to the middle of the first century BCE in Qawrawet, a caravan station in northern Sinai, al-Kutba is represented with a rounded head, and Patrich

suggests that there is a possibility that the five mushroom-like stelae that adorn the upper part of the façade of the main temple may be representations of al-Kutba (1990:102). In his survey, Dalman recorded a number of mushroom-like stelae, and Patrich has suggested that these stelae may be related to the five mushroom-shaped stelae that adorn the top of the façade of the temple at Qasrawet (Patrich 1990:89, Ill.30). If the assumption that the mushroom-like stelae represent Al-Kutba is correct, then it is possible that the mushroom-like stelae found in niches at Petra may also be representations of Al-Kutba. Wenning (2001) in contrast to Roche (1985:99) and Patrich (1990:88-89) has interpreted the mushroom-shaped, bottle-like, or T-shaped *betyls* as *betyls* as representing "rectangular and semicircular *betyls* placed one on top of the other" (Wenning 2001:85).

Qos

Qos, an Edomite deity has links with Hadad, the god of storms and rain. The worship of Qos is most evident at Khirbet et-Tannur, where two inscriptions name offerings that were dedicated to him (Healey 2001:126). In one of the offerings, a basalt sculpture of an eagle was carved for him. Both Qos and Hadad seem to have the same functions of agricultural growth and fecundity. They shared the same attributes – bulls, thunderbolts, and eagles. A statue of Qos at Khirbet et-Tannur depicts him setting on a throne holding a lightning bolt, flanked by two bulls which suggests that Qos may have been identified with Zeus as well.

Stelae Venerating Qos

There is a depiction of Qos at Khirbet Tannur that depicts him sitting upon a throne with upward-stretching arms, much like the throne on which the statue of Allat sat that also has horn-like appendages. Patrich has suggested that because the depictions are so similar that some form of clarification was needed to distinguish the depictions, which

would explain the inscriptions next to the idols (Patrich 1990:102). Stele with a spherical head and shoulders comprises another group of stelae in Nabataea. Patrich states that:

> The Allat of Bosra stele from ‘Ain Shellaleh (III.8), the idol near the Diwan at Mada’in Saleh, and the stelae from the temple at Khirbet Tannur have rounded heads and shoulders. Four stelae were found at Khirbet Tannur. One of them, which has two horns projecting from its sides, is almost intact and bears a dedicatory inscription to the Edomite god Qos . . . which is attributed to the end of the first century B.C.E” [Patrich 1990:90-91].

Shay al-Qaum

A probable meaning of Shay al-Quam in Arabic is “the one who accompanies (or aids) the people” (Healey 2001:146). Because of this epitaph, Shay al-Quam is known as a god who protected traveling clans or soldiers. He was also seemingly associated with abstinence from alcoholic beverages. Shay al-Quam was associated with Osiris in Egypt (David Johnson, personal communication 2007). He is the only true nomadic god in the Nabataean pantheon. He is referred to in inscriptions at Hegra and the Hauran during the Nabataean period; however, there is no mention of him at Petra. Zayadine speculates that the reason why Shay al-Quam is not mentioned in texts in Petra is because of the popularity of Dionysos (Zayadine 2003:62). Shay al-Quam is never portrayed as a god who was adapted to a settled life. From another inscription found in Palmyra on an altar dated to A.D. 132 we learn more about the nature of Shay al-Qaum.

> These two altars ‘Ubaydu …, the Nabataean of the Rawah tribe who was a cavalryman at the fort and camp of ‘Anah, for Shay’al-Qawm the good and bountiful god who does not drink wine, for his own life and the life of ….., in the month of Elul in the year 443, And remembered be Zabida … his patron and friend before Shay’al-Qawm the good god [Healey 2001:145; CIS II, 3973; Cooke 1903, 303-05: no. 140B; Littmann 1901, 281-90].

Al-Uzza

Al-Uzza is the presiding goddess at Petra and her name means “the mightiest one,”

(Healey 2001:114; Zayadine 1989; Lindner 1988). The nature of this goddess remains obscure; however, what is known about her nature comes from her associations with foreign deities such as the Greek Aphrodite and the Egyptian Isis. Her assimilation with Aphrodite is known from a bilingual inscription on the island of Cos, dated to AD 9 (Healey 2001). Many scholars believe that Al-Uzza is associated with the morning star, Venus (Healey 2001; Winnett 1940; Caskel 1953; Henninger 1954; Hofner 1965; Zayadine 1981; Drijvers 1980; Krone 1992). Healey states that while al-Uzza was popular at Petra, Allat was the favored goddess at Uram and in the Hawran (Healey 2001:119). Known from Lihyanite inscriptions at Dedan from the forth or third century BC Al-Uzzah, Allat and Manat formed a Nabataean trinity of female gods.

Niches Venerating Al-Uzza

Al-Uzzah is shown paired with both Dushara and al-Kutba, and she is depicted as the larger of the two, even when paired with "The Lord of the House," a reference believed to be a reference to Dushara (Patrich 1990:101). In two of the instances where al-Uzza is mentioned in an inscription next to a niche or *betyl*, her niche is arched. There is a niche for the stelae of al-'Uzza and the lord of the house, at Petra that contains an inscription which reads "these are the stelae of al-Uzza and of the Lord of the House. Made by Waheb'alahy, plasterer" (Patrich 1990:54). The niche that is associated with this inscription is empty; however, the niche itself is a carved rectilinear shape that is framed by an incised arch (Patrich 1990:III.5). Often in stele depicting her, she is shown with eyes that are shaped like stars. When al-Uzza is paired with other deities, she seems to always show up on the right side of the other deity, and she is always the larger of the two stelae. When two stelae are carved side-by-side, there are some instances where the stele on the right is the larger of the two. This phenomenon can be seen in the stele of

Bosra at Petra, the niche for two stelae at el-Hubtah, Petra, and the Stelae of al-‘Uzzah and the Lord of the House at ‘Ain-Shellaleh at er-Ramm. This may say something of the placement of *betyls* in niches, or niches appearing together.

Another inscription at the ‘Ain-Shellaleh open-air temple at er-Ramm pairs Al-Uzzah and The Lord of the House. Patrich provides a visual description of this niche:

> The stele couple identified as al-‘Uzza and the Lord of the House were found inside a single rectangular niche. The stele on the right is an eye idol: two large eyes are schematically represented on its upper part. It is the larger of the two (40cm high and less than 20cm wide). In other *betylic* depictions of al-Uzzah, she is depicted with schematic eyes, so it may be safe to presume that in this particular pairing of al-Uzzah and the Lord of the House, that she is the one on the right with the schematically-depicted eyes. The surface of the stele on the left is plain [Patrich 1990: III.7].

At the same sanctuary at er-Ramm, al-Uzzah is paired with al-Kutba. We know this from an inscription at this sanctuary that refers to the stelae as al-Kutba of Gaia and al-Uzzah. Both stelae have schematic star eyes and a raised band for a nose. See Patrich (1990:62 III.9). However, unlike al-Uzza’s pairing with the Lord of the House where the pair is depicted in the same niche, in al-Uzzah’s pairing with al-Kutba, they are depicted in separate niches. The niche containing the stela of al-Uzzah is arched, and larger than the niche of al-Kutba (Figure 3.4).

Possible identities for I-shaped *betyls* could be Al-‘Uzza-Aphrodite. The reason for this is an Al-‘Uzza-Aphrodite pendant from Avdat is also I-shaped. Concerning bottlelike stele, Patrich states that there is only one example of such a stele, and this was to the right of the niche in Wadi es-Siyyagh, that contained the seated figure of Isis, who was associated with Al-Uzza (Patrich 1990:90; see Milik and Starcky:120-124, no.5; 188, pl. XLIV; and Schmitt-Korte, *Hannover Catalog*, p. 72, fig. 41).

Perhaps the most famous stele of al-Uzza comes from the Temple of the Winged

Lions (Figure 3.5). In this stele, al-Uzzah is depicted with large oval eyes with a long stylized nose between them. At the base of the nose, two large lips are carved. A diadem, or wreath crowns this *betyl*, in the center of which is an oval cavity where a precious stone must have once been placed. The *betyl* is framed by a kind of aedicule, in that "an architrave decorated with indentation and a cornice above two pilasters with capitals" (Patrich 1990:85). An inscription at the base of the idol reads "The goddess of Hyn son of Nybt" (Patrich 1990:85). Patrich notes that the design of the eye idols resembles that used on funerary stelae in Southern Arabia (Patrich 1990; Harding 1964: 44-47). Patrich states that "The oldest dated examples of eye idols are from the second half of the first century, during the time of Rabel II, and possibly earlier, the latest are from the fourth century" (Patrich 1990:86). Patrich justifies these dates from an inscription found in the open rock sanctuary at 'Ain Shellaleh that is dated to the seventeenth regal year of Rabbel II (86 C.E.). He further states that the scripts used in both inscriptions date to around the end of the first century C.E. There is also a niche that contains a stele in the Siq that is dated to the first half of that century, according to the evidence provided by the inscriptions at Mada'in Salih. Burial activity continued at Mada'in Salih from 1 B.C.E. to 75 C.E., and according to Patrich, it is safe to assume that the stelae and the niches are from this same period (Patrich 1990:86). Patrich also assumes that because the style of the idol had remained unchanged from its earliest form to its latest, that there was a conservative religious tradition among the Nabataeans (Patrich 1990:86).

Manat

Manat's name means 'fate' or 'portion'; as the goddess of human destiny, good measure, due proportion, and justice. She is identified with the Greek Nemesis, which whom she shares the attributes of a measuring-rod, a sword and a wheel of fate. She was

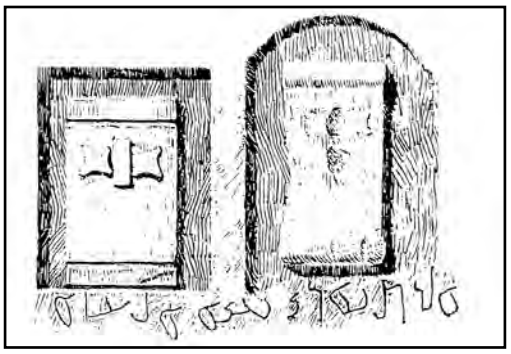

Figure 3.4. Al-Uzza and Al-Kubta (Healey 2001: Plate XV).

described as the 'goddess of goddesses' in a late third century BC inscription in north Arabia. There are a number of inscriptions to Manat, and representations of her in human form found in and around Palmyra. Manat's role is appropriate to the legalities of tomb ownership and the rights of burial. She is often invoked in tomb inscriptions to curse those who might violate the terms of use for the tombs. She is linked with Dushara and Qaysha. Iconography that is used to identify Manat includes the wheel of fate, found on a tomb façade at Hegra. The wheel is a rosette inscribed in a circle. Ma'at, the Egyptian goddess of truth, justice, and cosmic order (Wilkinson 2003:150) is associated with the Arabian Manat (David Johnson, personal communication 2007).

Allat

Allat, "the goddess" is the principal goddess of northern Arabia. She is the goddess Alilat that was mentioned by Herodotus. She is associated with Aphrodite, Athena, Atargatis, and Isis. Allat is mentioned in Lihyanite texts from the Hellenistic period at Dedan, just south of Hegra. From an inscription at her temple at Salkhad, Allat is also known as the "lady of the place" and as the "mother of the gods of our Lord Rabble [II]." Allat and her assimilation with the Egyptian Isis may have also been viewed as the mother of the male Egyptian child deity, Harpakhered (Greek Harpokrates) (David Johnson, personal communication 2007). Hammond argues that Allat was the goddess

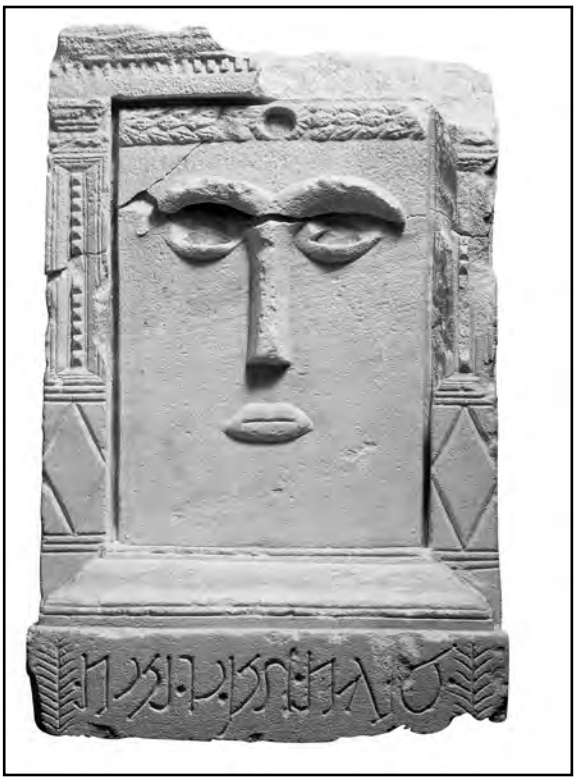

Figure 3.5. Al-Uzza from the Temple of the Winged Lions (Hammond 2003:246).

worshipped at the Temple of the Winged Lions at Petra (Hammond 1996). Healey (2001) reasons that if Allat were the goddess worshiped at the Temple of the Winged Lions that she would also have been the partner of Dushara, and thus the main goddess of Petra. However, Healey (2001) argues that since Allat is not named in any inscription at Petra, that she was most likely not the main goddess of Petra. Because Allat's association with the crescent moon symbol at 'Ain esh-Shallaleh, it is thought by Winnet (1940) that Allat was a moon deity. A niche located near 6-7 m high obelisks located on Jabal al Madhbah has an idol and pillars surmounted by crescent moons (Healey 2001:48; Dalman 1908:179-180) that are seen by Roche as evidence of a lunar cult (Roche 1995). If Allat is indeed connected with the lunar cult, then the stele on Jabal al Madhbah could be associated with her. Others, such as Dussaud (1955) and Ryckmans (1934) associate Allat with Venus, while Buhl (1936) and Fahd (1968) see Allat as a sun deity.

Niches Venerating Allat

There is a niche containing a stela of Allat, the goddess of Bostra at ‘Ain-Shellaleh, er-Ramm. This niche contains an inscription that says “This is Allat, the goddess of Bostra … which was made by Tim’alahy … the servants of the priest … in the month of Shevat, year . . . ” (Patrich 1990:57). Patrich provides a visual description of the niche that houses the stela of Allat:

> The stele of the goddess Allat of Bostra is inside a rectangular niche that is flanked by pilasters (III.8). The niche itself forms an aedicule, or canopy, above a rectangular pedestal. The upper part of the stela is spherical. The stele stands on a type of chair, or throne, whose arms extend upwards like horns [Patrich 1990:61].

At Mada’in Salih, Jaussen and Savignac discovered three major concentrations of niches. The first of these concentrations contains ten niches in the cliffs in the ravine that leads to the Diwan, and next to these is an idol that resembles Allat of Bostra from ‘Ain Shellaleh (Patrich 1990:62). In this stela, there is a lower section that may resemble a seat (*mwtb*) that, like the depiction of Allat at er-Ramm also contains horn-like appendages, and is topped by a stele with an elongated body and a spherical head. Patrich suggests that in the stele at Mada’in Salih, outstretched arms may have been added, but the workmanship is very crude, so it is difficult to tell (Patrich 1990:63).

Temples Associated with Allat

Wadi Rum was one of the most important centres of Allat’s worship, as there are inscriptions all over this area that refer to her. The Temple of Rum, built by Rabble II was dedicated to “Allat, the goddess who is at Iram” (Iram being the ancient name for Wadi Rum). Inside the temple a rectangular *betyl* and a fragment of a statue, possibly depicting Allat-Athena were found. This temple was built on an earlier foundation. Allat

was also venerated at ‘Ain Shellaleh, which is located a short distance from the temple. There is an inscription beside the spring, carved by masons who inscribed a prayer asking to be remembered “for good and for blessing.” Another major place of veneration for Allat was at the Hauran. There is a temple dedicated to Allat located at Salkhad that dates to AD 65 (Healey 2001).

Atargatis

Atargatis is the Syrian earth goddess who presided over vegetation, fertility, and water. Her main sanctuary is at Manbij (the Hierapolis of the Romans) in northern Syria, where she was worshipped together with Hadad, the Syrian god of heaven, rain, and fertility. There is a temple dedicated to Atargatis at Palmyra, Syria, however, this is only known by a Greek inscription, as the remains of the temple have not yet been located. Atargatis represents the Hellenistic version of all Semitic fertility goddesses in the region including Ishtar and Astarte whose attributes were combined with Aphrodite (Cynthia Finlayson, Personal Communication 2008).

Niches Venerating Atargatis

Atargatis, like Al Uzzah was depicted as an eye idol with eyes shaped to look like stars. Patrich mentions that stelae such as the eye idols vary greatly in height from 60 cm (like one found at Mada’in Salih) to 10 cm (this size is used more for portable figurines). In Petra Atargatis is represented in *betylic* form with square eyes whose inscription names her as ‘Atargatis of Manbij’ (Patrich 1990). Usually this goddess was represented in human form. Her *betyl* is carved on a rock that is near the main spring of Petra in Wadi Siyyagh (Figure 3.6).

It is necessary to provide this discussion concerning Nabataean deities, their attributes, representations, and foreign influences, because it provides a basis for

Figure 3.6. Atargatis at Wadi Siyyagh (Healey 2001:VIIb).

understanding the various deities that were worshipped within the cultic niches. A discussion detailing the findings of the survey, particularly with regards to *betyl* and niche shape, and any relationships between the two variables, as well as possible relationships between *betyl* or niche shape and orientation will be provided in Chapter Five.

4 THE NICHE IN THE NABATAEAN LANDSCAPE

INTRODUCTION

Niches are found across a wide variety of cultural contexts in Petra, including high places, temples, tombs, *biclinia*, *triclinia*, along processional routes, and sanctuaries. The discussion to follow addresses these various areas, and how niches appear in them. In the 2007 BYU Wadi Mataha Field Survey, niches were recorded in four designated areas of Wadi Mataha, as well as a few select areas outside of Wadi Mataha, such as Wadi as-Siq, Sadd al-Ma'jan, ad-Deir, and Beidha (see Figure 1.5). The surveyed areas also encompassed a range of geographical contexts, including canyons, mountain sides, rock outcroppings, and wadi valleys. Cultural and geographical areas such as these in what was once the Nabataean Kingdom comprise what I shall term the 'Nabataean Landscape.'

NICHE CONTEXTS

High Places

The Nabataeans worshipped on high places which are areas that are elevated above the surrounding landscape, oftentimes located on mountain tops. One particular high place located on the summit of Jabal al-Khubtha contains a complex of courtyards, altars, feasting areas, water basins and a huge vaulted cistern. This sanctuary is located at the end of a processional route that contains installations for sacrifices, sacred meals and water for a larger group of people.

The high place of sacrifice on the mountaintop of Jabal Madhbah is a well-known

sanctuary, and typifies the architectural features that are found on high places (Figure 4.1). This sanctuary is reached from a series of eight processional stairways located along the side of the mountain. The leveled platform, cut into the bedrock at the top, is rectangular, measuring 14.5 m long by 6.5 m wide and 20 cm deep. In the center of this platform is a raised rectangle. In the middle of the western side of the platform three steps lead to the top of a pedestal in which there are two possible slots for *betyls*.

Funerary Contexts

Funerary complexes vary in complexity in the number of architectural features present. An inscription from the Turkmaniya Tomb in Petra provides an excellent description of the various architectural features that are included in funerary complexes:

> "This tomb and the large burial chamber within it and the small burial chamber beyond it, in which are burial places, niche-arrangements, and the enclosure in front of them and the porticos and rooms within it (that is the enclosure) and the gardens (?)and triclinium garden(?) and the wells of water and the cisterns (?) and walls and all the rest of the property which is in these places are sacred and dedicated to Dushara, the god of our lord, and his sacred throne and all the gods, (as) in the documents of consecration according to their contents. And it is the responsibility of Dushara and his throne and all the gods that it should be done as in these documents of consecration and nothing of all that is in then shall be changed or removed and none shall be buried in this tomb except whoever has written for him an authorization for burial in these documents of consecration forever" [Healey 1993:238-239].

Tombs may be carved into the bedrock as a single loculus (tomb shaft) or as several loculi located in a constructed tomb structure.

Patrich notes that "the stelae from Qasrawet, the Uvdah Valley, and Wadi Shellaleh are not directly connected with tombs or a funerary cult and are not memorial stelae" (1990:69). Patrich further mentions that:

> there is a definite distinction between niches with stelae and the tombs themselves. The niches at Mada'in Salih are concentrated in three centers that

Figure 4.1. The High Place of Sacrifice.

> are removed from the tombs themselves. At Petra the niches also are generally grouped together and are unrelated to the graves. Dalman has remarked that none of the one-hundred and eighty stele idols he counted were found inside a rock-cut chamber that could clearly be identified as a burial chamber [Ibid.].

However, in his footnote, Patrich disagrees with Dalman by providing an example from a rock-cut chamber with burial shafts cut into its floor and an interior wall into which three niches have been cut, each containing a stele. Patrich also references a niche containing a stele that was cut into the façade above a tomb at Mada'in Salih. Also at Mada'in Salih, there is another tomb with a niche containing a stele to the left of the tomb (Ibid.). He also suggested that the very presence of niches for stelae in such chambers might indicate that the latter were used for cultic rather than burial purposes.

Stelae are sometimes found in proximity to, although generally not inside, a tomb. According to Dalman, this phenomenon is related to the Nabataeans' strict adherence to purification laws. Those laws required the separation of a burial place, which defiles,

from a cultic place, in which one must be pure. Patrich notes that scholars must make a distinction between a rock-cut relief intended as an idol, and one intended as a memorial marker for the dead (a *nefesh*) (Patrich 1990:70). In the ground survey of Petra, I recorded a number of niches that were associated with tombs (see Appendix A).

At Mada'in Saleh, a Nabataean site in present-day northern Saudi Arabia, there are multiple funerary complexes with niche installations. One of the areas within Mada'in Saleh is called Jabal Ithlib, which is located to the north-east of the tombs of Mada'in Salih, contains cult-niches that are associated with the tombs. Healey describes Jabal Ithlib as "a line of precipitous rocky summits surrounding a central hollow approached through a narrow gorge, called, by analogy with the much longer gorge at Petra, the Siq" (Healey 1993:9). The Diwan, which is a large triclinium that measures 10 m wide and 12 m deep, is located at the entrance to the gorge. This monument is the only triclinium at Mada'in Salih. This triclinium differs from typical *triclinia* at Petra because it has a completely open front. Healey notes that such openness suggests that it was used for a large number of people (Healey 1993). In an inscription beside a cult-niche opposite the Diwan at Mada'in Salih, the god Shay'-Al-Qawm is mentioned.

John Healey notes that cult-niches are very numerous at Jabal Ithlib in Mada'in Salih, and he speculates that the open areas (open air sanctuaries) in which cultic niches are located must have been used for religious rites (1993). To the left of the central area of Jabal Ithlib, there is an inscription that may refer to the banqueting ritual called *mshkb'*. One inscription above a niche in the gorge leading to the central area on the left near the Diwan end is dedicated to the god A'ra, the god of Bosra (Healey 1993). Jaussen and Savignac suggest that the open area is a natural *haram* (an Arabian sacred area) because of the presence of cult niches (Healey 1993; Jaussen and Savignac 1909). Concerning the cult of the Jabal Ithlib complex, Healey notes that:

> On the opposite side of the central hollow, there are steps leading to a narrow gully and past more niches (with ritual basins), to the smaller plateau which may be described as a low 'high place'. Certainly, the very prominent stone pillar carved on the rock-face (with stylized eyes and nose), surrounded by graffiti, must have been the focus of a significant part of the cult of the Jabal Ithlib complex [Healey 1993:10].

Healey speculates that this statue represents the goddess Al-Uzza because of parallels at Petra and Wadi Rum.

One sanctuary at Mada'in Saleh is a rock which had been hollowed out to form an open-fronted room facing Jabal Ithlib. Inside of this room are niches and inscriptions, one of which may refer to a statue in one of the niches. There is a way to climb to the roof of the sanctuary where there are carved installations. Concerning the niches and stelae at Mada'in Saleh, Healey states that:

> Many niches contain carvings of plain, stone pillars representing Dushara, sometimes with additional pillars representing the deities associated with him. The use of the pillar, usually without any facial markings is typical of the Nabataeans. It reflects a reluctance, shared, (notably with the Jews and later Muslim Arabs), to make images of a god in human form. Instead the Nabataeans used a plain carved stone block to represent the god's presence, or his throne might be depicted (see Chapter One, Figure 1.1). The base or throne (*mwtb*) was worshipped as a distinct object of veneration. The god himself, being spiritual, could not be portrayed. That these pillars did represent gods however is very clear from some instances in which a stylized face is carved on the block, or at least markings of eyes and nose. There are pre-Nabataean examples of this from Tayma, while Nabataean examples are found in the high place of Jabal Ithlib and at Petra, including one from a temple which is inscribed and depicts Al-Uzza. Under Greco-Roman influence statues of gods were produced, but as yet there is no trace of this at Mada'in Salih [Healey 1993:34-35].

Healey notes that high places are not common in Mada'in Saleh. One high place, however, was identified at the base of Jabal Ithlib by Jaussen and Savignac (Healey 1993:35). Healey notes that religious meals seem to have had some importance at Mada'in Saleh. Such meals were attested of by Strabo. Strabo states that "They prepare common meals together in groups of thirteen persons; and they have two girl-singers

for each banquet. The king holds many drinking bouts in magnificent style, but no one drinks more than eleven cupfuls, each time using a different golden cup. The king is so democratic that, in addition to serving himself, he sometimes even serves the rest himself in turn" (Geography 16.4.26). The *Diwan* at Mada'in Saleh is a triclinium. Healey notes that "at Petra, the cults of *triclinia* appear to have been related to the dead and the divinized king, Obodas, but at Hegra there is a clear separation between the tombs and the religious area of the site where the *Diwan* triclinium is located" (Healey 1993:35-36). A cult-niche in the *Diwan* is called a *masgida* in Aramaic. In Arabic, *masjid* literally means "a place of bowing down" to the god; however, the word can also mean "sanctuary" (Healey 1993:36). Eighteen niches, one of which contains a rock figure and another containing an altar and a plaque are in the Central Area of Jabal Ithlib. These eighteen niches do not include the niches in the three cult niches in the central area of Jabal Ithlib.

A. Jaussen and R. Savignac discovered three major concentrations of niches at Mada'in Saleh (Jaussen and Savignac 1909:405-441). One of these concentrations contains ten niches that are located in the cliffs of the ravine that leads to the Diwan. Next to this grouping is an idol that resembles the idol of Allat of Bostra from 'Ain-Shellaleh (Patrich 1990:62). (For a description of this idol, see Niches Venerating Allat in Chapter Three). There is a second concentration of nine niches that is close to the Diwan in the interior of Djbal Etlib. A third concentration of twelve niches is located south of the interior of Djbal Etlib. All together, Jaussen and Savignac describe thirty-one niches, although there are more, including a few west of Mada'in Salih, near Djbal Huweira (Patrich 1990:63).

Nabataean Temples in Petra

Although there is no typical Nabataean temple plan, there are some common themes in temple construction (Healey 2001; Patrich 1990:45). Healey notes that Nabataean temples of the late 1st century B.C. to the 2nd century A.D. share in common:

> the feature of an elevated platform in the cella of the temple reached by steps. Sometimes the temple is divided into three sections, of which the cella is the most enclosed (Qasr el-Bint, Dharih). The raised platforms sometimes show evidence of arrangements for steles or statues, while dividing walls, which are often plastered and painted, sometimes support engaged columns and contain niches which might also have contained steles or statues [Healey 2001:74].

It is interesting that a number of niches recorded in the 2007 survey of Wadi Mataha shared a few of the same characteristics in construction as Nabataean temples. A number of niches were accessible by a small number of steps. At the top of these staircases, a platform is often located just below the niche. (see Chapter Five for the specific niches that were recorded in the field survey that are associated with stairs, as well as a detailed description of these niches).

Niches are also found associated with Nabataean temples, so it is important to understand this association. Three Nabataean temples located inside of Petra, as well as two Nabataean temples located outside of Petra will be described below, including, architectural components, iconography, and orientation, as well as a discussion concerning the niches that are located inside each temple compound.

The Temple of the Winged Lions

The Temple of the Winged Lions, dating to AD 26/27 and the reign of Aretas IV is oriented to the south-south west. Healey provides the following physical description of the temple:

> A complex of terraced colonnades led the eighty-five meters from the street and bridge to the main part of the temple, which was fronted by an arched portico *in antis*. The square cella (17.5 m by 17.5 m) is laid with a decorative marble floor and has engaged and free-standing columns (also decorated) forming an ambulatory . . . around a central altar podium about 1.3 m high, also surrounded by columns, and accessed by two sets of steps [Healey 2001:42-43].

The cella was very small, not providing enough room for a large congregation of people, which led Hammond to suggest that this temple was the site of a mystery cult featuring Allat with Isiac connections (Hammond 1990).

The Temple of the Winged Lions was probably dedicated to a female deity – evidenced by its later association (post Nabataean period) with Aphrodite, as well as the presence of an eye idol found within the temple. Healey notes that Isis "took on the role of the supreme goddess, absorbing features of other supreme goddesses and the characteristics of her "sister" al-Uzza . . ." (Healey 2001:43). Another possible female deity worshipped here is Al-Uzza/Atargatis, because Al-Uzza is the (possible) principal goddess of Petra. Allat is another possibility, because of the Isiac motifs including the link with Osiris as there are clear Isis-Osiris connections in the iconography of the temple (Healey 2001). Hammond concludes that Allat was probably the deity worshipped at the temple (Hammond 1996).

Niche Occurrences at the Temple of the Winged Lions

Philip Hammond noted a number of niches (*aediculae*) were built into the interior walls of the Temple of the Winged Lions "in the spaces between the engaged wall columns" (Hammond 1996:33). Hammond observed that these niches were similar in construction to the "indented panels between pilasters on the outer face of the temple at et-Tannur . . . and were similar to the exterior niches seen on Nabataean tombs, as well as common in interior decoration throughtout the Hellenistic-Roman world (e.g. the Temple

of Bacchus at Baalbek, but differently treated here)" (Hammond 1990:33-34; Glueck 1965:621). Hammond speculates that because a number of cultic objects such as the eye idols and the Osiris figurine on the Egyptian funerary stele were recovered in spots that indicate that they fell from the walls during the earthquake of A.D. 363 that these items were originally housed in the surrounding niches (Hammond 1990:33).

Hammond assumes that there was a standard panel border employed in the decoration of the niches (Hammond 1996:68). Concerning the niche framing, Hammond notes that there was uniformity in niche framing because of the frequency of the design "proceeding from the top edge, the mouldings showed a fascia in blue, a cavetto in red, a rounded fillet in white, the type "C" design [Lozenge-and-Circle], the panel with the painted fresco on white, with a lower moulding consisting of a rounded fillet in blue, a cavetto in white, and a blue fascia" (Hammond 1996:72, 76). Hammond noted that the niches at the Temple of the Winged Lions show signs of fresco scenes painted on their rear walls that were later replaced by colored panels (Hammond 1996). In his description of the frescos, Hammond noted that some of the fresco fragments from the aedicule depict "mystery scenes" that are similar to scenes found in the House of the Mysteries at Pompeii (Hammond 1996:11). There was also a "poorly preserved painted bust still in-situ in the aedicule next to the entrance, on the Southwest side of the temple . . . (Hammond 1996:12). Hammond noted that he is uncertain "whether this represented a monarch, a deity, or a donor . . . since its preservation was so poor when recovered" (Ibid.). Fortunately, Hammond provided a detailed physical description of the niches, which, because of its importance to this thesis, I shall quote in its entirety here:

> Because of the slight variations in intercolumnar placing of the engaged wall columns, the niche widths correspondingly varied, from ca. 93.5 cm > 1.42 m in width and varied from ca. 32 cm > 52 cm in depth, depending on location, with those in the north wall somewhat wider. Flat flagging was used to provide

> bases, varying from ca. 84cm. > 1m. in length, by ca. 45 cm > 52 cm in width, and ca. 8.5 cm > 10 cm in thickness. The single example with moulding partially intact, in the Southwest corner, measured 1.36 cm, with its panel measuring 1.19 cm wide. The niches were constructed by simply reducing the wall thicknesses, beginning up to ca. 1.84cm > 2.13cm from the floor level, with the exception of the South Wall examples, which began just above floor level, apparently to accommodate "portrait" frescos. . . . The niche area at the southwest end of Wall #3(13)S, also showed a difference form the others, in that a plinth-like "bench" had been constructed between the engaged columns of the niche area. This addition was possibly done during the remodeling of the niches and its purpose is obscure, other than an obvious use as a seating device. Because of the wall weakness thus introduced, no data regarding the height, nor upper treatment, of the niches remains, with those on the East wall having been destroyed to the level of the ledge slabs, and those on the other walls partially destroyed. However, on the basis of reconsructable fragments of the plaster side mouldings . . . , it is probable that the niches were simply finished by a horizontal lintel, rather than any arcuation. The niches were outlined with plastered mouldings . . . the only partially preserved examples in-situ being that around the remains of the Southwestern corner niche, which also had a badly preserved fresco on its rear wall, showing a possible male bust . . . . Fragments of other mouldings were also recovered in the earthquake debris from the less destroyed West wall area, permitting some degree of reconstruction of both form and colors used . . . [Hammond 1996:34].

The Great Temple

This temple is located on the south side of the main thoroughfare to the center of Petra. There is much doubt about the function of the building (Joukowsky 2003:219). Joukowski and her team in future seasons will test several hypotheses to explain and understand the function of the building. These hypotheses are as follows:

> It was a temple or a theater-temple, or 2) it served as the civic center for Petra in the Nabataean and Nabataean-Roman periods. In the latter capacity it functioned as either: a) a *bouleuterion* (council chamber), where the *boule* (city council) met or as a *comituim* or *curia*, a Roman political meeting place; b) an *odeum,* or small concert hall, or c) a law court, council chamber, audience hall, or meeting hall" [Joukowsky 2003:219].

The building complex includes an enclosure with a monumental *propylaeum*, a stairway leading up to the upper *temenos* with a hexagonally paved forecourt (Healey 2001).

The building plan seems to follow the plan of a temple with peristyle columns *in antis*. The open-air theater is the dominant and central architectural element of the structure (Joukowsky 2003). Originally, the structure would have stood 19m high with a ground plan measuring 28m by 42m (Healey 2001:44). Healey also mentions that the structure was covered in red and white stucco (Ibid.). Unique sculpture from this temple includes elephant-headed volute capitals. This temple dates to the mid to late 1st century B.C. with major rebuilding occurring in the mid to late 1st centry A.D. In the rebuilding phase of the temple the theatre was built into the complex (Joukowski 1997; 1998). An oval niche which is flanked by two small staircases is located in the center of the wall facing the *cavea*.

Qasr el-Bint

Qasr el-Bint was in use from the late first century BC to well into the Roman period (Healey 2001:40; Niehr 1998:223). The temple is a square in shape, measuring approximately 32 m by 32 m. In the front of the temple, there is a piazza which broadens out to accommodate a square space that is surrounded by porticoes that may have acted as a public viewing area (Healey 2001). At the center of this space, there are the remains of an outdoor altar with steps on the side facing the temple (Ibid.). Hammond provides the following physical description of the temple ". . . the temple consists of a podium, oriented north-northeast, on which a (semi-) peripteral almost square cella and in-antis pronaos (ca. 20.72 m by 20.16 m) were erected, approached by an axial stairway, with a second story, reached by stairways contained in the (rear) cavity wall" (Hammond 1996:87). Patrich speculates that it is probable that the central shrine of the temple, the cella, with its cult image or images, could be seen from outside and the outdoor altar is aligned with it (Patrich 1990). The entrance to the temple "looks towards the mountains

north of the city and may have some religious significance" (Parr 1967-68:18-19). This temple is located at the end of the public street that runs through an elongated piazza about two hundred meters in length.

The identity of the deity that was worshipped at Qasr el-Bint is debatable; however, Healey offers a number of possible candidates. The first of these is Dushara, because he was the principle god of the Nabataeans. Hammond also supports this idea (1996:87). However the only epigraphic evidence for this comes from the post Nabataean period in an inscription that references Zeus Hypsistos (Healey 2001). There is also a Greek inscription on an altar that probably comes from inside the temenos dedicated to Zeus Agios-Dushara, which may be of Nabataean date.

Another possibility is a god of heaven of the Helios type, because of sculptural remains that were found at the temple. Wenning and Merklein (1997) are the main proponents of this theory. Al-Kutba or Atargatis are other possibilities because of the eye-idol remains found at the temple. Zayadine and Farajat (1991:293-295) have suggested this**.** Aphrodite has also been suggested because of possible Aphrodite figurines from the temenos and because of a fragmentary Roman-period Greek inscription which may refer to Aphrodite. Zayadine and Farajat (1991) have also suggested this possibility. Zayadine, Farajat, Wenning, Merklien conclude that Dushara and al-Uzza / Aphrodite were worshipped at Qasr el-Bint. There is a niche on the exterior of the south wall of the Qasr el Bint. The niche is located in the center of the wall. Architectural components include two pilasters supporting a double plain entablature, which is crowned by a triangular pediment. This physical description was taken from a drawing in McKenzie (1990: plate 74). The detail is not good enough to determine the pilaster base or capital types.

Nabataean Temples Outside of Petra in Central Nabataea

Khirbet et-Tannur

Khirbet et-Tannur was a major Nabataean pilgrimage center (see Figure 2.1). This temple is oriented to the west with the temple gates oriented to the east. Francois Villeneuve and Zeidoun al-Muheisen (2003) speculate that because of these orientations, the temple was probably used in pilgrimages associated with the sunrise or sunset, and that these pilgrimages may have only taken place at the equinoxes, "with essential phases of the cult at sunrise, at midnight, or at sunset. This fact is hardly surprising, considering the abundance of astral symbols in the sculpture of Tannur" (Villeneuve and al-Muheisen 2003:87). Stracky suspects that the temple was dedicated to the Edomite god Qos because of his prominence at the Temple (Starcky 1968: 208-10, 225-34). Glueck, however, feels that Tannur was dedicated to Dushara in the form of Zeus-Hadad (Healey 2001; Glueck 1965:86). Qos is shown flanked by a bull and an eagle and carrying a thunderbolt, which also identify him with the Syrian Hadad, and Baalshamin. Fragments of figures representing deities such as Aphrodite-al-'Uzza, Helios-Baalshamin, Hermes, Jupiter, and a Tyche figure encircled with Zodiac figures were also recovered from Glueck's excavations (Glueck 1970; Healey 2001). The tower-altar has a lot of Syrian-Phoenician characteristics. An earlier altar at the center of the stone-paved temenos with four *triclinia* around its outer edge for ritual feasts is an enclosed 2-meter-square building with an arched entrance on the east side, finely decorated with carved thunderbolts and foliate designs. A paved courtyard measuring about fifteen and a half meters by fifteen and a half meters is porticoed on the north and south sides. Inside of the courtyard, there was an altar, as well as *triclinia* attached to the north and south sides (Healey 2001:60).

Niche Occurrences at Khirbet et-Tannur

The square-shaped inner sanctuary of the temple contains niches that are located on either side of a doorway which is also flanked by engaged columns. The niches are decorated with "an elaborate architrave incorporating female heads" (Ibid.). There is an image over the doorway of a vegetation deity that Glueck has identified as Atargatis (Ibid.). Villeneuve and al-Muheisen (2003) discuss the construction phases of the platform within the central inner sanctuary (Figure 4.2). The shrine originally measured 1.5 m square with a height of 1.75 m, however, during later construction phases:

> The platform in the sanctuary was enlarged, and, that "after the first enlargement (2 m square, height 2.61m) it resembled a cultic niche, one furnished with a stairway providing access to its top. The niche façade . . . was adorned with a crude cult image depicting two seated deities, one bearded male divinity bearing a thunderbolt (thus a Nabataean equivalent to Zeus, better identified as the main god Dushara than the Syrian Hadad), and a female deity completely destroyed except for one of her feet, and a lion-throne support with adjoining lower garment [Villeneuve and al-Muheisen 2003:99].

Villeneuve and al-Muheisen (2003) place the date of this construction phase of the shrine to about the late first century BC. This cultic feature was enlarged (3.5 m square with a height of 3-4 m) during a later phase of construction, which McKenzie dates to the third century (McKenzie, Gibson, and Reyes 2002:60; Villeneuve and al-Muheisen 2003:99). During this later phase, there were still stairs that went to the top of the niche; however, a small recess feature was added to the back of the shrine. Villeneuve and al-Muheisen (2003) speculate that this recess was used similarly to a recess to a recess found in the angle staircase in the Dharih temple. The recess in the temple at Dharih was used as a cupboard for utensils of the cult (Ibid.).

Khirbet edh-Dharih

The Nabataean temple of Khirbet Adh Dharih contains a great deal of zodiac

related iconography, suggesting that this temple served the purpose of celebrating the main festivals in the Nabataean calendar. Khirbet edh-Dharih is oriented north-east. Villeneuve and al-Muheisen (2003) point out that in February, a special celebration was held on a day when "sunrise and sunset are on the line perpendicular to the axis of the temple (there are also astral symbols at Dharih . . .), but we may guess that the orientation of the temple and of the whole sanctuary complex was guided mainly by the natural features of the ground at the spot" (Villeneuve and al-Muheisen 2003:87).

Decorated panels contain geometric, floral, and cultic scenes that have Dionysian themes. Because of the Dionysian themes, the excavator believes that edh-Dharih was dedicated to fertility (Hammond 1996:91). The decoration of the temple is Late Hellenistic in style. Niches or windows were built above the large central door. There is a platform/*mwtb* in the temple which has a slot for a single *betyl* to be held. In a remodeling of the temple in the 2nd century, two more *betyl* slots were added. Stuccoed niches adorned the interior façade of the temple (Villeneuve and al-Muheisen 2003:87).

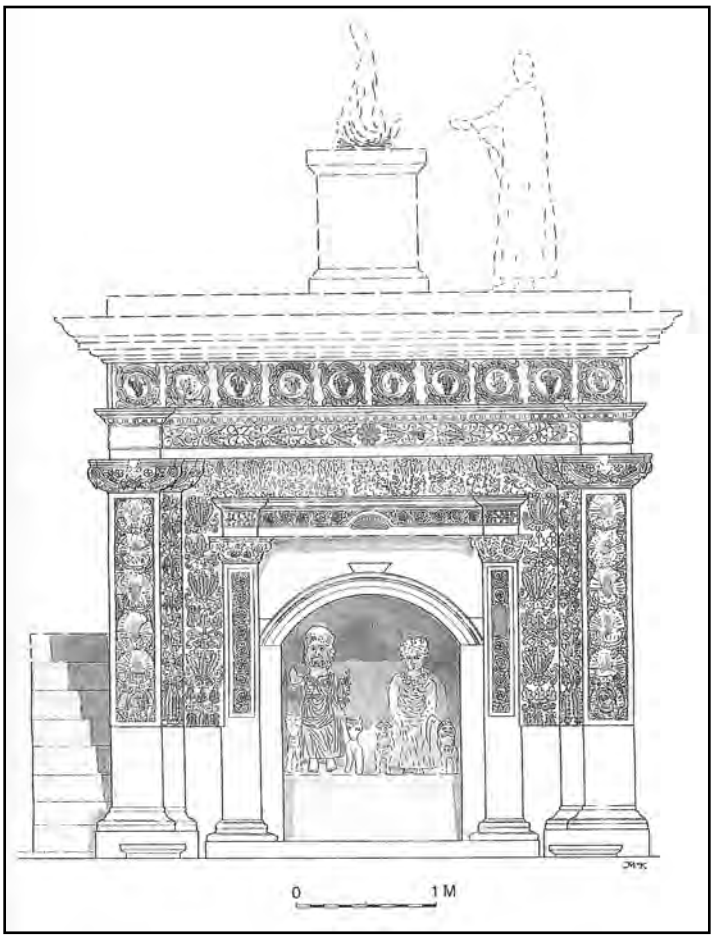

Figure 4.2. Khirbet et-Tannur platform (Villeneuve and al-Muheisen 2003:188).

5 SURVEY RESULTS AND NICHE ANALYSIS

GEOGRAPHICAL CONTEXT

The field survey at Wadi al-Mataha lasted for three weeks between June 4th and June 22, 2007. The main objective of the survey was to find, record, and interpret Nabataean cultic niches as part of a research designed that proposed purposes of niche variation. A typology was also developed that identified common façade motifs in Nabataean cultic niches.

The survey area was initially divided into four separate and distinct areas of study, designated A, B, C, and D (Figure 5.1). These areas were established in order to survey across a wide range of geographical regions in Wadi al-Mataha. Area A consisted of Wadi al-Mataha, the major drainage separating Jabal al-Khubtha from the rock outcroppings to the north-east and north-west of Jabal al-Khubtha (UTM coordinates 735550 East and 3358100 North and continued to the northeast at UTM coordinates 736300 East and 3358700 North). Area B consisted of a small wadi flowing into the main Wadi al-Mataha from the north as well as the rock outcroppings that surrounded it in Mughur an-Nasara (UTM coordinates 735750 East and 3358400 North) and continued northeast at UTM coordinates 735950 East and 3358700 North. Area C consisted of a minor drainage flowing into Wadi al-Mataha from the north as well as the rock outcroppings in the area of the Mughur al-Mataha (UTM coordinates 735750 East and 335900 North) and continued southeast to where the minor drainage in Mughur al-Mataha meets with Wadi al-Mataha at UTM coordinates 736100 East and 3358550 North.

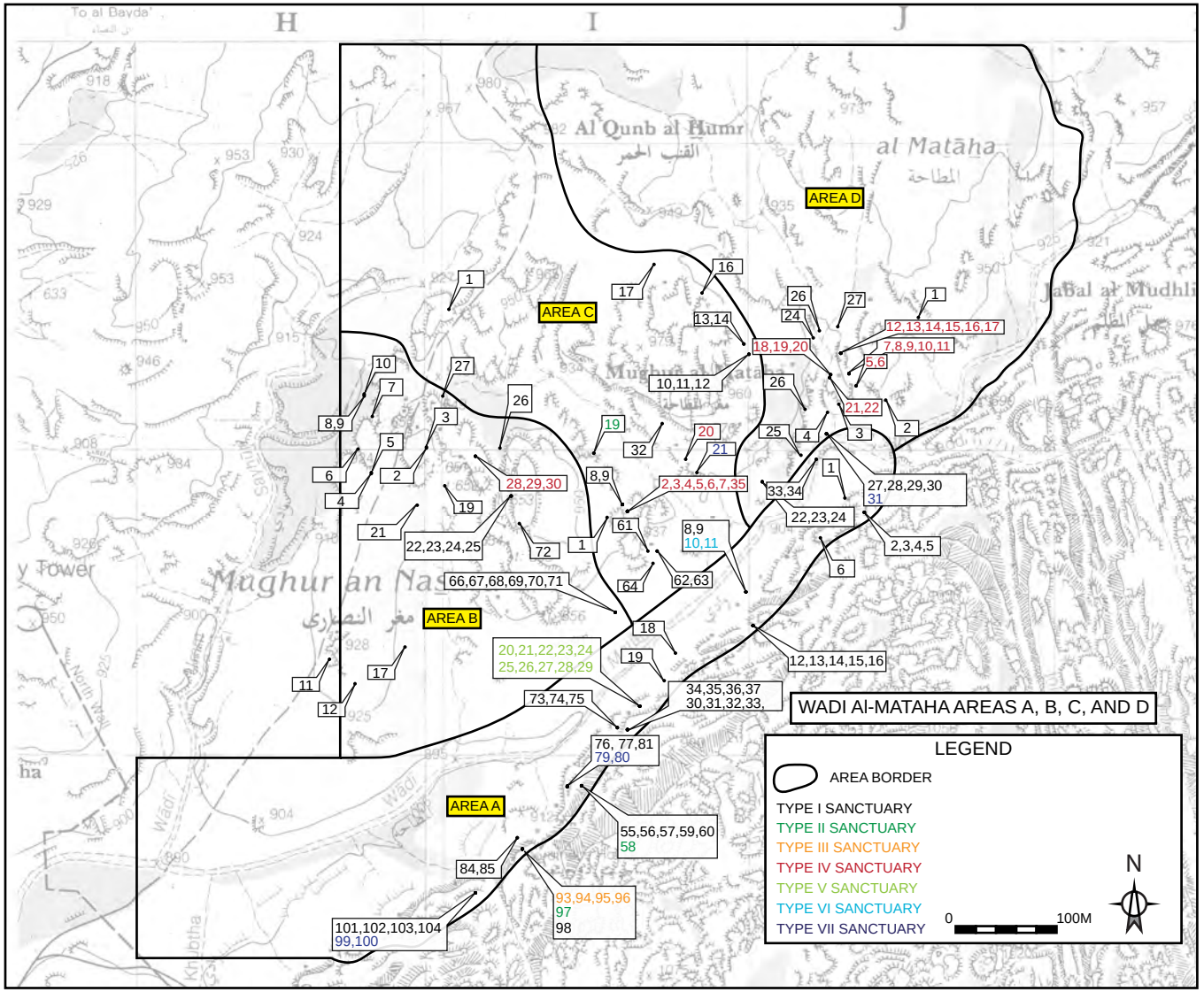

Figure 5.1. Map of Wadi al-Mataha Areas A, B, C, and D and plotted niches (2005 Royal Jordanian Geographic Center (1/5000)

Area D consisted of two minor drainages flowing into the Wadi al-Mataha from the north as well as the rock outcroppings in the areas of Al-Qunb al-Humr and al-Mataha. Area D was bounded by Jabal al-Mudhlim to the southwest (UTM coordinates 735950 East and 3359100 North) and continued south where the two minor drainages converge and flow into Wadi al-Mataha (UTM coordinates 736150 East and 3358650 North) (Figure 5.1).

In addition to the areas in Wadi al-Mataha, Sadd al-Ma'jan, Bab as-Siq, "Little Petra" in Beidha, and the processional route to Ad-Deir were also surveyed (Figure 1.5). Sadd al-Ma'jan was surveyed up to the point where it joins with Wadi al-Mudhlim. For further clarification, the area boundaries were noted in thick black lines on a general map of Petra and on a map published by the Royal Jordanian Geographic Center (figures 1.5 and 5.1, respectively). Other niches that were included in this study, but not a part of the ground survey included the niches in Mada'in Saleh. There were several limitations to using niches that I did not personally record. For example, since I was not personally able to be on site at Mada'in Saleh, I was not able to record their orientations, sizes, UTM coordinates, and in some cases, any associated features. However, I had photographs available from Mada'in Saleh, so I was able to include these niches in my analysis of the architectural details in the Stylistic Typology of niche facades (Chapter Five).

SAMPLING METHODS

I selected niche data from three very different cultural contexts. These included funerary edifices, processional routes, and temples. Wadi al-Mataha was chosen as the primary survey area because of the number of funerary features and cultic installations built there by the Nabataeans. The niches from Mada'in Saleh and Beidha, like the niches from Wadi al-Mataha, were chosen because of its profuse number of funerary and cultic installations. Wadi as-Siq and the processional route to ad-Deir were chosen because they were all processual routes, and because there were also cultic

features located along the routes. All areas were chosen because they provided varied geographical and cultural contexts in which Nabataean cultic niches were constructed.

SURVEY METHODS

Each of the four survey areas in Wadi al-Mataha were systematically investigated for cultic niche features. One-hundred percent of the areas surveyed in Wadi al-Mataha were covered. Survey crew members included Dr. David Johnson, Dr. Ron Harris, Heather Bullock, Deborah Harris, and Holly Raymond.

The recording process included taking photographs of each cultic niche, recording their orientations, architectural styles, iconography, any accompanying inscriptions, shape, size when at an accessible height, as well as their UTM coordinates when it was possible to obtain them. Any notable geographical landforms or cultural features that were associated with niches were also recorded. All of these variables were recorded in the field using Excel spreadsheets (see Appendix A), in which I utilized a numbering system to numerically order the niches found in each area. Each area of Wad al-Mataha, as well as Sadd al-Ma'jan, Bab as-Siq, the processional route to ad-Deir, and the wadi running through Beidha has their own sequential numbering system. Where I could identify cultic niches recorded by Dalman (1908), Roche (1985), and Johnson et al. (1999) I noted these using their respective numbering systems (see Appendix A).

In many cases, niches were inaccessible without climbing gear; therefore I was not always able to measure the dimensions of a niche or accompanying *betyl*. I could not always get GPS coordinates for niches. Such cases included niches located in a narrow slot canyon or in an enclosed room. In these cases, GPS readings were taken in the nearest area to the niche where satellites could be accessed by the GPS unit, such as directly outside of an enclosed room, or as in the case of al-Beidha, Bab as-Siq, or Saad al-Ma'jan, a GPS reading was taken from the canyon entrances. The following is a

listing of the variables that were recorded in the field survey.

RECORDED VARIABLES

In the BYU 2007 field survey, I located each niche with a global positioning system when possible, using the European Datum 1950. In addition, I also noted the size (for the niches that were at an accessible height), shape, cardinal orientation, *betyl* or interior niche presence, iconography, façade ornamentation, and architectural features such as stairs, steps, platforms, *triclinia*, libation pools, cisterns, and/or water channels associated with the niches. For the niche sanctuaries, I noted how they were arranged geographically in relation to the surrounding landscape. The following is a discussion of each variable that I recorded in the survey.

Orientations

Oftentimes, the orientation of certain structures or features, especially those with religious connotations is meaningful. In the 2007 BYU Field Survey, the cardinal orientation of each niche was recorded to aid in the possible identification of a deity or a certain divine aspect. The cardinal direction in which the opening of the niche faced was considered to be the orientation of the niche. In order to measure the orientation of the niche, I stood with my back against the niche, and using a compass with the declination set to two degrees, I read the cardinal direction off of my compass. When taking the orientation of each niche, I found it unnecessary to use compass degrees, as they were not available to the Nabataeans at the time they constructed the cultic niches. Instead, I used the cardinal directions, north, north-north east, northeast, east-north east, east, east-south east, southeast, south-south east, south, south-south west, southwest, west-south west, west, west-north west, northwest, and north-north west. From these, I grouped the niches according to the four primary cardinal directions: north, east, south, and west. With the

remaining cardinal directions, I created four sub categories: northeast, which includes north-north east, northeast, and east-north east; southeast, which includes east-south east, southeast, south-south east, southwest, which includes south-south west, west-south west; and northwest, which includes west-north west, northwest, and north-north west.

Size

In the field survey, the size of each accessible niche was noted. Many of the niches were located in inaccessible areas; therefore, all of the measurements included in this survey are for niches that were at an accessible height. With proper funding, future niche surveys may be able to solve this problem by the use of climbing gear to access each niche and get accurate measurements. Another difficulty in obtaining measurements was that some of the niches were eroded or partially buried in sediment. When this occurred, I took measurements from the known sides. For instance, when a niche was partially buried in sediment, I took measurements for the width and depth of each niche, but I did not take measurements for height, as part of the height was not visible. Measurements of the height, width, and depth of the interiors of the niches were taken using the metric system.

Shape

In the 2007 field survey, the shape of the niche interior was considered to be the niche shape. The majority of niches in this survey were rectilinear; however, there were also many niches that were arched. Less common niche shapes included square, circular, basin-shaped, apse-shaped, mushroom-shaped, T-shaped (niches that resemble the English capital letter "T"), Bottle-shaped niches, tear-drop shapes, and one arched niche shape that resembled a beehive (see figures 5.2 through 5.13). The "beehive" shaped niche is most likely the representation of an arched sanctuary/niche with a *betyl* and accompanying stairs, like those that are found on some Nabataean coins (see Figure 3.2).

Figure 5.2. Examples of rectangular (vertical) niches in Area A (in a structure containing Niches 20-29) .

Figure 5.3. Example of rectangular (horizontal) niche in Area C (Niche 2).

Figure 5.4. Example of an arched niche in Area B (Niche 29).

Figure 5.5. Example of a square niche in Area D (Niche 22).

Figure 5.6. Example of a circular niche in Area A (Niche 2).

Figure 5.7. Niche basin in Area A (Niche 50).

Figure 5.8. Apse niche in Wadi as-Siq (Niche 14).

Figure 5.9. “T”-shaped Niche in Area A (Niche 43).

Figure 5.10. Mushroom-shaped niche in Sadd al-Ma’jan (Niche 52).

Figure 5.11. Bottle-shaped niche in Sadd al-Ma’jan (Niche 53).

Figure 5.12. Tear-drop-shaped niche in Area A (Niche 102).

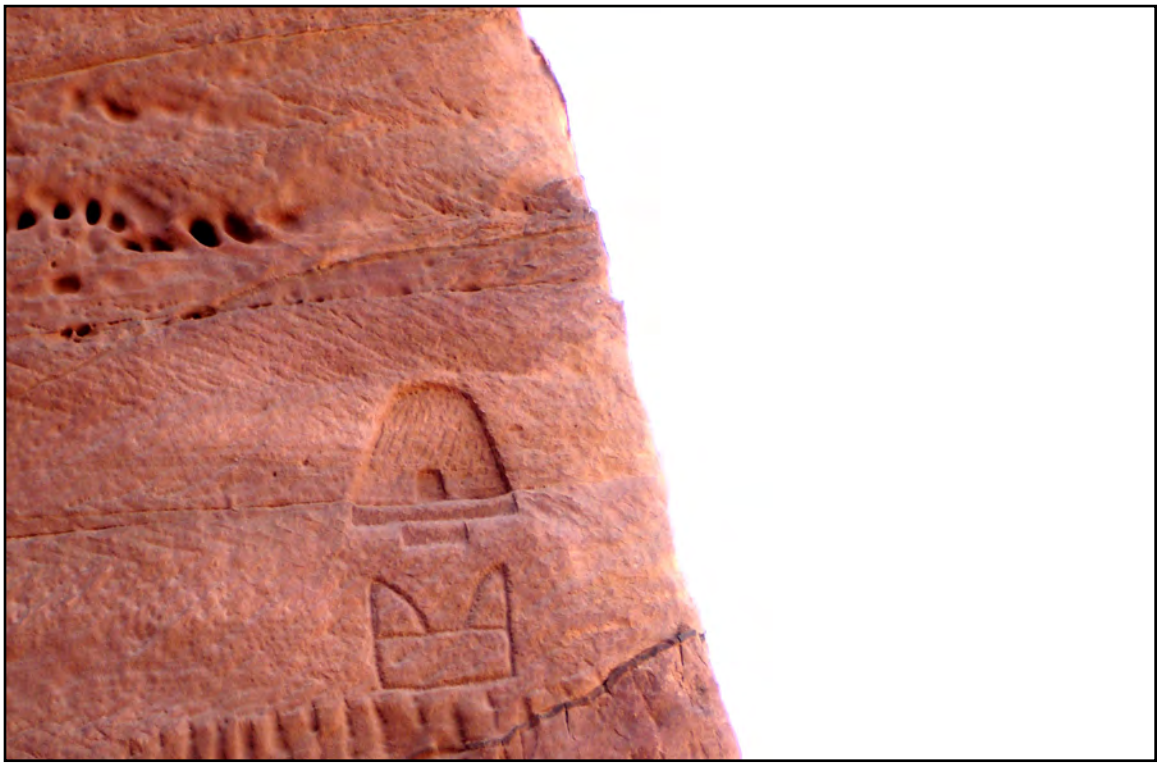

Figure 5.13. Arched Niche with Horned Altar in Area B (Niche 9).

Betyl or Interior Niche Presence

Patrich (1990:76) discussed the possibility that Nabataean deities were not only represented by bas relief or incised depiction, but also by the niche's negative space. Others who have made this assumption are Dalman (1908:70) and Starcky (1966). Due to these variations, I recorded in the field survey whether or not a *betyl* or interior niche was present within each of the niches. If either feature was present, I recorded the shape of the *betyl* or interior niche. If more than one *betyl* or interior niche was present, I also recorded the number of each.

Water Features

Because water features may have religious significance (MacDonald 2006), I recorded any water features that were associated with the niches. I considered water features to be libation pools, cisterns, or water channels.

Architectural Details

As Wenning has suggested, "All the details of *betyls*, niches, framings, and installations demonstrate that the Nabataean votive niche is complex and not as simple as it may appear at first glance" (Wenning 2001:88). Wenning has suggested that the details of niche framings may provide information regarding the importance of the venerated deity or the donor (Ibid.). The more elaborated niche framings may also suggest that niches of this sort were important in cultic worshipping practices, or that the particular context in which the niche was built was of some significance. The architectural elements that will be evaluated in this thesis include the forms of pediments, entablatures, arches, capitals, bases, and the types of supports that are present on Nabataean niche facades (for definitions for each of these architectural terms, see Appendix B).

Interior Architectural Features

Interior architectural features are defined as those that are located within the niche. Any notable architectural features associated with the exterior of niches were also noted. Interior architectural features include grooves or hollows in the floor of the niche that may have served as slots for *betyl* insertion; small holes in the walls that, as Wenning has suggested (2001:88) may have served as inserts for veils or votive offerings; and small cup holes located in the base of the niche for libations or offerings of incense or other liquids or items.

Exterior Architectural Features

Exterior architectural features are defined as architectural features that are located outside of the niche, but associated with each niche. These features include rock-cut additions to the landscape such as steps or staircases leading to the niches, platforms, benches, or pedestals below or in front of the niches, or water channels or cisterns associated with the niches. Occasionally, there were carved loops in the stone to either side of a niche, which may have served as places were votive gifts could have been tied (Wenning 2001:88). These features may provide information about the function of the niche. Noting such features may help to determine how sacred space was organized with regard to niches in Nabataean Petra.

Wenning has suggested that "these elements are important for our understanding of ritual practices" (2001:88). I believe that these elements are also important for our understanding of cultic niche construction and architectural and other visual preferences favored by the Nabataeans. Wenning further noted the importance of studying the elements of niches "All of the elements and details need to be researched and analyzed in order to understand which detail or combination of elements indicates a specific function or points to an individual deity or a certain divine aspect" (Ibid.).

SURVEY RESULTS, NICHE ANALYSIS AND INTERPRETATION

Introduction

There were five main objectives to my research, which will be reiterated here. The first objective was to determine whether or not the Nabataeans preferred sacred or standardized orientations for cultic niches or whether or not the orientation of niches provides any information pertaining to the identity of the deity for whom the niche was built. The second objective was to examine *betyl* or interior niches and their shapes, and then compare these to the outer niche shape to determine whether or not there were any possible relationships between the two variables. The third objective of this study was to contextualize the niches in relation to built features such as *biclinia, triclinia*, stairs, platforms, cisterns, water channels, and libation pools, and use these features to discuss the various cultic niche "sanctuaries" that were recorded in the BYU 2007 ground survey. The fourth objective was to explore how niches may have functioned in Nabataean sanctuaries. The fifth and final objective was to create a stylistic typology based on the architectural details of niche facades. Each of these objectives comprises a separate section, which will be organized in the following manner: 1.) Orientation; 2.) *Betyl* or Interior Niche Presence and Deity Identification; 3.) Niche Sanctuaries and a Niche Sanctuary Typology; 4.) Niche Functions; and 5.) Niche Facade Typology. For each of the objectives, I explain my survey results, niche analysis, and my interpretation of the data.

A total of four hundred and twenty four niches were recorded in all of the surveyed areas during my three weeks of survey. The following text provides details pertaining to the results of the ground survey and an interpretation of the data. This portion of the chapter is divided into five sections. The first section explores the possibility that the Nabataeans had preferred, sacred, or standardized orientations for cultic niches. I

also discuss orientation of niches in determining the identity of the deity for whom the niche was built. The second section discusses *betyl* or interior niches and their shapes in relation to the outer niche shape, and any discernible significant relationships between the two variables and the possibility that deity identifications can be made based on this criterion. The third section discusses various cultic niche "sanctuaries" recorded in the field survey. This section includes information concerning how I identified niche sanctuaries based on Colin Renfrew and Paul Bahn's model regarding cultic activity, and how this space was divided from profane space. I also discuss the various architectural features that were associated with niches, and how these features were organized in Nabataean cultic space. The architectural features that were associated with the niches, such as *triclinia*, stairs, platforms, libation pools, cisterns, and water channels may provide information about the function of the niche in cultic space. The fourth section discusses several possible niche functions. The fifth and final section contains a stylistic typology based on the architectural details of niche facades. This typology was generated from niches containing facades recorded in the 2007 field survey of Wadi al-Mataha, Beidha, Saad al-Ma'jan, Bab as-Siq, and the processual route to ad-Deir. In addition to these niches, I also included niches from Mada'in Saleh that were not apart of the 2007 field survey of Petra.

ORIENTATION

Introduction

Healey (2001) has noted that within Nabataean society, the orientation of Nabataean temples is not standardized, which suggests that either: 1) the orientation of the temple had no religious significance to the Nabataeans, and therefore determined by the layout of the land; or 2) the orientation of the temple was based upon the characteristics of the

deity for whom the temple was built. The purpose of this study is to determine if the Nabataeans had any kind of standardized method of orienting the cultic niches to any particular cardinal direction.

Concerning portable stelae, U. Avner conducted an emergency survey of the ‘Uvdah Valley and other regions in Israel’s Negev Desert. In this survey, Avner located approximately two hundred Nabataean encampment sites, and over two thousand stelae. Avner noted that there was a correlation between the number of stones and the quantity of pottery in each site. He noted that “the longer an encampment was occupied, the more pottery was used and the more standing stones were erected” (Patrich 1990:64). In this survey, Avner noted that the orientation of the stelae varied from place to place. There was no one dominate orientation. He did note, however, that for more than ninety-five percent of the time, the stelae were found behind the encampment’s row of tents, at the foot of the hill, with the back of the stele facing the hill. Therefore, the worshipper would be facing the stone and the hill behind it. The cardinal direction of the stele seemed to be of no consequence; however, Avner notes that it was important for a kneeling worshipper to be facing the stone and the hill behind it (Avner 1984). It may also be significant that the stones were placed behind the encampment’s row of tents, as this may say something of religious practices, in that the worshipper had some privacy in supplication before the deity. It can also be assumed that because there were stelae behind each tent, that each family or clan had their own stelae to worship.

In Isabelle Ruben’s 2003 publication, the *Petra Siq: Nabataean Hydrology Uncovered,* she indicated that the orientation of religious sites, particularly niches was not arbitrarily chosen. Ruben states “the detailed mapping of the whole Siq with all the sanctuaries, niches, altars, steps and inscriptions has made it clear that their location and orientation were all carefully chosen” (Ruben 2003:84). Concerning two specific

sanctuaries, the façade of the block monument with the eye *betyls* in Sector 11, and the sanctuary on the Khubtha Fault, Ruben states that:

> The deposition of the bedrock of both sanctuaries would have allowed them to have been chiseled into the opposite sides if that had been desirable and therefore their actual orientation must have been a deliberate choice. The situation of other sanctuaries is very similar, for instance the entire group of niches around the altar rock in Sector 14 is visible when walking out, but coming down one has to turn around to see them all. Clearly the orientation and exposure was as much a concern in the arrangement of the sanctuaries as it was with the camel caravan reliefs; the caravan walking down the Siq is the most prominent one when walking up and vice versa [Ibid.].

By noting the orientation of cultic niches, I hope to provide more information regarding their orientation and Nabataean worship. Such data can provide information such as whether or not the Nabataeans were concerned about the cardinal orientation of their cultic features, or whether or not a certain orientation was associated with a specific deity.

Methods and Research Objectives

There were two objectives to this portion of the study. The first objective was to discern whether or not the Nabataeans were concerned about the orientation of cultic niches. In order to test for this, I generated rose diagrams that show the frequency of each of the possible orientations for all of the niches in each of the surveyed areas. I then compared the results of the rose diagrams with topographic maps to see if niche placement and orientation were determined by the natural topography of the land. The second part of this study was geared towards determining whether or not there were specific or standardized cardinal orientations for certain *betyl* types.

Discussion

Area A is comprised of Wadi al-Mataha, the northwest-facing cliff side of Jabal al-

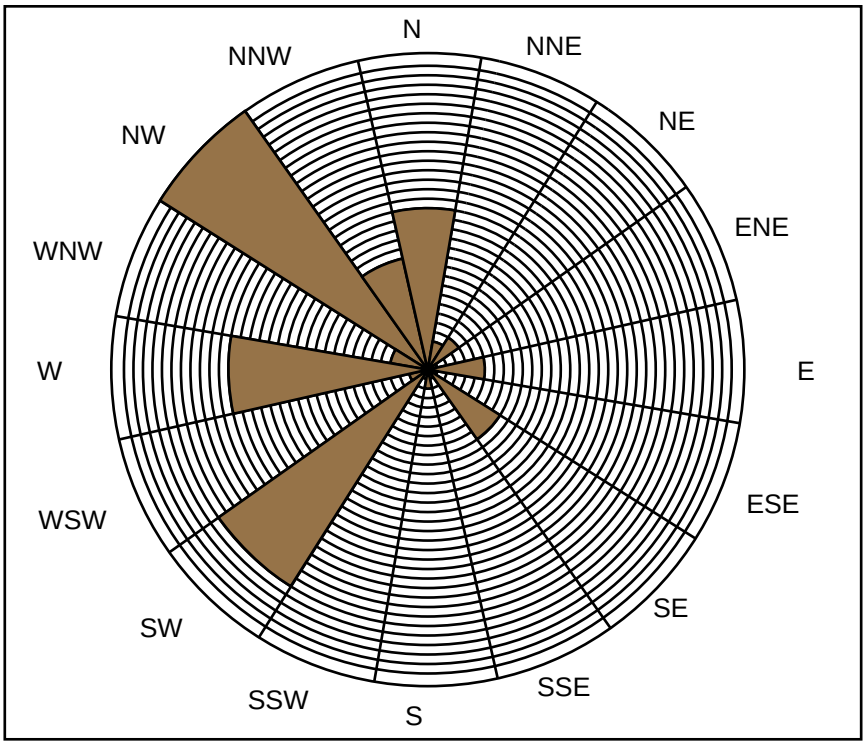

Figure 5.14. Rose diagram showing the cardinal directions of the niches in Area A.

Kubtha, as well as rock outcroppings of Mughur an-Nasara, Mughur al-Mataha, and al-Mataha. Thirty-five percent of the niches that were located in this area were oriented to the northwest, followed by southwest at twenty percent, and west at fifteen percent. Twelve percent of the niches were oriented north, seven percent were oriented southeast, six percent were oriented northeast, four percent were oriented east, and one percent was oriented south. Figure 5.14 is a visual of the rose diagram that was generated for this area. The majority of niches in this area were oriented northwest, which is the direction that the cliff escarpment of Jabal al-Kubtha. Therefore, it appears as though the orientations of the niches in this area generally followed the topography of the land.

Area B consisted of the rock outcroppings of Mughur an-Nasara. In area B, the rock outcroppings have multiple surfaces that face multiple directions on which niches could have been carved. The majority of niches, at twenty-seven percent, were oriented to the east. Twenty-three percent of the niches in Area B were oriented west, fifteen percent

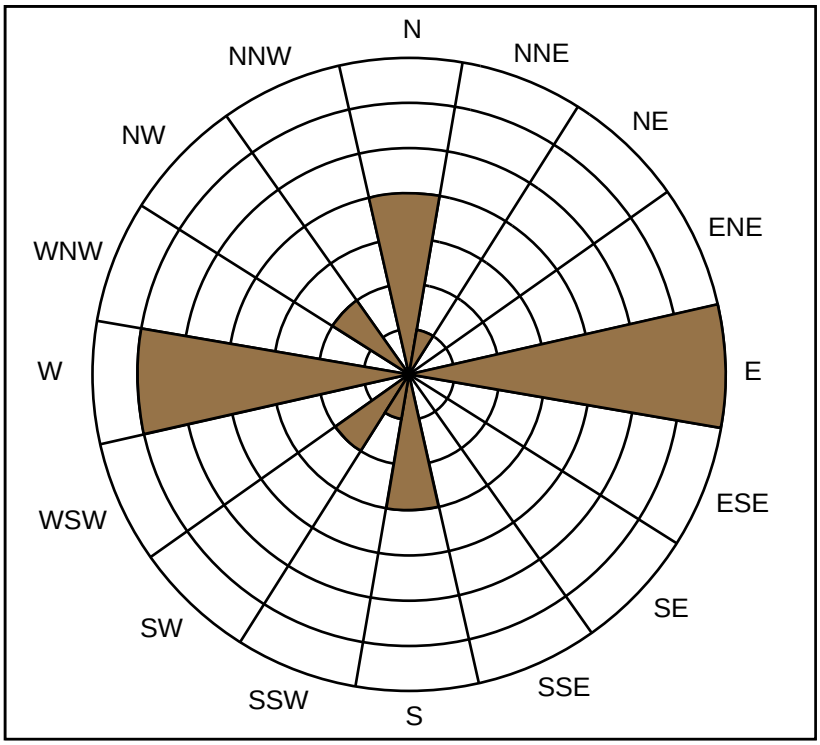

Figure 5.15. Rose diagram showing the cardinal directions of the niches in Area B.

were oriented north, twelve percent were oriented south, twelve percent were oriented southwest, eight percent were oriented northwest, and one at four percent was oriented northeast (Figure 5.15). Therefore, in an area such as this where topography was not a limitation and where there were multiple directions for niche placement and orientation, the majority of niches were oriented east.

Area C was comprised of the rock outcroppings of Mughur al-Mataha, and like Area B, there are multiple rock surfaces with multiple directions on which niches could have been carved. Fifty-three percent were oriented east, twelve percent were oriented northwest, twelve percent were oriented west, twelve percent were oriented south, nine percent were oriented southeast, and one, comprising three percent of the data was oriented north (Figure 5.16). Again, as in Area B, niche placement was not limited to the confines of topography and there were multiple directions that niches could have been oriented. Despite this, the majority of niches in this area faced east.

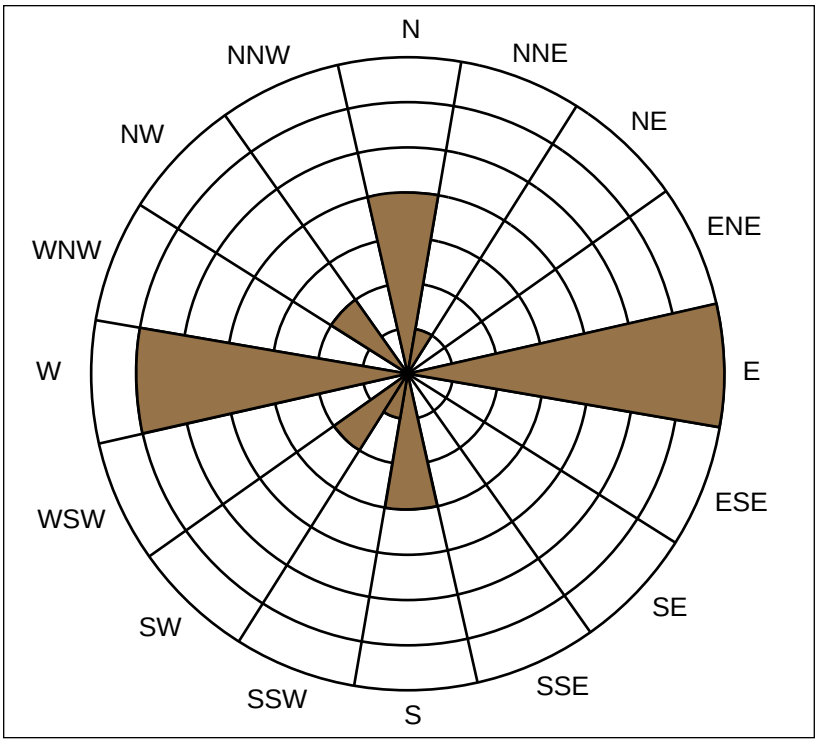

Figure 5.16. Rose diagram showing the cardinal directions of the niches in Area C.

The topography of Area D also behaves in the same manner as the topography in Areas B and C. Area D is comprised of the rock outcroppings of al-Qunb al-Humr and al-Mataha. The majority of niches in this area were oriented west at forty-four percent, followed by east with twenty-four percent of the data, southwest at twenty-four percent, one niche oriented northwest, and one niche oriented southeast (Figure 5.17). Therefore, although niches could have been carved to face a variety of directions, the majority were oriented west. As with Areas B and C, niche placement was not confined to topography.

Sadd al-Ma'jan is a narrow slot canyon that eventually leads out into Wadi al-Mataha. The rose diagram for Sadd al-Majan shows that the niches in this area were either oriented to the north and northwest, or to the south (Figure 5.18). North-northwest was the dominant orientation of niches in Sadd al-Ma'jan, comprising twenty-eight percent of the data. Nineteen percent of the of the niches in Sadd al-Ma'jan were oriented north, fifteen percent were oriented south, twelve percent were oriented west, nine percent were

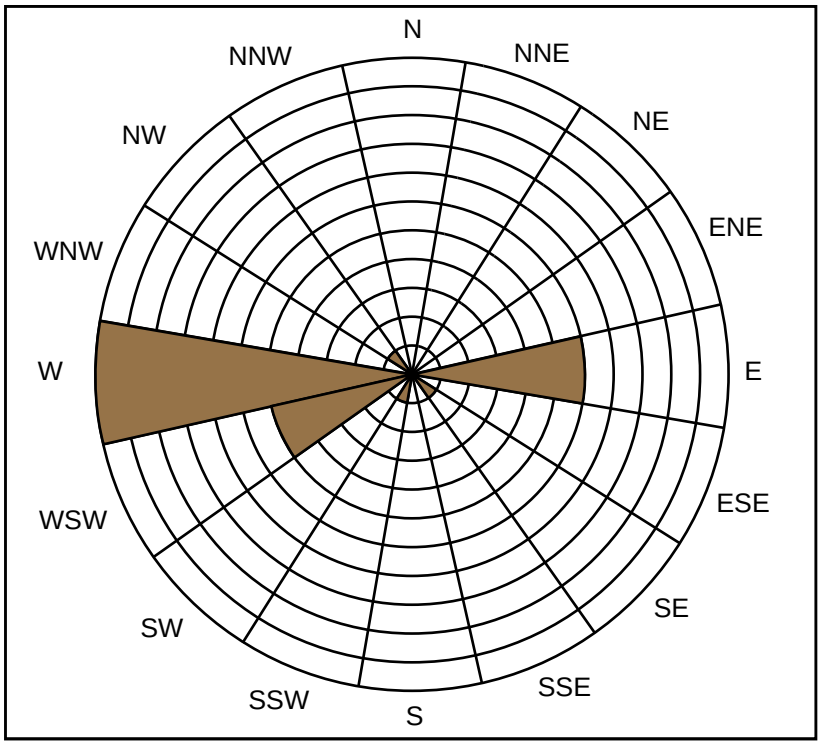

Figure 5.17. Rose diagram showing the cardinal directions of the niches in Area D.

oriented southeast, nine percent were oriented northeast, five percent were oriented south west, and four percent were oriented east. Therefore, the limits of the topography in this area determined the placement and orientation of niches.

Wadi as-Siq is a slot canyon that eventually leads out into Wadi Musa. The majority of the niches in the Siq were oriented northwest at twenty-three percent and twenty-three percent oriented southeast. Nineteen percent were oriented northeast, fourteen percent were oriented north, nine percent were oriented southwest, seven percent were oriented west, four percent were oriented south, and one niche, comprising two percent of the data was oriented east. Again, as in the case of Sadd al-Majan, the orientations of the niches in Wadi as-Siq can be explained by the topography. Wadi as-Siq is a narrow slot canyon with the canyon walls facing a variety of directions, however, northwest and southeast are the dominant orientations of the canyon walls. See figure 5.19 for the rose diagram.

"Little Petra" in Beidha contains many funerary installations, including the tombs

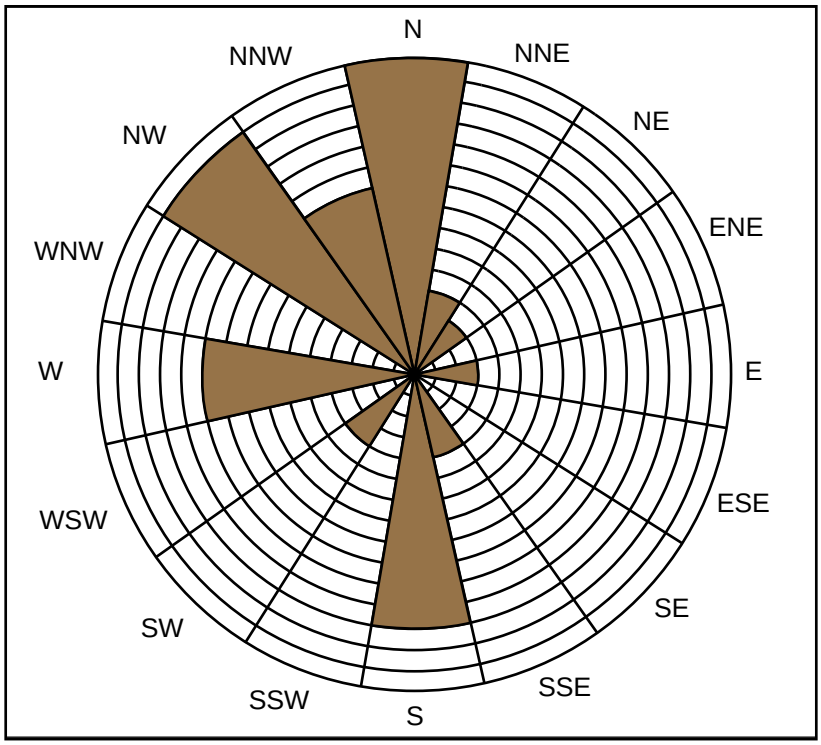

Figure 5.18. Rose diagram showing the cardinal directions of the niches in Sadd al Ma'jan.

themselves, *triclinia*, rock-cut rooms, cisterns, channels, and cultic niches. The canyon running through Little Petra runs in an east-west orientation, allowing the north and south sides of the canyon walls to contain structural features. Again, because of the constraints of the topography, the majority of niches in this area were oriented either to the North or to the South. See figure 5.20 for the rose diagram.

Only twelve niches were recorded along the processional route to ad-Deir. Of these, thirty-three percent were oriented east, twenty-five percent were oriented southwest, twenty-five percent were oriented west, and seventeen percent were oriented southeast. Because of the small number of niches that were recorded in this area, it was decided that the data set was not large enough to gather any significant conclusions. Therefore, the niches that were recorded along the processional route to ad-Deir were left out of this portion of the study. It is interesting to note that along such a seemingly important processional route, there were very few cultic niches.

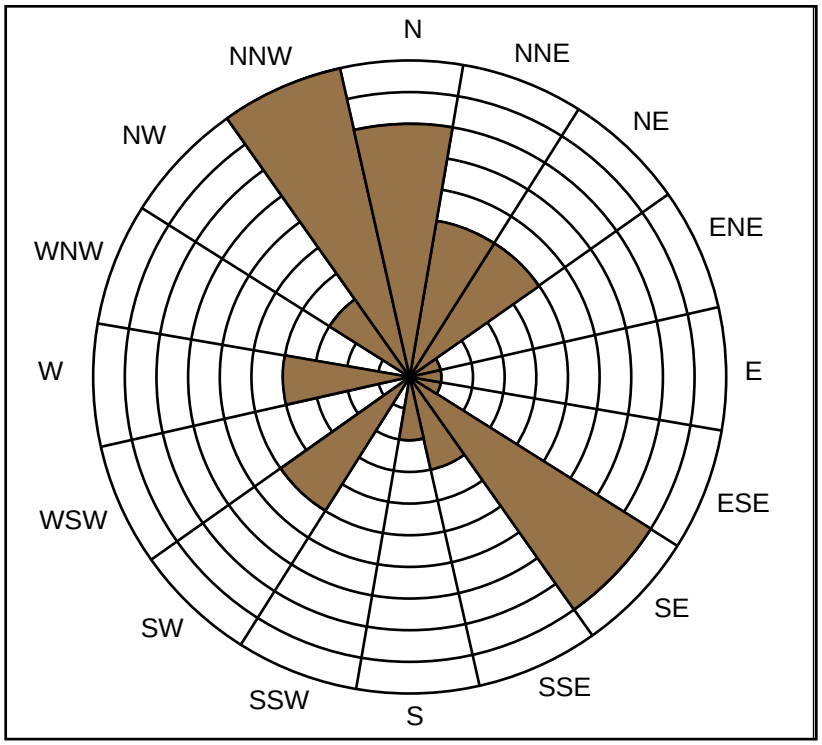

Figure 5.19. Rose diagram showing the cardinal directions of the niches in Wadi as-Siq.

The results of the rose diagrams and the percentages reveal that in Wadi as-Siq, Sadd al-Ma'jan, Beidha, and Wadi al-Mataha Area A there seem to be no standardized orientation for niches. Rather, the orientations of the niches seem to follow the natural orientations of the cliff faces and the topography of the land. However, in Wadi al-Mataha Areas B, C, and D, where there are many tombs suggesting an important funerary context, there are multiple sides of the cliff face in which niches could have been built. Significantly, the majority of the niches in these areas were oriented either to the east or to the west. What this data suggests is that when constrained by landscape, the niches generally followed the topography. However, in areas where there is no such constraint (such as in Wadi al-Mataha Areas B, C, and D), where there can be some choice in where niches are built and how they were oriented - the orientation was either to the east or to the west. This may be significant, because Areas B, C, and D in Wadi al-Mataha contain a number of funerary installations. In Near Eastern ideology, aspects of life and death

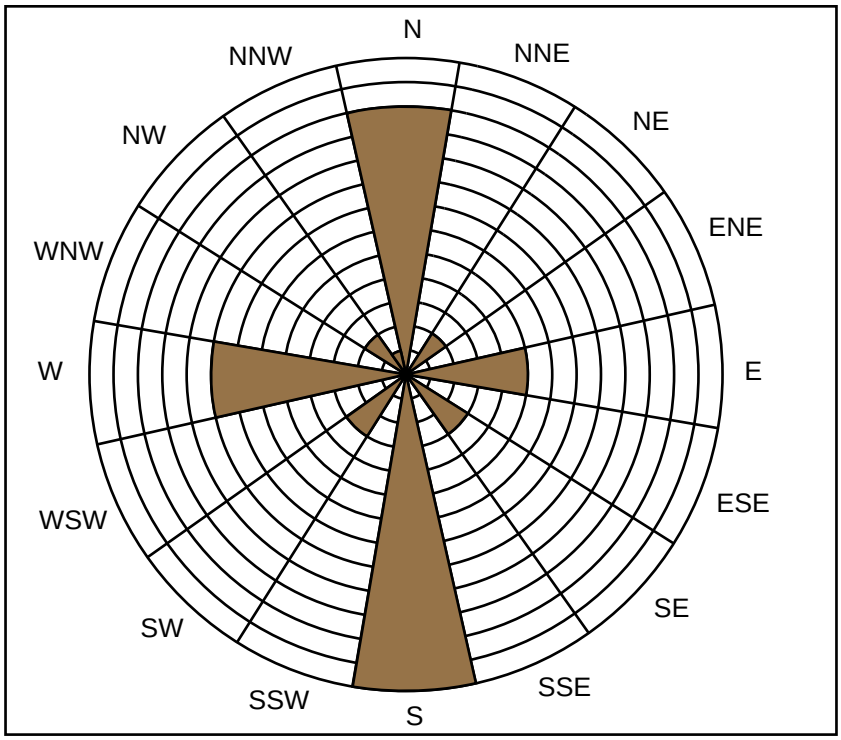

Figure 5.20. Rose diagram showing the cardinal directions of the niches in Beidha.

were connected with the rising and setting sun (David Johnson and Glenna Nielsen, personal communication, 2008). In addition to this, geological studies have revealed that the prevailing stress direction in the Petra region is pushing in a northwest-southeast direction, creating extensional fracture sets in a northeast-southwest direction (Figure 5.21). Because of this, there are very few cliff surfaces that are oriented to the cardinal directions (Ibrahim 1993:56). Despite this, the Nabataeans, at least in the funerary contexts of Wadi al-Mataha Areas B, C, and D selected surfaces that were oriented either to the east or west on which to construct their cultic niches.

Similar to the lack of standardization in Nabataean temple orientations, one can come to one of two conclusions regarding the absence of standardization for the orientation of cultic niches in areas that are constrained by topography, such as in Wadi al-Mataha Area A, Wadi as-Siq, and Sadd al-Majan. These are: 1) the orientations of cultic niches were of no religious significance to the Nabataeans, and therefore determined by the layout of

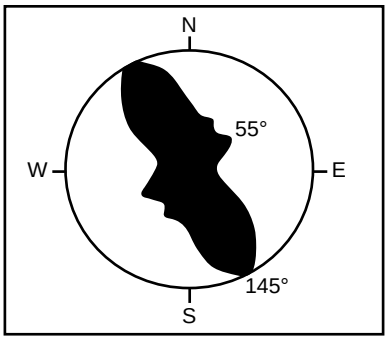

Figure 5.21. Rose diagram showing the orientation of the extensional fractures of the Petra Region.

the land; or 2) the orientations of niches were based upon the characteristics of the deity for whom the niche was built, or for a certain divine aspect of the deity.

The second part of this study was geared towards determining whether or not there were specific or standardized orientations for certain *betyl* types. However, the sample size of *betyls* and interior niches was too small to run statistical tests on it. A cursory look at the data reveals that there are no significant patterns in the data (Table 5.1). There were also no significant patterns in the data for interior niche shapes (Table 5.2). In other words, given the sample size that I had available, there were not any relationships between the *betyl* type or interior niche shape and cardinal orientation. For example, rectangular *betyls*, which were generally associated with Dushara, face a number of orientations, and do not have a dominant cardinal orientation.

This suggests that in Nabataean ideology, cardinal orientation does not seem to have been a factor in the construction and placement of *betyls* or niches on the landscape, with the possible exceptions of Wadi al-Mataha Areas B, C, and D. Given the results of the rose diagrams and a cursory look at the data for the individual *betyls*, it seems that niches and *betyls* generally follow the orientations of the cliff faces on which they were carved. Again, in Avner's study of Nabataean camp sites in the Negev, he found that there was not a dominant orientation for the stelae that were erected; however, ninety-five percent of the time, the stelae were located behind the encampment's row of tents, at the foot

Table 5.1 Betyl type and their frequency for each cardinal direction.

Betyl Type	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Rectangular (1)	5	1	5	3	1	1	4	3
Rectangular (2)	1		1	2			1	1
Rectangular (3)	1				1			
Rectangular (4)		1						
Rectangular (10)				1				
Eye Idol							1	
Anthropomoph		1				1		2
Domed								1
Horned	1			1	1		1	1
Nephesh		1						
Arched				1		1	1	

Table 5.2 Interior Niche Shape and their frequency for each cardinal direction.

Interior Niche Shape	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Rectangular	6		3	1	1	1		2
Arched	2		3	1	1	1	2	2
Mushroom				1				
Bottle-Shaped						1		
T-Shaped					2			2

of the hill, with the back of the stelae facing the hill (Avner 1984). The results of my ground survey, along with Avner's survey, and the lack of standardization of orientation for Nabataean temples suggest that orientation was not a major concern in the general construction of Nabataean religious structures or features when limited by topography.

BETYL OR INTERIOR NICHE PRESENCE AND DEITY IDENTIFICATION

Introduction

The shapes of interior niches or *betyls* within niches can sometimes determine which deity the *betyl* represented (see Chapter Three for a description of the attributes of each deity and the *betyl* types that represent them). There may be a relationship between the

interior niche and/or *betyl* shape and the shape of the niche that houses them. Especially when the *betyl* is not present, the niche may be the only thing that we have to possibly identify the deity who was venerated at the niche. Wenning suggests that there may be a relationship between niches and the *betyls* that were housed within them. Wenning states that, "We should neither separate the *betyl* from its niche nor the niche from its place and surroundings" (Wenning 2001:87). Because *betyls* and interior niches may yield such important information, I recorded whether or not a *betyl* or an interior niche was present in each of the niches in the ground survey, and then I used this information to examine what kind of relationships (if any) could be determined from the *betyl* presence and niche shape. The purpose of this section is to discuss the various niche shapes that are associated with certain *betyls* or interior niche shapes or *betyl* combinations. In Chapter Three, I provided a discussion concerning the various ways in which Nabataean deities were depicted. The following is a discussion concerning the various *betyl* and interior niche shapes, and the outer niche shapes in which they occur.

If a particular niche shape can be identified with a particular *betyl* or interior niche shape, then it may be possible to identify deities in niches that do not contain *betyls* or interior niches. In order to test for this, I performed correspondence analysis on the data. The following is a discussion concerning *betyl* shapes and deity identification, as well as how various scholars have interpreted groupings of *betyls* found within niches.

Betyl Shapes and Deity Identification

The shapes of niches may be related to the shapes of *betyls*. For a more complete discussion concerning *betyl* shape and deity identification for each of the deities, see Chapter Three. While *betyl* or interior niche shapes may help to identify a deity, the same criteria may also make it difficult to do so. Occasionally a deity may be represented by

several different *betyl* shapes. Dushara, for example, has been identified in stelae form as both a rectilinear shape, as well as an oval or arched shape. Patrich states that "On the one hand, the representation of a deity is not always the same, and on the other hand, a specific shape of one or more stelae does not always refer to the same deity" (1990: 104). Regarding the different representations of the same god in stelae, Patrich offers two approaches:

> We have observed a large variety of stele types and two different approaches: one formal and crystallized and the other personal. In the first approach the stele is related to a specific deity, and the groupings appear and reappear in the same arrangements. This testifies to there having been definite fixed formulas for representing each deity. At the same time there are deviations from the fixed forms, a phenomenon appropriate to a popular cult in which the connection between man and god is personal – where the mediation of a religious establishment or of absolutely obligatory cultic formulas was not required [Patrich 1990:103].

Regarding the stele shape and the deity's identity, there are many unanswered questions (Patrich 1990:99). Concerning deity identification, Patrich has further suggested that where an inscription accompanies a *betyl* or a niche, there was a need for the accompanying inscription to be there in order to identify the god worshipped there (1990:102-103). So in other words, Patrich suggests that it is possible that even the Nabataeans didn't know one representation of a god from another (Ibid.).

Groupings of *Betyls* in Niches

Groupings of stelae within niches may provide clues as to the identity of the deity or deities worshipped there. Because of the many different groupings of stelae, some scholars have come to the conclusion that each of the different groupings had a different significance, "accorded to it by the particular intent of its dedicator" (Patrich 1990:103).

In the field survey, groupings of stelae were also noted to aid in the identification of the deity for whom the niche was built to venerate.

In Avner's survey in the Uvdah Valley and other regions in Israel's Negev Desert, he noted that in the 'Udvah Valley the arrangements of stelae consistently repeated itself. In reference to this survey, Patrich notes that:

> they appear singly, in pairs, in threes, and in fours; an additional lone stele may appear to the right of the group (a group of four with the additional one to the left is rare); or they may appear in two sets of threes – one in front of the other – or in two sets of twos – one in front of the other – and so on. Infrequently, but generally where there is a group of three, a small offering plate in the form of a horizontal stone slab was laying at the foot of the stelae [Patrich 1990:66].

Avner also found standing stones along the side of a road once used by the Nabataeans in the Negev, but unconnected to a specific site. Avner noted that the arrangements of the stelae on the sides of the road were the same as the arrangements at the encampments, the only difference being that the rows of stelae are longer. Patrich notes that they may be connected with a road cult, and that "they may have been used for prayer by people traveling with caravans" (Patrich 1990:66). In the first half of the ninth century A.D., Ibn Sa'ad provided a detailed description of Arab travelers and their practice of erecting stone slabs at their encampment sites:

> When some part of the tribe, while encamping in a certain new place, does not have an idol, one man goes and looks for four stones which he erects – three are used for the pot while he chooses the nicest stone for the idol, which he then worships. If, later on, he finds a nicer one, he replaces it; at the next stop he takes another in its stead [this translation is provided by Patrich 1990:66, taken from T. Fahd 1968:26].

Patrich makes reference of pairs of *betyls* found at 'Ain Shellaleh, Mada'in Salih, and the 'Udvah Valley (1990:80). Patrich also noted that where three stelae are represented together, the dimensions vary, and that in common arrangements of three stelae at

Petra, that a large stele is flanked by two small ones of similar dimensions. Similar arrangements of three stelae have also been found at Mada'in Salih, Bostra coins, the el-Umtaiyeh lintel, and the Uvdah Valley (Patrich 1990:81, Dalman 1908:134, 145, 148; Jaussen and Savignac 1909:437, figs. 208, 219, and 220) and for the classification of the stelae at Mada'in Salih). Another arrangement that occurs at Petra and Mada'in Salih depicts different dimensions for all three of the stele, but the smallest stele appears on the right and the largest in the middle. There are also arrangements of four stelae, where all four stelae are of different dimensions (Dalman 1908:1974; for Mada'in Salih, see Jaussen and Savignac 1909:434, fig. 224). Stelae are also arranged in groups of five, six, and even ten at Petra (Dalman 1908:147). Avner noted in the 'Udvah Valley there were fifty stelae strung side by side along the road (Avner 1984).

Within a niche at Qattar ed-Der, there is a pair of *betyls,* the larger one deeply incised with a cross with two bars. There is a much smaller stele to the left of the larger one that is narrow and elongated in shape. To the right of the niche is an inscription stating "This is a stele of bsr'" that presumably refers to the goddess of Bosra (Patrich 1990:87). The coins from Bostra that depict three stelae only mention Dushara of Bostra, which has led some scholars to believe that the three stelae represent three different aspects of the same deity (Dussaud, 1905:170; Dalman 1908:73, 1912:53-56).

Groups of three stelae are also found at Petra and Mada'in Salih, as well as three adjoining stelae in the Uvdah Valley. Some scholars are of the opinion that each stele represents a different god (Milik 1958: 126-129). Milik suggests that the three stelae represent Dushara-Aarra, Allat of Bostra, and bsr', the Tyche of that city (Ibid.). G.W. Bowersock suggests that the three stelae represent Ares-Arsu, Theandrios, and Dushara (1986:117-21). Krone is of the opinion that three stelae in some niches may represent Allat, Manat, and al-Uzza (Krone 1992:139; Healey 2001:155). In niches where two

betyls appear, Krone believes that the two stelae may represent Allat and Dushara or Allat and al-Uzza (Ibid.). Niehr believes that when two *betyls* appear together in the same niche that the larger of the two represents Allat while the smaller *betyl* represents Dushara (Niehr 1998:221). Patrich has noted that some individual preference may have played some kind of part in how *betyls* were grouped within a niche. Patrich states that "It appears that each grouping has a different significance, accorded to it by the particular intent of its dedicator" (Patrich 1990:103).

Discussion

Table 5.3 shows each *betyl* type, the deity believed to be associated with each particular *betyl* type, and the various niche shapes in which each particular *betyl* type occur. Table 5.4 shows each interior niche type, and the various exterior niche shapes in which each particular interior niche type occurs.

From the tables, it is apparent that any given niche shape was not specific to a certain *betyl* or interior niche type. In other words, the Nabataeans were not necessarily concerned with maintaining a specific niche shape for a particular *betyl* type. Thus, niche shape may have been a choice for the individual carver or the patron who commissioned to have it built, or the data suggests that niche shape did not necessarily have religious connotations. However, it is important to note that sometimes, the *betyls* that were housed in the niches were portable. With portable *betyls*, individuals had the option of putting the *betyl* in a number of different niche types, which further illustrates the idea that niche shape was presumably not associated with *betyl* type. In other words, since portable *betyls* could be carried around, niche shape may not have been significant. (David Johnson, personal communication 2008). Finally, it is possible that the shape of the niche may have been determined more by stylistic preferences, and less so by the

Table 5.3. *Betyl* type and the niche shapes in which they occur.

***Betyl* Type**	**Deity Associated with the *Betyl* Type**	**Niche Shape**
Plain Rectangular Slab	Dushara	Rectangular (vertical), Rectangular (horizontal), Basin, Arched
Rectangular Slab With Stylized Facial Features	al-Uzzah, al-Kutba, or Atargatis	Rectangular (vertical)
Rectangular Slab(s) with Mwtb	Dushara	Rectangular (vertical), Rectangular (horizontal), Square, Arched, Apse
Rectangular Slab with Rounded Top	Dushara	Rectangular (vertical), Rectangular (horizontal), Arched
Two Rectangular Betyls	Dushara and al Uzzah; Allat and Dushara; or Allat and al-Uzza	Rectangular (vertical), Rectangular (horizontal), Arched
Three Rectangular Betyls	Three Aspects of Dushara; Dushara-Aarra, Allat of Bostra, and Tyche; Ares-Arsu, Theandrios, and Dushara; or Allat, Manat, and al-Uzza	Rectangular (vertical), Arched
Four Rectangular Betyls	-	Rectangular (horizontal)
Ten Rectangular Betyls	-	Rectangular (horizontal)
Nephesh	Funerary Marker – Not a Deity	Rectangular (vertical)
Horned Betyl/Altar	Not a Deity	Rectangular (vertical)
Anthropomorphic Figure	Unknown	Arched, Rectangular (vertical)
Domed Betyl	Dushara	Apse

Table 5.4. Interior niche type and the niche shapes in which they occur.

Interior Niche Type	Deity Associated with the Interior Niche Type	Niche Shape
Rectangular	Dushara	Rectangular (vertical), Rectangular (horizontal), Arched
Arched	Dushara or Al Uzza	Arched, Rectangular (vertical)
Mushroom-Shaped	Possibly al-Kutba	Rectangular (vertical)
Bottle-Shaped	Unknown – possibly al Uzzah	Rectangular (vertical)
"T"-Shaped	Unknown	Rectangular (vertical), Arched

deity who was worshipped within the niche.

NICHE SANCTUARIES

Introduction

Wenning has suggested that there is a need to not only explore the shape of the niche and its framing, but the carved features that are also associated with niches (Wenning 2001). Wenning notes that features such as small holes in the walls, libation cups, channels, steps, stairs, and platforms for offerings may provide information regarding Nabataean ritual. Wenning states that "Many of these elements are important for our understanding of ritual practices . . . All the details of *betyls*, niches, framings, and installations demonstrate that the Nabataean votive niche is complex and not as simple as it may appear at first glance" (Wenning 2001:88).

The purpose of this section is to look at all of the niches that contain stairs, steps, platforms, basins, cisterns, or water channels in order to see how cultic spaces containing niches are organized, and which architectural features are present in these cultic areas. It

is first necessary to define these areas as spaces where ritual took place. In order to do so, I used Colin Renfrew and Paul Bahn's model (2000) for identifying areas of ritual activity. First, I outline his model and then apply his model to each of the areas in the ground survey that qualify as sanctuaries where ritual took place. This information can help us to see how the Nabataeans organized sacred space that contains niches, and what kinds of architectural features are commonly present in these cultic areas. Such an examination of this space can also help us to better understand ritual within Nabataean religion.

Colin Renfrew and Paul Bahn (2000) have provided four criteria for distinguishing areas of cult activity from other spaces. These four criteria are: focusing of attention; a boundary zone between this world and the next; the presence of deity; and participation and offering. Outlined below are Renfrew and Bahn's archaeological indicators of ritual.

Renfrew and Bahn's Model

Focusing of attention:

1. Ritual may take place in a spot with special, natural associations (e.g. a cave, a grove of trees, a spring, or a mountaintop).
2. Alternatively, ritual may take place in a special building set apart for sacred functions (e.g. a temple or church).
3. The structure and equipment used for the ritual may employ attention-focusing devices, reflected in the architecture, special fixtures (e.g. altars, benches, hearths), and movable equipment (e.g. lamps, gongs and bells, ritual vessels, censers, altar cloths, and all the paraphernalia of ritual).
4. The sacred area is likely to be rich in repeated symbols (this is known as "redundancy").

Boundary Zone between this world and the next

5. Ritual may involve both conspicuous public display (and expenditure), and hidden exclusive mysteries, whose practice will be reflected in the architecture.
6. Concepts of cleanliness and pollution may be reflected in the facilities (e.g. pools or basins of water) and maintenance of the sacred area.

Presence of the deity:

7. The association with a deity or deities may be reflected in the use of a cult image, or a representation of the deity in abstract form (e.g. the Christian Chi-Rho symbol).
8. The ritualistic symbols will often relate iconographically to the deities worshipped and to their associated myth. Animal symbolism (of real or mythical animals) may often be used with particular animals relating to specific deities or powers.
9. The ritualistic symbols may relate to those seen also in funerary ritual and in other rites of passage.

Participation and offering:

10. Worship will involve prayer and special movements – gestures of adoration – and these may be reflected in the art or iconography of decorations or images.
11. The ritual may employ various devices for inducing religious experience (e.g. dance, music, drugs, and infliction of pain).
12. The sacrifice of animals or humans may be practiced.
13. Food and drink may be brought and possibly consumed as offerings or burned/poured away.

14. Other material objects may be brought and offered (votives). The act of offering may entail breakage and hiding or discard.
15. Great investment of wealth may be reflected both in the equipment used and in the offerings made.
16. Great investment of wealth and resources may be reflected in the structure itself and its facilities [Renfrew and Bahn 2000: 408-409].

Described below are Renfrew and Bahn's (2000) criteria for defining areas of ritual activity and how I implemented these criteria to define Nabataean areas of ritual or sanctuaries that contained niches in the 2007 BYU field survey. There were several trends in how niches and other carved installations were organized in the niche sanctuaries that I identified, and these trends are also discussed.

Focusing of Attention

Several niches in the 2007 ground survey had stairways that were cut directly below the niche (see figure 5.22). These stairways do not appear to have served a practical function, as they are small, and in some cases, unnecessary to use in order to reach the niche. This type of stairway functions in such a way that it draws the eye up to the niche, giving the niche the central focus and importance. This type of stairway also serves to visually show the separation between the ground surface and the niche location, creating an artificial high place, which in a way, creates a boundary zone between the sacred world and the profane. Additionally, in Egyptian texts, stairways were often used to illustrate an individual's accent into the afterlife. In addition to this, the hieroglyph representing Osiris is an image of a stairway. Given the fact that the Nabataeans were heavily influenced by Egyptian culture and religion, it is reasonable to assume that the Nabataeans may have viewed such stairways as a symbol of one's ascent into the

Figure 5.22. Niche with associated stairway and platform in Area D (Niche 15).

afterlife, or as a symbol to represent Osiris (Cynthia Finlayson, personal communication 2008). Niches 12 and 13 in Wadi as Siq have a small staircase that leads to a small platform located directly below the niches. In Wadi al- Mataha Area A, Niches 38, 58, 79, 80, 93, 94, 95, and 96 all have staircases located directly in front of them. Below Niches 93, 94, 95, and 96, there is a also a *mwtb*-like feature that is similar in shape to one that is located below Niches 38 and 39 in Area A (Figure 5.23) Niche 19 in Wadi al-Mataha Area C also has a staircase located directly in front of it. In Wadi al-Mataha Area D, Niches 12 and 15 also have staircases located directly in front of them.

Some niches have elaborate facades that also emphasize that it was an important

Figure 5.23. *mwtb*-like feature below niches 38 and 39 in Area A.

feature in the landscape. Forty-two niches were recorded in the 2007 BYU ground survey that had façade decoration. These facades were separated into six main groups based upon the number of architectural details that were present in them. See the Stylistic Typology as described at the end of this chapter for a description of each of the six niche façade types that were identified.

Boundary Zone between This World and the Next

It can be assumed that privacy was a concern for Nabataeans in the construction of their sacred spaces. U. Avner (1984) in his survey of the Negev reported that ninty-five percent of the time, the stelae were found behind the encampment's row of tents, indicating that the supplicant required a certain amount of privacy as he/she worshipped. *Harem* is the term used in Arabian culture to refer to a sacred area that is separated from the profane world. Areas that were designated to be *harem* were usually secluded,

emphasizing that privacy was important in ritual activities. Gawlikowski explains that *harem* can refer both to a tract of land that was preserved for religious activities as well as an area where profane activities were not permitted (Gawlikowski 1982: 302-303).

Some of the niche groupings and niche sanctuaries were located either in man-made enclosed rooms or in areas where the natural landscape of the land allowed for privacy during supplication, such as slot canyons or high places (see the Niche Sanctuary Typology below for the specific sanctuaries and niches found within them). High places are only visible once an individual climbs up the staircases that led up to each sanctuary. Strabo provides a historical account of Nabataean worship on high places with the following text: "They worship the sun, building an altar on top of the house, and pouring libations on it daily and burning frankincense" (Strabo, *Geography*. 16.4.26).

Strabo's account brings us to another common feature of niche sanctuaries, and this is the presence of libation cups and pools. Renfrew and Bahn (2000) explain that sanctuaries may contain facilities such as pools or basins of water that may have been used for cleansing practices. For the purpose of this thesis, libation cups are defined as small, shallow carved installations that are located either inside or outside of the niche. Libation pools are larger and deeper, and these are typically located outside of the niche, but are still located within the general vicinity of the niche. Again, the presences of basins near the entrance ways to enclosed structures were presumably used for cleansing purposes.

Presence of the Deity

Some of the cultic niches contained representations of deity in the form of *betyls*. (See Chapter One for a definition of a *betyl*, and Chapter Three for a discussion on the various forms that *betyls* take, and the different deities that they represent). Other cultic

niches that do not contain *betyls* had rectangular or square cuts in the bases where a portable *betyl* could have been placed.

Participation and Offering

Strabo mentions that the Nabataeans poured libations and burned frankincense over altars that were kept on the roofs of their houses. (Strabo, *Geography*. 16.4.26). Again, libation cups and pools were present in many of the niche sanctuaries that were recorded (Figure 1.3). Many of the niches in Wadi al-Mataha that were recorded in the survey were associated with a small platform just below or in front of the niche where offerings were presumably placed. A Nabataean temple at Qasrawet contains a raised platform that served as an offering table. This offering table was found in front of the niche within the temple (Patrich 1990:67). This, along with images of raised platforms on Nabataean coins show that an offering table was an important structural feature in niche sanctuaries.

Discussion

After applying Renfrew and Bahn's (2000) model to niche contexts, it was evident that there were commonalities with regards to the structural features that were present in most niche sanctuaries, and that these areas were used in cultic activity. This suggests that certain specific structural features were deemed necessary by the Nabataeans to include in their sanctuaries. These structural features included the niches themselves, a stairway of some sort, a platform, which was either a part of the niche base or located directly in front of the niche, and water-holding devices such as cisterns, libation pools, basins, or water channels. From the examination of sanctuaries that contain niches, it is evident that there are several types of Nabataean sanctuaries where the model predicts ritual would have taken place. Therefore, a sanctuary typology was created, the purpose of which was to show the different types of sanctuaries, the number of people each

sanctuary type accommodated (to show public and individual sanctuaries), how the architectural features (niches, stairways, platforms, water-holding devices, etc.) within sanctuaries were organized, the degree of seclusion for each type, as well as the different functions that niche sanctuaries served. Functional types are categorical groups of artifacts or features that are created based on similar perceived use. The sanctuary types and functions will be discussed separately, followed by a table showing the different functions that are evident in each sanctuary type.

NICHE SANCTUARY TYPOLOGY

Open Air Sanctuaries

There are four types of open-air sanctuaries that the Nabataeans used for ritual practices. I have divided these sanctuaries by the number of niches present, how many people the sanctuary may have accommodated, and the degree of seclusion that each sanctuary exhibited. The first type is an isolated niche that does not contain any external architectural features and is not secluded, the second is an open-air sanctuary that contains a single niche and is not secluded, the third type is an open-air sanctuary with multiple niches that is not secluded, and the fourth type is an open-air sanctuary that contains one or multiple niches that is secluded from the surrounding landscape.

Type I: Isolated Niche

Type I niche sanctuaries comprise the majority of niches in Petra. Type I niche sanctuaries can function as private communal, public communal, or individual cultic centers, depending on location and the degree of seclusion for each individual niche. Characteristics of Type I sanctuaries include an isolated niche that does not contain any external architectural features such as stairs, platforms, other niches, or structures of any kind (Figure 5.24). With this type of sanctuary, the niche can stand alone and still

Figure 5.24. Example of a Type I Sanctuary in Wadi al-Mataha Area A (Niche 1).

be considered a sanctuary because of religious connotations associated with niches. Isolated niches meet a few of Renfrew and Bahn's (2000) criteria for the establishment of cultic activity, such as the presence of deity and participation and offerings. The niches themselves in this case can act by themselves as boundary zones between this world and the next, because niches were used as sanctuaries for deity. Type I niches comprise the majority of the data collected from the 2007 BYU Field Survey.

Type II: Singular Niche – Not Secluded

The open-air sanctuary with a singular niche was presumably used for individual or small group worship, as the sacred area occupied was not large enough to accommodate more than a few people. Structural features that are associated with an open-air sanctuary containing one niche include: stairs that are located directly below the niche, a platform

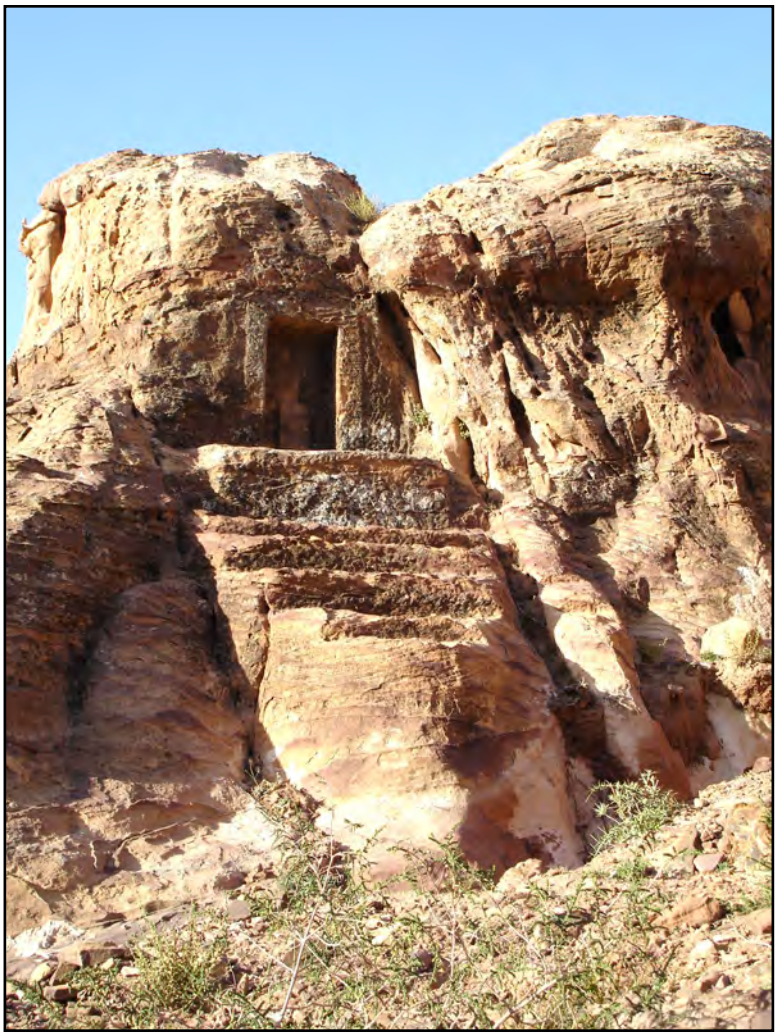

Figure 5.25. Example of a Type II Sanctuary in Wadi al-Mataha Area C (Niche 19).

that was a part of the niche or located directly in front of the niche, occasionally a water basin off to either side of the niche, and/or water channels, located either above or below the niche. One niche in particular at Wadi al-Mataha Area C, Niche 19 is a prime example of this type of niche sanctuary (Figure 5.25). Sanctuaries of this sort were not secluded from the surrounding landscape, as they could be easily seen and accessed. Sanctuaries of this type in the surveyed areas also included the following Niches: Area A: Niche 58, Niche 87, Niche 97, Niche 164, and 107; Area C: Niche 26.

Figure 5.26. Example of a Type III Sanctuary in Wadi Mataha Area A (Niches 93-96).

Type III: Multiple Niches – Not Secluded

There were sacred areas that included several groupings of niches in Wadi as-Siq, Beidha, and all four areas of Wadi al-Mataha. These niche groupings/sanctuaries were not separated from the surrounding landscape, and they occupied sufficient space in which to accommodate a small gathering of people. Niches in this type of sanctuary, especially in Wadi as-Siq, were located in open, public areas. Other similar features exist on the Caravan route between Petra and Umm Sayhun on the road to Beidha (Cynthia Finlayson, personal communication 2008). Architectural features that are associated with this type of sanctuary include stair steps, platforms, occasionally a water basin off to either side of the niche, and/or water channels, located either above or below the niche (Figure 5.26). Sanctuaries of this type in the areas surveyed included the following niches: Area A: Niches 93, 94, 95, and 96, as well as Niches 14, 15, and 16 in Wadi al-

Mataha Area A that are all located above a large cistern. Niches 112, 113, and 114 are also included in this group. These niches are all situated on a cliff face above a water channel.

Type IV: Secluded Sanctuary Containing One or More Niches

The forth type of open-air sanctuary contained either one or multiple niches, in secluded areas which were separated from the surrounding landscape. This kind of open-air sanctuary was typically located in such a way on the landscape that it was higher than the surrounding landscape, and it was not visible from below. Because of this seclusion, it can be assumed that privacy and height were factors in the sanctuary's placement in the landscape. Stairs are the means by which an individual reached the sanctuary. Structural features that are common with this kind of a sanctuary include a stairway to reach the sanctuary, water channels located in the sanctuary or leading into the sanctuary, *biclinia* or *triclinia*, a platform or platforms in front of the niches, as well as some kind of water storage feature, such as a libation pool, a cistern, or a basin. This type of sanctuary encompasses a large enough area that it could have held a small gathering of people, such as a family or a clan. One variation of this grouping can be seen in Sadd al Ma'jan. The entire slot canyon that comprises Sadd al'Ma'jan can be considered to be one large sanctuary because of the number of niches located within the canyon, and because of its secluded placement within the landscape (Figure 5.27). Four sanctuaries in Wadi al-Mataha are accessed by a stairway. Niches 28, 29, and 30 in Wadi Al-Mataha Area B comprised what I shall term Sanctuary 1; Niches 2 through 7 and Niche 35 in Area C comprise Sanctuary 2; Niche 20 in Area C comprises Sanctuary 3; and Niches 5 through 22 in Area D comprise Sanctuary 4 (Figures 5.28 through 5.31). As previously mentioned, the stairs also act as a boundary zone, separating the profane from the sacred.

Figure 5.27. Sanctuary in Sadd al-Ma'jan.

Stairs also emphasize that the sanctuaries are higher than the surrounding landscape, which creates a high place. Niche 35 in Beidha is also part of an open-air sanctuary that is accessed by a stairway. It is separated from the surrounding landscape in that it is not visible from the ground below, and it can only be accessed by the stairway.

Closed Air Sanctuaries

Closed air sanctuaries were built to hold a moderately-sized group, such as a larger family or clan. Some of the closed air sanctuaries contain anti-chambers, the function of which is unknown. In addition to these structural features, the closed air sanctuaries occasionally have basins located near the entrance of the structure. Because of their placement within the structures, these basins were presumably used for cleansing purposes. For instance, the rock-cut structure that contains Niches 20-29 in Area A

Figure 5.28. Example of a Type IV Sanctuary in Wadi al-Mataha Area B (Sanctuary 1).

Figure 5.29. Example of a Type IV Sanctuary in Wadi al-Mataha Area C (Sanctuary 2).

Figure 5.30. Example of a Type IV Sanctuary in Wadi al-Mataha Area C (Sanctuary 3).

Figure 5.31. Example of a Type IV Sanctuary in Wadi al-Mataha Area D (Sanctuary 4).

Figure 5.32. Example of a Type V Sanctuary in Wadi al-Mataha Area A (Niches 20-29).

contains a niche with a basin in its base (Niche 29) and is located on the left-hand side of the entrance. Niche 46 in Area A is a basin that is located on the left-hand side of the entrance way to a *triclinium* containing Niches 43, 44, 45, 47, and 48. Niche 50 in Area A also has a basin-shaped base and is located near the entrance way to a *triclinium.* Another *triclinium,* located in Area A has a water basin located just outside of the entrance and to the lower right of Niches 66, 67, 68, and 69. Niche 92 has a basin-shaped base and it is located just outside of the entrance to a *triclinium* containing Niches 89, 90, 91. Niche 25 in Area B has a basin-shaped base and is located just outside of a tomb entrance. Niche 11 in Beidha, located outside of a tomb has a basin-like base.

Type V: Closed air Sanctuaries Containing Multiple Niches

In Area A, Niches 20 through 29 were located in a carved room. For the purpose of this study, these are considered to be enclosed sanctuaries (Figure 5.32). Another

Figure 5.33. Example of a Type V Sanctuary in Mada'in Saleh.

enclosed sanctuary is located in Mada'in Salih, where three niches were carved into the walls of a carved room (Figure 5.33). The closed-air sanctuary in Area A also contained a basin-like niche (Niche 29) that was located near the entrance way and was presumably used for cleansing or libation purposes. These closed-air sanctuaries are large enough to accommodate a small gathering of people, such as a family or a clan.

Type VI: Triclinia or Biclinia

Niche 30 in Beidha is located in an enclosed room that contains a *triclinium*. The niche in this *triclinium* is oriented so that it faces the entrance of the structure. Additionally, Niche 30 was meant to have some prominence in the structure, as it is centrally located on the back wall, and it is the first thing that individuals see as they walk into the room (Figure 5.34). This is the same case for Niches 10 and 11 that are located inside of a *triclinium* in Wadi al-Mataha Area A, although Niche 11 in this *triclinium* is

Figure 5.34. Example of a Type VI Sanctuary in Wadi al-Mataha Area A (Niches 10 and 11).

very shallow and square-shaped, and was presumably used as niche for some kind of plaque. A second *triclinium* in Area A contains three arched niches, numbered 89, 90, and 91 that are also centrally located on the back wall and oriented so that they face the entrance of the structure. A third *triclinium* in Area A contains a rectangular niche as well as an upside-down mushroom-shaped niche that are located on the back wall (Niches 43, 44, 45, 47, and 48), however, these niches are not prominent features in the *triclinium*, as they are small in size and off-center. Niches located in closed-air sanctuaries containing a *triclinium* or *biclinium* include the following: Beidha: Niche 30; Area A: Niches 10, 11, 43, 44, 45, 46, 47, 48, 89, 90, and 91.

Type VII: Singular Niche

Some closed air sanctuaries contain a single niche in the back wall, however, there are no other structural features located within the rock-cut room to indicate what the function

Figure 5.35. Example of a Type VII Sanctuary in Wadi al-Mataha Area A (Niches 79 and 80).

of the room may have been. It is recognized that some of these rock-cut rooms could once have served as tombs, however, the floors of the structures have not been excavated, therefore it is difficult to know exactly what the original purpose of the room would have been. Some of these sanctuaries contain anti-chambers, the function of which is unknown.

Niche 38 in Area A is a large rectilinear room that contains a smaller rectangular niche in the center of the back wall. Below this niche, there is a large *betyl* that is carved in relief. There are stairs that lead up to a platform, and in the back of this platform there is a *mwtb*-like pedestal carved below the niche (Figure 5.23) Niches 79 and 80 are located in the back wall of a rectilinear room that does not contain a *triclinium* or a *biclinium*. There are stairs that lead up to the base of Niche 79, and Niche 80 is located in the back wall of Niche 79 (Figure 5.35). There are two large rectilinear-cut rooms

on the north-facing wall of the room that contains Niches 79 and 80. To the left of these rooms, there is a niche that contains three smaller niches, two rectilinear, and one arched. Niche 99 in Area A is a large square cut niche that houses Niche 100, which is a smaller rectangular niche. Below Niche 100, there is a platform. Niche 127 in Area A is arched and located in the center of a back wall of a rock cut room. Because the floor is covered in deposition, it is difficult to determine whether or not there was any *biclinium* or *triclinium* located within it. Niche 31 in Area C is located centrally in the back wall of a rock cut room. Niche 31 has a small libation pool in the base of the niche. The function of this room is unknown, as the floor is buried in deposition. Niche 21 in Area C is located in the center of the back wall of a tomb, and it contains a square-shaped *betyl*. Ad-Deir also qualifies as this kind of a sanctuary, because of the large niche located in the back wall of the structure. This niche has two stairways leading up to a platform, which is also serves as the base of the niche.

NICHE FUNCTIONS

As Wenning has noted, ". . . we have to find a meaning for the function of each niche" (Wenning 2001:87). Some inferences may be made concerning the function of niches based on certain variables that are present, or contexts in which these niches occur.

Niches as Places of Worship and Supplication

Again, as mentioned in Chapter Four, A cult-niche in the Diwan is called a masgida in Aramaic. In Arabic, masjid literally means "a place of bowing down" to the god; however, the word can also mean "sanctuary" (Healey 1993:36). Therefore, it may be assumed that a niche was a place/sanctuary where one would bow down in respect for deity. Healey makes a differentiation between private and public worship, and where each one would have taken place. Healey proposes three categories of Nabataean cultic

space. These are as follows:

> (i) the public communal (the main temples and high places); (ii) the private communal (localized cults at small private and often secluded sanctuaries, often terraces, cults of particular deities such as Isis, cults based on social groupings especially exemplified by mrzhy' of particular professional associations – slaves, scribes, workmen, soldiers); and (iii) private individual cultic acts (isolated niche-carvings, etc) [Healey 2001:75].

Niche sanctuary Types I, IV, V, VI, and VI as described above fall into Healey's second category of Nabataean cultic space (Table 5.5). The sanctuaries that were identified in this survey are small in comparison to public communal spaces such as large temples and high places, and they are also secluded from the surrounding landscape. Presumably, Niches located in these small sanctuaries would have functioned as private communal cultic centers for worship and supplication. Other isolated, singular niches, such as those found in Types I and II fall under Healey's third category of Nabataean cultic space, which consists of private individual cultic acts that take place at isolated niche carvings. Presumably, given their isolation and lack of architectural features such as large carved-out areas or seating arrangements (*biclinia*, *triclinia*) that would have accommodated a number of worshippers, these niches would have been used in private individual cultic acts. Types I and III presumably functioned as public communal places of worship, however, not on the same level as temples or large high places. They functioned as public places of worship because their location on the landscape was not secluded, but rather more public in nature.

Niches as Sanctuaries and Miniature Temples

Apart from their role as cultic centers, niches had other functions. Perhaps the most accepted function for niches was that of a protective/sacred enclosure for a deity – places

where *betyls* could be placed, if they weren't already carved in bas relief. A number of niches were built with cavities in the bottom of the niche where *betyls* could be held in place. Two petroglyphs in Petra depict *betyls* that are framed by palms, creating a kind of sanctuary (Wenning 2001:88; Patrich 1990). In the ancient Near East, sacred space was often defined by vines or other forms of vegetation. Finbarr Barry Flood states that:

> The ubiquity of vine ornament in the arts of pre-Islamic Syria is hardly surprising in a region which owed so much of its economic prosperity to viticulture. Just as the vine, a prolific natural creeper, leant itself to covering vertical architectural members, representations of it in architectural contexts were often used to define, emphasize, or frame architectonic elements [Flood 2001: 68].

Niches may function in a similar fashion, creating a sacred space, a temple of sorts that protects and defines a space that would have been preserved for the image of the deity. As Wenning (2001) has noted, some of these niches are equipped with holes that may have functioned as places where rods holding a curtain or veil could have been attached, so the veil acts as a kind of protection as well. Niches could also serve as miniature temples. Healey definitively states that "the essential concept for the niche is, however, clear: it is a miniature temple or *adyton* of a temple" (Healey 2001:155; Zayadine 1989:113). Because the nature of all niches appears to have been the same - that is as sanctuaries for deity-- all seven sanctuary types are considered to have functioned in some capacity as miniature temples (Table 5.5).

Niches as Receptacles for Offerings

Niches may have also functioned as receptacles for offerings. Patrich (1990:67) makes note of a niche located in a temple at Qasrawet in the Northern Sinai on the Egyptian border that has a raised platform in front of it that had served as an offering table. Patrich also notes that a figurine of an Eastern goddess was found next to a

domestic cultic niche in a dwelling at Qasrawet (Patrich 1990:153). Avner, in his survey of the ‘Uvdah Valley and other regions in Israel’s Negev Desert noted that, although it was an infrequent occurrence, where there was a group of three such stelae, an offering plate in the form of a horizontal stone slab was lying at the foot of the stelae. Many of the niches that were recorded in the 2007 survey were associated with a small platform just below or in front of the niche, which may equate in function to the stone slab in front of the stela. Because of this, each of the seven types of niche sanctuaries are considered to have functioned in some capacity as places where offerings may have been placed (Table 5.5). Some of the niches in the 2007 ground survey contained small libation cups where liquid offerings may have been kept. Wenning has suggested that the double hole with a bridge (called a “sand glass”), often found outside of the niche would have been used as a place where votive gifts could have been tied (Wenning 2001:88) (Figure 5.36).

Figure 5.36. Example of a “sand glass” associated with a niche in Area A (Niches 33-35).

Niches and the Ritual Use of Water

Julie MacDonald (2006) has already established that oftentimes in cultic areas, there are water installations present and that water played a major role in Nabataean ritual. In her master's thesis, *The Ritual Use of Water by the Nabataeans at Petra* (2006) MacDonald included a number of cultic areas containing niches that also have water installations associated with them. I will discuss these sites, and to these, I will add some additional niche sanctuaries that were recorded in the 2007 survey that are also directly associated with water. Many of the niche sanctuaries that I recorded were associated in some way with water installations, such as cisterns, libation pools, or water channels. However, a few notable niches that I recorded were directly associated with water, in that the Nabataeans constructed and placed the niche in such a way that water was made to flow over the top of it. (For a full discussion on niches and the ritual use of water, see MacDonald's 2006 master's thesis.) Because niche function, in relationship to water and ritual is important, I will briefly outline her findings in addition to my own from the 2007 ground survey. Water features were considered to be cisterns, water channels, or libation pools. Because niches are often located near water features, this could indicate that there was a relationship between niches and water features. Several niches that were recorded in the survey had obvious associations with water suggesting that water rituals of some kind were associated with niches. Two cultic niches in Wadi al-Mataha, as well as a niche in Beidha are prime examples of this. Concerning the importance of water to the Nabataeans, and the frequent occurrence of water features near cultic areas, Lee Ann Bedal states that:

> "Because of the crucial role as a life-giving resource for the desert nomads, it is not surprising that the Nabataeans perceived water as sacred and that the many examples of ornamental water display in Petra held religious significance.

> Numerous religious icons, inscriptions, and sanctuaries are found in association with springs, catchment pools, and channels throughout the city and its environs" [Bedal 2003:99].

Concerning cultic sites and the appearance of water features, Binst provides the following:

> In Petra each of these cultic sites has its own cistern carved into the living rock into which rainwater was directed down special channels. This water was then transferred into smaller basins and used for ritual purification or for cleaning the trappings of the cult after each use. It is not known how often these ceremonies took place, but they were probably observed according to a precisely determined calendar in which the seasons may well have played a role [Binst 2000:157].

Niches Directly Associated with Water Installations Recorded in the 2007 Survey

Sanctuary Types II, III, and IV all contained examples of niches that were in some way directly associated with water. Several of the niches that are noted here were recorded by Julie MacDonald and reported in her 2006 master's thesis. However, because of their implications concerning niches, water, and Nabataean ritual, I found it appropriate to mention them here. Niches that were recorded by MacDonald are cited where necessary.

Niche 35 in Beidha is a prime example of how the Nabataeans incorporated niches into the water installations. Niche 35 is also part of an open-air sanctuary that is accessed by a stairway. It is separated from the surrounding landscape in that it is not visible from the ground below, and it can only be accessed by the stairway. A water channel is carved directly above the niche in such a way that water could be directed to flow right into the niche. There is also a groove below the niche so that this water could then drain out of the niche into a water channel that leads to a libation pool. There is also a groove to the left of the niche that leads water into a small cistern that is cut into the Cliffside. See figure 5.37 for a visual of this niche. This niche was also recorded by Julie MacDonald

Figure 5.37. Niche 35 in Beidha. Note the water channels.

(2006).

Niches 14, 15, and 16 in Wadi al-Mataha Area A are all located above a large cistern. These niches were carved with shallow tops so that rain water would have been allowed to flow over the tops of the niches, into the niches, and then subsequently down into the major cistern for water collection. These niches were also recorded by Julie MacDonald (2006).

Niches 112, 113, and 114 in Wadi al-Mataha Area A are all situated on a cliff face above a water channel. Below Niche 113, there is a cut groove in the rock so that after water flowed over the tops of the niches, it would then drain through this groove and be

collected in the water channel below, which would then flow into a nearby cistern.

Niche 2 in Wadi al-Mataha Area C is part of an open-air sanctuary containing multiple niches. This sanctuary is accessed by a stairway, separating and elevating it from the surrounding landscape. Inside of Niche 2, the Nabataeans carved grooves in the base of the niche that would allow liquids (presumably water) to flow out of the niche, implying that liquids were directed into this niche, or poured into the niche to be collected in a cistern below it (Figure 5.3).

Niche 19 in Wadi al-Mataha Area C is an open-air sanctuary with a singular niche, Dushares block, *mwtb*, platform, stairs, and water channels (see Figure 5.25). There are water channels located on top of the niche sanctuary that channeled the water so that it would flow over the top of the niche, *betyl*, and stairs. There are two additional water channels that are located one on each side of the stairs so that water could be diverted and flow into a cistern that is located to the east of this sanctuary. This is another example of the Nabataeans diverting the water so that it flowed over the face of the niche and into a cistern. This is a case, also, where water was allowed to flow over the stairs, which would create a waterfall effect. In 2005, the BYU Field School of Archaeology opened up a three by one meter test trench below the niche and stairway, and it was designated as Site 11. This niche was also recorded in a BYU 1997 field survey.

Niche 20 in Wadi al-Mataha Area C (Figure 5.30) is part of a secluded open-air sanctuary that contains a singular niche, *betyl*, a platform below the niche, a *biclinium*, two libation pools, and a cistern. This sanctuary can be accessed by stairs, and it is not visible from the Nabataean road cut to the west of it. There are water channels carved above the niche and *betyl* which directed the water to flow over the tops of them into two libation pools below. This sanctuary has been recorded in detail by Julie MacDonald (2006) and was also excavated by the BYU Field School of Archaeology in 2005, and

Figure 5.38. Niche 12 in Sanctuary 4 in Wadi al-Mataha Area D.

was designated as Site 10.

Niche 12 in Wadi al-Mataha Area D is part of a secluded open-air sanctuary that contains multiple niches. Niche 12 is an interesting example because there is a hole that was carved above the niche to allow water to flow into the niche and basin below (Figure 5.38). This open-air sanctuary is located above a series of cisterns and water channels below it, therefore, water would be allowed to flow into this sanctuary, and then subsequently flow into the cisterns below it.

The Nabataeans constructed a dam and water tunnel that diverted water out of the Siq into Wadi Muthlim and Sadd al-Ma'jan. In the 2007 ground survey, eighty-one niches

were recorded, showing that the Nabataeans obviously placed cultic importance on this area, and that it was seen as sacred. This area also exhibited many of the indicators of ritual as defined by Renfrew and Bahn (2000). The water that was diverted would have flowed through Sadd al-Ma'jan, over these niches, into water channels and cisterns located in Wadi al-Mataha. Some of these niches also exhibited very elaborate facades, showing their importance. See my discussion concerning niche façade types below for more detail as to the extent of the architectural details of these niches.

Discussion

As previously stated, MacDonald (2006) has already established that the Nabataeans incorporated water into their rituals. My own survey also supports MacDonald's determination that the Nabataeans intentionally diverted water so that it would flow over niches into cisterns. As previously stated, MacDonald (2006) has already established that the Nabataeans incorporated water into their rituals. For a complete discussion on this topic, see MacDonald's 2006 master's thesis. From these examples cited here, it is evident that the Nabataeans intentionally diverted water so that it would flow over niches into cisterns. A similar practice was employed by the Egyptians during the Greco-Roman period. David Frankfurter explains that "In Egypt, however, the principle had been long institutionalized and centralized: some stelae and statue bases are actually equipped with depressions for the water to pool and be collected after passing over the hieroglyphs" (1997:48). The stelae over which the water was poured was often inscribed with healing spells. It was thought that by drinking the water that passed over the healing stelae that the individual who drank it would become healed (Ibid.). MacDonald suggests that these installations may have been used for purifying or blessing rituals of the water, as water was essential for the Nabataeans' survival in the desert (MacDonald 2006).

Table 5.5. Niche Sanctuary Functions

Sanctuary Type	Functions					
	The Private Communal	The Public Communal	Private Individual Cultic Area	Miniature Temples	Receptacles for Offerings	Ritual Use of Water
Type I	X	X	X	X	X	
Type II			X	X	X	X
Type III		X		X	X	X
Type IV	X			X	X	X
Type V	X			X	X	
Type VI	X			X	X	
Type VII	X			X	X	

NICHE FACADE TYPOLOGY

Introduction

When devising an artifact typology or classification, David Hurst Thomas states that ". . . the first analytical step is to describe the artifacts carefully and accurately by grouping them into morphological types" (1989:316). By examining significant attributes of artifacts or features, and then generating descriptive groups based on similar attributes, typologies can help illuminate multiple functions for the artifacts. Morphological types may be based on several different attributes and criteria. When describing objects, variables such as weight, height, length, volume, and other basic nominal measurements are recorded. The function of morphological types is to organize data into groups, making it easier to examine data in groups rather than as individual entities.

A separate niche typology based on the morphological characteristics, specifically with regards to architectural details in the facades, was developed that created stylistic groupings, and this is discussed in detail below. This particular typology organizes and classifies niches into stylistic types based on their morphological (physical) traits in façade ornamentation and show (1) the varying degrees of façade complexity, (2) how these niche façade types are distributed across varying contexts, and (3) Nabataean preference for niche facade ornamentation. It also shows how the many different combinations of classical details were employed by the Nabataeans in niche construction. Discussed below are the methods employed for the identification of niche facade groupings and patterns in the data.

Niches in this typology included all of the niches located and recorded in the 2007 field survey. In addition to this data, I incorporated niches that were located in Mada'in Saleh. One objective of this study was to establish a stylistic typology of niches, dividing them into six main stylistic types based on the number of classical elements present.

Figure 5.39. Example of a Type I Facade in Area C (Niche 19).

For each classification, all of the architectural details are mentioned, as well as the niche shape, and the areas in which those niches were found. Appendix B is a glossary containing all of the architectural terms used here, taken from Judith McKenzie's 1990 publication. The following text describes each of the different niche facade groups that were created.

Type I

Type I facades consist of a simple post and lintel system (Figure 5.39). The niche facades in this category are those with undecorated supports, usually carved in relief, that support undecorated lintels. Niches with this specific façade type occur only in

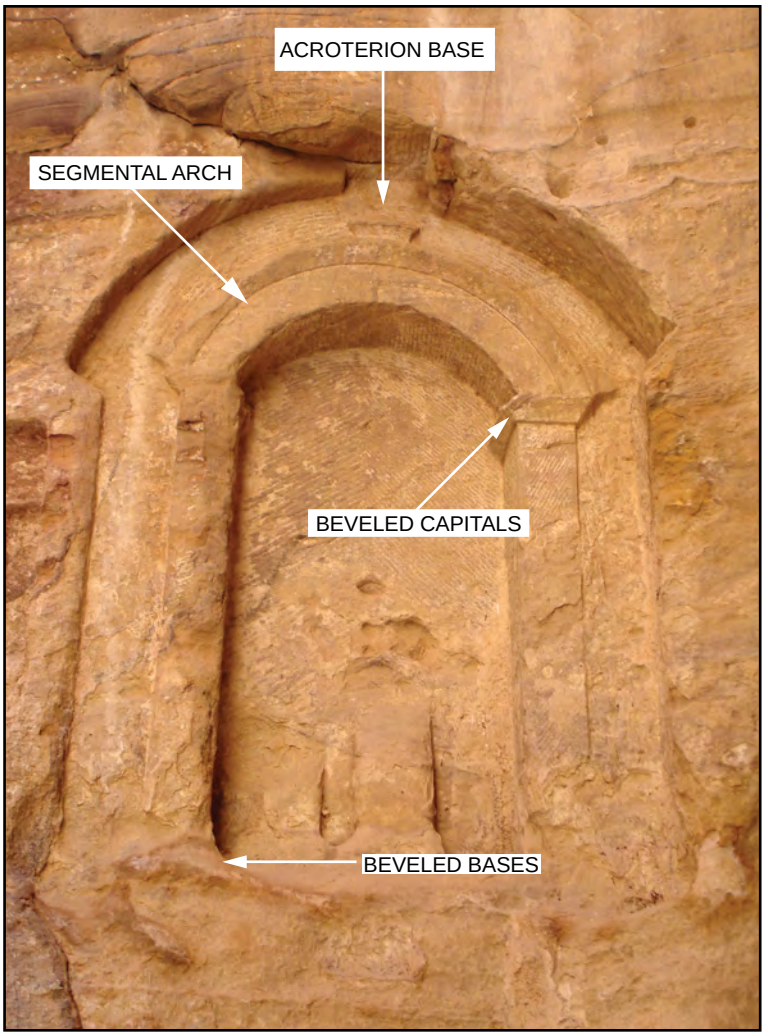

Figure 5.40. Example of a Type II Facade in Sadd al-Ma'jan (Niche 80).

vertically rectangular niche shapes. Niches with a post and lintel façade were found in the following areas: Bab as-Siq (Niche 56), Jabal ad-Deir (Niches 6 and 9), Sadd al-Ma'jan (Niches 59, 73, and 82), Wadi al-Mataha Area C (Niches 4 and 19), and one from Mada'in Saleh.

Type II

Type II niche facades are characterized by an arched or apse-shaped niche. The façades are decorated with two pillars with beveled capitals and beveled or sometimes quarter round bases (Figure 5.40) The pillars support a curved segmental arch. Sometimes, as in the case of the niche in the back wall of the Obelisk Tomb or Niche

13 and 51 in Bab as-Siq, or Niche 80 in Sadd al-Ma'jan, an acroterion base crowns the top of the entablature. In an example from Sadd al-Ma'jan, the pillars may also contain dwarf pilasters with beveled capitals. In other cases, as in the case with Niche 19 in Wadi as-Siq, the niche will also have a carved base directly below it. The interior niche on the back wall of ad-Deir is also considered a Type II façade. There are two pillars on each side of the niche, which has a segmental arch with related baroque entablatures. However, the bases of the pediments are so badly corroded that it is difficult to see any diagnostic characteristics to determine the base type. There are stairs on both sides of the niche that lead up to the interior of the niche. McKenzie describes this niche in great detail:

> The back wall (1. 12.11m) contains a broad recess (4.3 by 2.4 m, h 5.2m) starting .90 m above present floor (bench top) level. It has four steps carved into it at either end, and a segmentally vaulted ceiling. The front of the recess is framed by pillars and a segmental arch. The pillars which fade out towards the bottom, have inset molded anta-type capitals on which all detail has been weathered. They continue as a rock-cut cornice along the sides and across the back of the niche. The segmental arch consists of a rock-cut two fascia architrave crowned by an inset cornice with weathered moldings, a beveled ovolo and a sima. In the centre of the back wall of the niche there is the trace of the foot of a pedestal protruding from the wall. From the shadowlike trace on the wall there would appear to have been an altar above it, possibly as indicated by Musil, although careful examination of the tooling shows no sign of it. Some crosses with serifs have been carved above the "shadow" of the altar. The left side-wall is plain, except for an L-shaped groove in the front corner (h.53 m l 1.06 m). The right side-wall and front wall are plain. The ceiling (h 8.8 m) is a little above the top of the doorway. The interior is dressed with fine pecked tooling [McKenzie 1990:161.

Niche facades of this type were found in Wadi as-Siq (Niches 8, 13, 19, 23, 24, 25, and 51), Sadd al-Ma'jan (Niches 58 and 80), Wadi al-Mataha Area A (Niche 6), the niche in the back wall of ad-Deir, and one example from Mada'in Saleh.

Type IIa

At Mada'in Saleh, there are three niches with facades containing the same

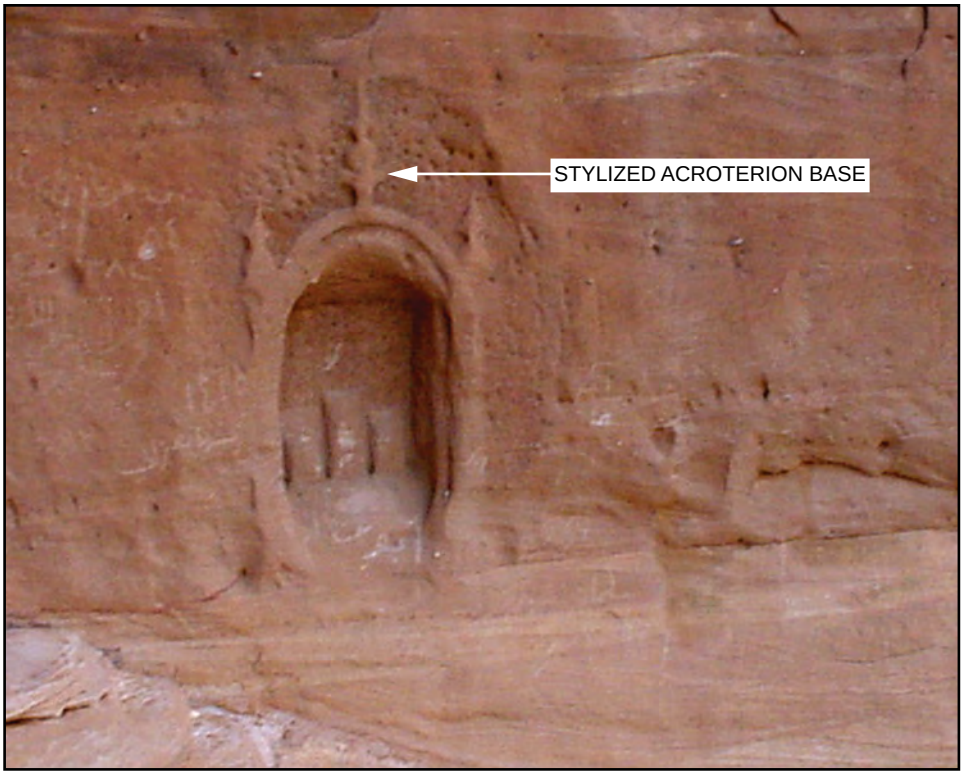

Figure 5.41. Example of a Type IIa Facade.

architectural elements as the niche facades in Type II such as a pair of pillars with beveled bases and beveled capitals that support a segmental arch containing a curved architrave. However, these niches differ from Type II niches in that they contain a distinctive stylized acroterion bases that so far have only been observed at Mada'in Saleh (Figure 5.41).

Type III

Niche facades in Type III are more complex than those in Type II. They contain the same architectural features as the Niches in Type II, but they also contain some added features. Niche facades in Type III as with the facades in Type II are characterized by pillars with beveled capitals and beveled or quarter round bases supporting a segmental arch with a curved architrave. Niche facades in Type III also contain an additional pair of pillars, adorning either side of the niche. However, due to erosion, as in the case with Niches 12 and 14 in Wadi as Siq, it is difficult to determine the base or capital types of

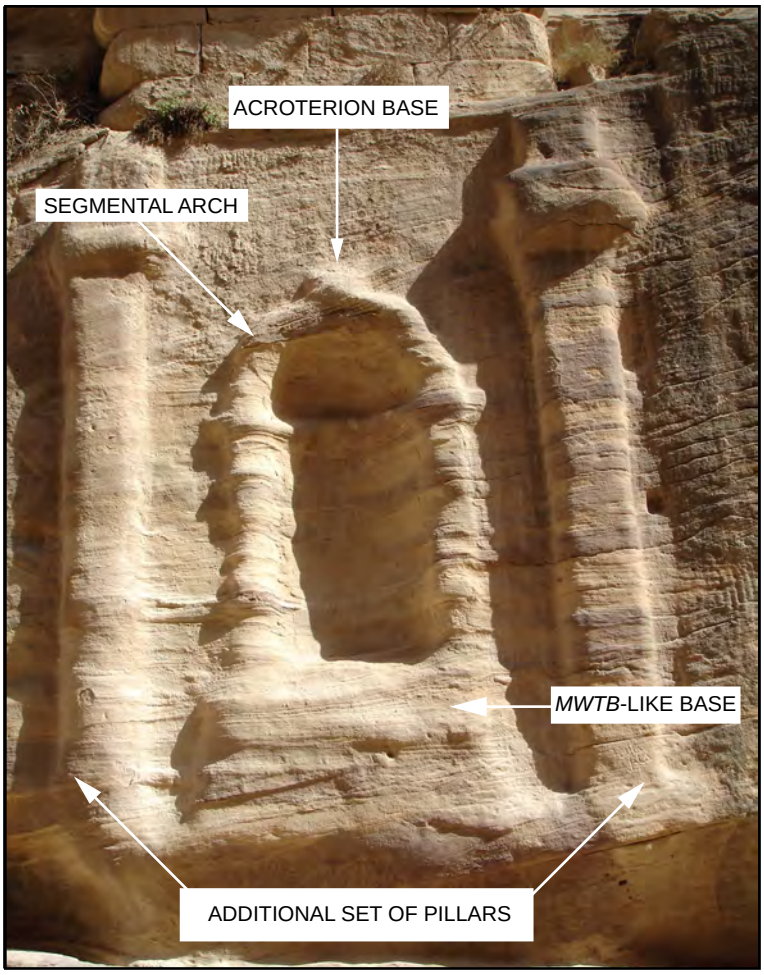

Figure 5.42. Example of a Type III Facade in Wadi as-Siq (Niche 14).

the additional set of pillars (Figure 5.42). Both Niche 12 and Niche 14 have a carved *mwtb*-like base directly below them. Niches 12 and 14 are apse-shaped niches with a conch. Niches 12 and 14 were once a part of the arch in Bab as-Siq. McKenzie places a date of the Bab as-Siq arch at terminus post quem c. A.D. 50. The niches in the lower order of ad-Deir also have Type III niche facades. The two niches in the lower order have segmental pediments. Each of these two niches has an acroterion base crowning the segmental pediment. Plain, rectangular entablatures are located just under the segmental pediment. Niches with Type III facades occur in Wadi as-Siq (Niche 12 and 14), as well as on two niches of the lower order of ad-Deir.

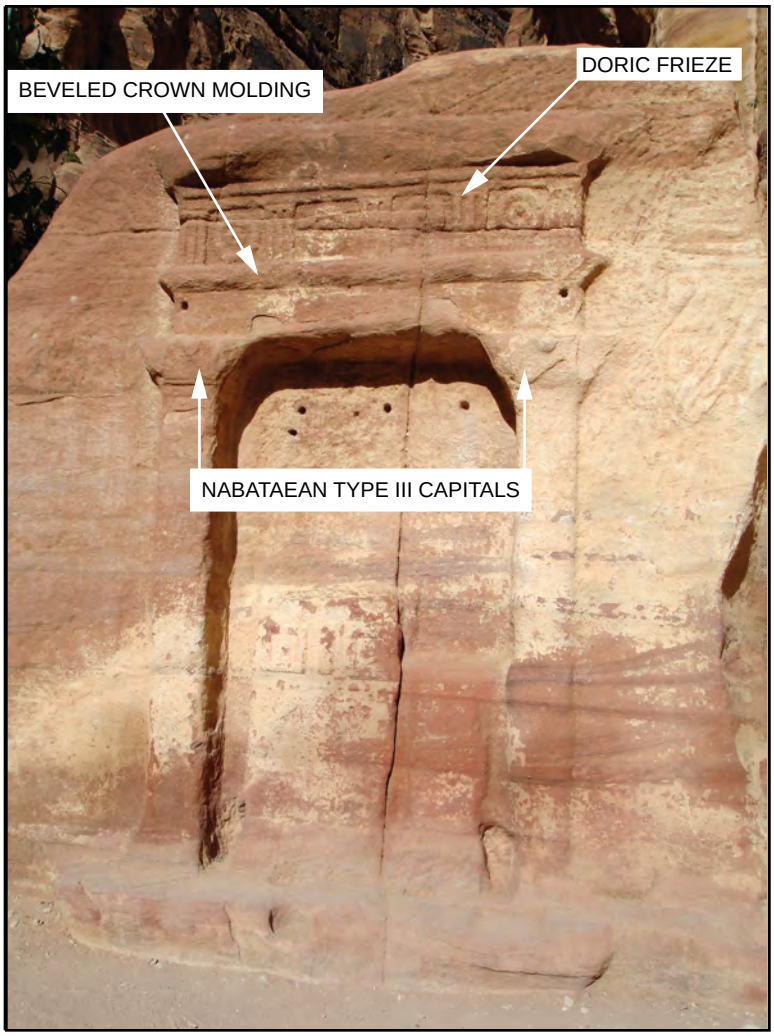

Figure 5.43. Example of a Type IV Facade in Wadi as-Siq (Niche 18).

Type IV

Niches with a Type IV façade consist of a set of pillars with beveled bases and beveled capitals that support a horizontal entablature that, in some cases contain elaborate details (Figure 5.43). A prime example of this type is the niche on the façade of the Obelisk Tomb. The façade of the niche is marked by two pillars with quarter-round bases with beveled anta-type capitals. The pillars support an entablature that has a single fascia architrave and beveled crown molding. Above this there is a Doric frieze and a weathered cornice. According to McKenzie, "the Doric frieze has no regulae or guttae and has plain discs in the metopes" (1990:156). The niche houses a badly eroded draped

figure that is carved in relief. An example from Sadd al-Ma'jan (Niche 29) exhibits a niche framed by two pillars with eroded bases and beveled capitals that support an empty frieze, which may have stored a plaster molding. Some of the capitals, as with Niche 66 in Sadd al-Ma'jan are Nabataean Type III columns. Niches with a Type IV façade occur in Wadi as-Siq (Niches 8 and 17) and Sadd al-Ma'jan (Niches 29 and 66).

This façade type is also evident in the three upper niches of ad-Deir. The three niches in the upper order of ad-Deir are famed by pillars and a plain rectangular entablature. These three niches are sitting upon *mwtb*-like pedestals. The central niche on the upper order has:

> molded anta-type capitals with a necking band, without visible pillars. The capitals carry a two fascia architrave which is crowned by a beveled ovolo, dentil element, corona, astragal and ovolo. The architrave does not extend completely over the capitals. The niche contains a pedestal which is crowned by a cyma reversa and a cavetto. The tholos contains a niche framed by pillars without bases, with moldid anta-type capitals. The entablature consists of a two fascia architrave crowned by a bevelled ovolo, dentil element, corona, astragal, ovolo, and a sima. The niche contains a pedestal" [McKenzie 1990:161].

Type V

Type V niche facades are characterized by a set of pillars with beveled capitals and beveled or quarter round bases with the addition of a triangular pediment with or without a ranking cornice (Figure 5.44). Sometimes acroterion bases are present, adorning each end of the triangular pediment. An example of this comes from Niche 17 in Wadi as-Siq. Other niche facades, as with Niche 47 in Sadd al-Ma'jan, exhibit elaborate entablatures with Doric friezes. Many of the facades were too eroded to identify specific architectural details. Niche 2 in Jabal ad-Deir differs from the other Type V niche facades in that it has an arched pediment. Type V niche facades occur in vertically rectangular niche shapes, however, one example from Sadd al-Ma'jan (Niche 68) differs from the rest, in that it is

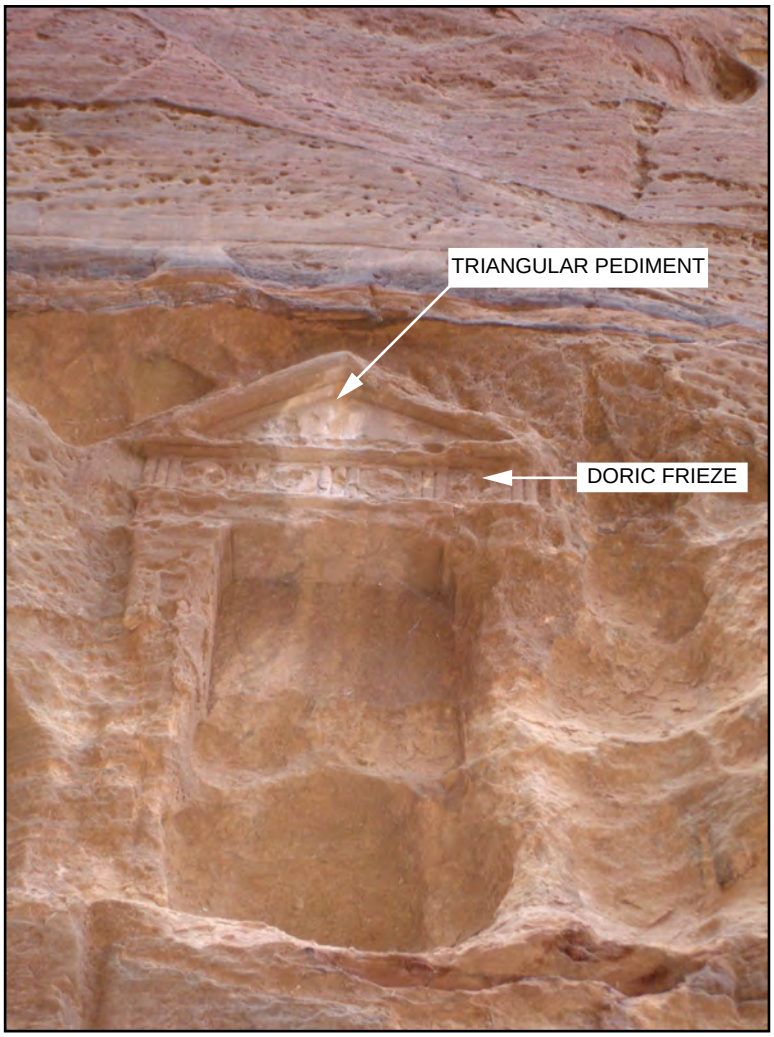

Figure 5.44. Example of a Type V Facade in Sadd al-Ma'jan (Niche 47).

an arch-shaped niche. Niche 68 has beveled or Nabataean Type 3 capitals, however, due to erosion, this is difficult to determine. The columns have beveled bases which are also badly eroded. The columns and the capitals support a segmental arch that is crowned by a crescent moon. Type V niche facades were identified in Wadi as-Siq (Niches 17 and 22), Sadd al-Ma'jan (Niches 38, 55, and 68), and Jabal ad-Deir (Niche 2).

Type VI

Type VI niche facades are the most elaborate of niche types. The only example of a Type VI niche façade is Niche 56 from Sadd al-Ma'jan (Figure 5.45). This is a complex niche that consists of a large outer plain rectangular niche that contains an interior

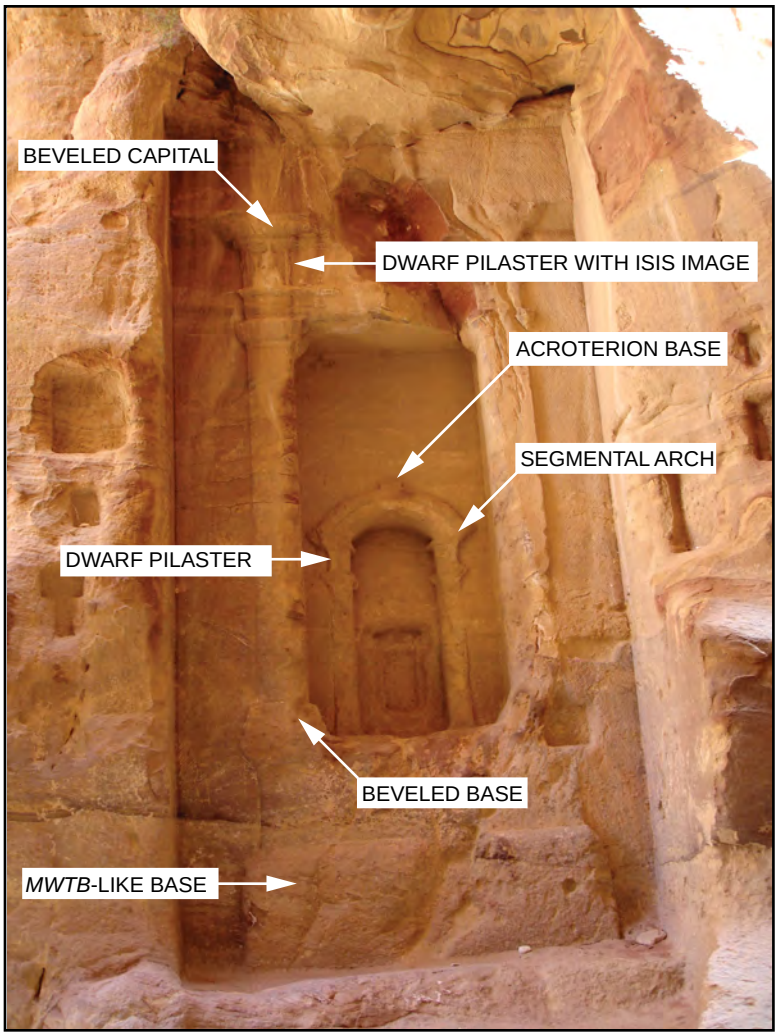

Figure 5.45. Example of a Type VI Facade in Sadd al-Ma'jan (Niche 56).

niche that is framed by two pillars that have beveled or quarter round bases and beveled capitals. The tops of these capitals contain dwarf pilasters with beveled capitals. Above these are friezes that contain eroded Isis figures that are crowned with beveled capitals. The right pillar is almost completely eroded; however, it is assumed that it contains the same architectural details as the pillar to the left. These complex pillars support a horizontal entablature that is partially eroded. The entablature consists of a plain surface with beveled crown molding. Inside of this outer niche, there is an interior niche with an arched façade that has two pillars that contain dwarf pilasters with beveled capitals that support a segmental arch that is crowned with an acroterion base. The bases are too

eroded to determine what base type they are. Inside of this niche, there is the inner-most niche that is slightly T-shaped and undecorated. The entire façade sits above a pedestal that is carved in relief.

Discussion

The total sample number of niches with facades for all surveyed areas was forty-two. Only niches with facades were included in this typology. Niches with plain facades, or facades that were too badly eroded to determine any architectural details were excluded from this typology. It was determined that six fundamental niche façade types as well as one sub type can be identified from the sample of niche facades from the surveyed areas and from Mada'in Saleh. There are of course, variants in each of the types; however, they were not considered to be significant enough to justify adding varieties to the types to accommodate for these minor attributes.

As previously mentioned, there were three purposes of this typology, and these were to organize and classify niches into stylistic types based on their morphological (physical) traits in façade ornamentation into several distinct groups in order to show: (1) the varying degrees of façade complexity, (2) how these niche façade types are distributed across varying contexts, and (3) Nabataean preference for niche facade ornamentation. With regards to the first purpose, each of the six types and one sub type were divided based on the number of architectural details present. These stylistic types ranged from simple to complex, with Type I being the simplest, and Type VI being the most complex. The second objective was to determine how these facade types are distributed across varying contexts, and given the data, a cursory look at the examples of the niche facades shows that the more elaborate niche facades such as Types III, IV, V, and VI were located in areas of Petra that would have been public areas and seen and visited by many people.

These were located along the processional routes in Petra, such as Wadi as-Siq, Sadd al-Ma'jan, and Jabal ad-Deir. In contrast, only the simplest forms of niche facades, Types I and II were present in Wadi al-Mataha areas C and A, respectfully. Wadi al-Mataha is located far from the city center, and it is assumed that this area of Petra was not necessarily a frequented public area. Niches with facades of any type were not present in Beidha. From this data, it can be assumed that the Nabataeans preferred to keep the most elaborate of niche facades in areas that were visible to many people. Also, these niches would have been more accessible for public worship. Given the various forms of ornamentation that were used to adorn niche facades, it is not impossible to consider the fact that individual preference may have been more of a factor in niche façade ornamentation than some kind of standardized way of decorating the facades of niches.

Differentiating between the more elaborate niche facades verses the simpler facades can also say something of the patron who commissioned the niche to be built. Concerning tomb facades, Robert Wenning states that:

> The few inscriptions at Petra, the costs and prestige of the elaborate facades, especially of the Temple Tombs, may allow us to associate these precious monuments with Nabataean kings and other dynastic members; the "Gable" and "Step" tombs, with leading families of the tribe and other nobilities; and the large group of "Crow step" and "Arch" tombs, with other less prosperous members of the tribe … We can suggest that the richer owners, as patrons, allowed their clients to be buried in their tombs or in nearby graves. Assuming these considerations about the owners are correct, it is interesting to note that Hellenistic influence on the facades increased within the upper ranks of the social groupings. At the same time, the forms of the facades move towards simplification, as demonstrated by Judith McKenzie [2003: 142].

According to Wenning, the tombs with the most complex facades most likely belonged to wealthy individuals who could afford to build them. If this idea is applied to niche facades, we can assume that the more elaborate niche facades were commissioned

by patrons who could afford to have such features constructed. Wenning also suggests that the more elaborate niches may have been built by wealthy donors. Wenning has suggested that:

> All the details of *betyls,* niches, framings, and installations demonstrate that the Nabataean votive niche is complex and not as simple as it may appear at first glance. The more elaborated niche emphasizes the importance of the venerated deity and also may reflect the status of the donor. But the various combinations are not simply accidental decoration [Wenning 2001:88].

With regards to the third purpose of this typology, which was to determine Nabataean preference for niche facade ornamentation, it was observed that all of the facades exhibit combinations of Hellenistic architectural details and motifs. It is interesting to note that the Crow Step motif does not occur on any niche facades within this survey (See figure 5.46 for an image of a Crow Step). It has been suggested that perhaps the stairs that are found with some of the niches may replace the Crow Step symbol (Cynthia Finlayson personal communication, 2008). Crow steps are not found on any of the known niches in the BYU 2007 field survey or in publications. A number of assumptions can be made from this observation. It can be assumed that the Nabataeans viewed the Crow Step motif as fitting for tomb facades, but not for cultic features such as niches that were preserved for the veneration of deity. The Crow Step motif does not occur on any of the royal tomb facades; however, given its frequent appearance on middle class tomb facades, it can be assumed that it was quite popular. Despite its popularity, the Nabataeans chose not to use the Crow Step motif to decorate the facades of niches, and Nabataean kings chose not to use the Crow Step pattern to decorate the facades of their tombs. Instead, in both cases, the Nabataeans chose to use Hellenistic motifs to decorate the facades of royal tombs and niche facades. It can also be assumed that since the Crow Step motif was used primarily

Figure 5.46. Example of the Crow Step Motif on a tomb in Area B.

in the tombs of middle class individuals that it was not seen as an appropriate motif with which to decorate the tomb facades of royalty, who were sometimes, as in the case of Obodas, deified at death, or to decorate the facades of cultic niches that were meant for the veneration of deity.

However, stylistic preferences also presumably had a role in the ornamentation of niche facades. It may have simply been up to the individual who commissioned the niche to exclude the Crow Step motif from the façade ornamentation. The Crow Step motif may have been a stylistic convention that was determined more by stylistic preferences of a certain time period. Judith McKenzie has established a chronological sequence of the monuments of Petra based on the dated monuments from Mada'in Saleh. According to her chronology, at Mada'in Saleh there is simplification of architectural details as well

as an increasing squatness in the shape of the facade with chronological development (McKenzie 1990:50). Of the dated tombs at Mada'in Saleh, the Crow Step motif appears on tombs dated between AD 16 and 76. It is assumed that tombs with the Crow Step motif appear at approximately the same time chronologically in Petra. However, these assumptions and the time frames of exactly when the Crow Step motif was utilized at Petra are still in question. All of the assumptions that are presented here are meant to provide some direction for future studies concerning the lack of the Crow Step motif on cultic niche facades. However, this current study brings to light the fact that the Crow Step motif did not appear on cultic niches surveyed in this study. Of course, the sample of niche facades from which this typology was created is small in comparison to the many niches located in and around the Petra area. This typology has the potential to serve as a base-line for future niche facade classification studies.

6 CONCLUSIONS

REVIEW OF RESEARCH OBJECTIVES AND CONCLUSIONS

The purpose of this chapter is to provide an overview of the research objectives and conclusions reached in Chapter Five. There were five main objectives to this study. The first objective was to determine whether or not the Nabataeans preferred sacred or standardized orientations for cultic niches or whether or not the orientation of the individual *betyls* or interior niches within the niches had any specific orientations. Concerning orientation, with the exceptions of Wadi al-Mataha Areas B, C, and D, the orientation of cultic niches seems to have been determined by the topography. As discussed in Chapter Five, east and west were the dominant orientations for Wadi al-Mataha Areas B, C, and D, where niche placement was not confined to topography. This is interesting, and may be of significance, because Areas B, C, and D are funerary contexts filled with numerous tombs. In ancient Near Eastern religions, the cardinal directions of east and west were associated with the rising and the setting of the sun, which were synonymous with the concepts of life and death, respectfully. With regards to the orientation of *betyls* and interior niches within niches, it was determined that there were not any relationships between the *betyl* type or interior niche shape and cardinal orientation.

The second objective was to examine *betyl* or interior niches and their shapes, and then compare these to outer niche shapes to determine whether or not there were any possible relationships between the two variables. For example, as discussed in Chapters

One, Three, and Five, different *betyl* shapes were used to represent different deities. The purpose of this portion of the study was to see if any of the particular *betyl* shapes or types required particular niche shapes or types. A cursory look at the data has revealed that there are not any relationships between *betyl* or interior niche shape and the outer niche shape (see Tables 5.3 and 5.4). This suggests that in Nabataean society, individual deities did not necessarily require a particular niche shape or type.

The third objective of this study was to contextualize the niches in relation to built features such as *biclinia, triclinia,* stairs, platforms, cisterns, water channels, and libation pools, and use these features to discuss the various cultic niche "sanctuaries" that were recorded in the BYU 2007 field survey. As discussed in Chapter Five, it was determined that based on the number and type of built features present, and the degree of seclusion, that there were seven different types of sanctuaries containing niches that the Nabataeans built and used in cultic worship. The purpose of this typology was to show the different types of sanctuaries, the number of people each sanctuary type accommodated (to show public and individual sanctuaries), how the architectural features (niches, stairways, platforms, water-holding devices, etc.) within sanctuaries were organized, the degree of seclusion for each type, as well as the different functions that niche sanctuaries served.

The fourth objective was to explore how niches may have functioned in Nabataean sanctuaries. Several functions were discussed, and these included the following: niches as private and public communal places of worship and supplication, niches as individual cultic areas, niches as miniature temples, niches as receptacles for offerings, and finally, niches used in water rituals. See Table 5.5 for the proposed functions for each niche sanctuary type.

The fifth and final objective was to create a stylistic typology based on the architectural details of niche facades that were recorded in the 2007 field survey as

well as niches from Mada'in Saleh. A niche typology based on the morphological characteristics, specifically with regards to architectural details in the facades, was developed that created stylistic groupings. This particular typology organized and classified niches into stylistic types based on their morphological (physical) traits in façade ornamentation and show (1) the varying degrees of façade complexity, (2) how these niche façade types are distributed across varying contexts, and (3) Nabataean preference for niche facade ornamentation. It also shows how the many different combinations of classical details were employed by the Nabataeans in niche construction. Based on the number of architectural elements present in the niche facades, it was determined that six primary niche façade types as well as one sub-type could be identified from the sample of niche facades from the surveyed areas and from Mada'in Saleh. With regards to the first purpose, each of the six types and one sub type were divided based on the number of architectural details present. These stylistic types ranged from simple to complex, with Type I being the simplest, and Type VI being the most complex. The second purpose was to determine how these facade types are distributed across varying contexts. The data shows that the more elaborate facade types such as Types III, IV, V, and VI were located in areas of Petra that would have been public areas and seen and visited by many people. With regards to the third purpose of this typology, which was to determine Nabataean preference for niche facade ornamentation, it was observed that all of the facades exhibit combinations of Hellenistic architectural details and motifs, showing a preference for such decoration.

SIGNIFICANCE AND BROADER IMPLICATIONS

Personal preference for the niche shape, façade ornamentation, and niche placement seems to have been more of a factor in determining niche construction than

a standardized method pre-determined by the Nabataean state. As previously stated by Patrich, the Nabataeans took two approaches in stele construction. I find it necessary to re-quote Patrich here:

> We have observed a large variety of stele types and two different approaches: one formal and crystallized and the other personal. In the first approach the stele is related to a specific deity, and the groupings appear and reappear in the same arrangements. This testifies to there having been definite fixed formulas for representing each deity. At the same time there are deviations from the fixed forms, a phenomenon appropriate to a popular cult in which the connection between man and god is personal – where the mediation of a religious establishment or of absolutely obligatory cultic formulas was not required [Patrich 1990:103].

From the observations and tests that I conducted on the data from the field survey, it seems that there was a lack of standardization of niches, with regards to orientation (when confined by topography) and niche construction, specifically with the differing niche shapes, differing combinations of niche and *betyl* shapes, as well as the differing styles used to decorate niche facades.

Given the evidence, and based also on topographical considerations, niche construction and placement on the landscape appears to have been decided by the individual who commissioned to have the niche built. With the exceptions of the niches in Wadi al-Mataha Areas B, C, and D, there seems to be no standardized cardinal orientation for niches, when confined by topography. However, when not limited by topography, there does seem to be a Nabataean preference for east and west orientations for niches, which may be of cultic and symbolic significance. Given the lack of standardization in niche construction, it seems reasonable to assume that in Nabataean religion, the relationship between individuals and deity was a personal relationship, and that standardization in the construction of religious features such as cultic niches was not fixed or determined by the state, and that, as Patrich suggests, ". . . the mediation of

a religious establishment or of absolutely obligatory cultic formulas was not required" (Patrich 1990:103). In the larger scope, this reflects the ecliptic nature of Nabataean society. As discussed in Chapters Two and Three, Nabataean culture and religion was heavily influenced by the societies with whom the Nabataeans traded. The Nabataeans had a very dynamic culture that allowed for flexibility in the construction of religious features and in cultic worship. Such flexibility was a common feature of trading societies such as the Nabataeans (David Johnson, personal communication 2008).

DIRECTIONS FOR FURTHER RESEARCH

This study developed a functional typology based on niche sanctuaries and a stylistic typology based on niche facade ornamentation that will serve as the bases and beginning of what can expand and evolve into future projects and research questions. It is hoped that in future niche studies, others will use the same recording system that was used in this study, noting variables such as size, shape, orientation, façade ornamentation, *betyl* or *nephesh* presence, as well as the location of each niche. This information can subsequently be added to the existing data base, and perhaps be used to make more interpretations, or possibly add to the typologies as discussed in Chapter Five. Future work should involve the classification of niches taking into account the construction and placement of niches on the landscape. Such research can further our knowledge concerning various niche types and construction, and in the larger picture, the nature of Nabataean society and religious practices.

APPENDIX A - FIELD DATA

Table A.1 is the field data that was recorded during the 2007 BYU field survey of Wadi as-Siq, Sadd al-Ma'jan, Jabal ad-Deir, Beidha, and Wadi al-Mataha Areas A, B, C, and D. In this chart, I also provide the niches that I could identify that were also recorded by Gustav Dalman (1908), Jean-Marie Roche (1985), and Johnson et al. (1999). All measurements were taken in centimeters. The following abbreviations were used in the table:

Dalman - Gustav Dalman (1908)
Roche - Marie-Jeanne Roche (1988)
Johnson - Johnson et al. (1996)
Niche Dim. - Niche Dimensions
Betyl Dim. - Betyl Dimensions
H - Height
W - Width
D - Depth
Orien. - Orientation
UTMs - Universal Transverse Mercator (European Datum 1950)
Rec - Rectilinear Shape
Rec (V) - Vertical Rectaliniar Shape
Rec (H) - Horizontal Rectaliniar Shape
A - Wadi al-Mataha Area A
B - Wadi al-Mataha Area B
C - Wadi al-Mataha Area C
D - Wadi al-Mataha Area D
WS - Wadi as-Siq
SM - Sadd al-Ma'jan
JD - Jabal ad-Deir
Beid - Beidha

Table A.1. Field Data

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
1				A	43	30	17					NW	736247	3358655	Arched			
2				A	27	18	14					NW	736266	3358641	Circular			
3				A	-	100	40					NW	736266	3358641	Rec (V)			
4				A								SW	736266	3358641	Rec (V)			
5				A	39	30	6					NW	736266	3358641	Rec (V)			
6				A	65	40	18					W	736223	3358616	Arched			
8				A	65	46	14					E	736150	3358563	Rec (V)			
9				A								SW	736150	3358563	Rec (V)		Triclinium	Cistern
10				A	88	40	40		69	41	22	NW	736150	3358563	Rec (V)		Triclinium	
11				A	44	44	3					NW	736150	3358563	Square		Triclinium	
12				A	50	26	28					NW	736157	3358530	Rec (V)			
13				A	34	34	20					NW	736157	3358530	Rec (V)			
14				A								N	736157	3358530	Rec (V)			Water Channels, Cistern
15				A								NNW	736157	3358530	Rec (V)			Cistern
16				A								NNW	736157	3358530	Rec (V)			
17				A								N	736157	3358530	Rec (V)	Rec		Water Channel
18				A								NW	736081	3358503	Rec (V)			
19				A	88	79	40					W	736070	3358476	Rec (V)			
20				A	106	64	32					NW	736046	3358451	Rec (V)			
21				A	106	60	34					NW	736046	3358451	Rec (V)			
22				A	106	65	38					NW	736046	3358451	Rec (V)			
23				A	106	62	32					SW	736046	3358451	Rec (V)			
24				A	106	62	33					SW	736046	3358451	Rec (V)			
25				A	108	64	33					SW	736046	3358451	Rec (V)			
26				A	116	66	27					SE	736046	3358451	Rec (V)			
27				A	117	71	24					SE	736046	3358451	Rec (V)			
28				A	120	73	20					SE	736046	3358451	Rec (V)			
29				A	103	11	49					NE	736046	3358451	Arched			
30				A	56	44	22					SW	736034	3358428	Rec (V)			

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs					
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape	Betyl or Interior Niche Shape	Structural Associations	Water Associations
31				A	48	54	14					SW	736034	3358428	Rec (V)			
32				A	144	64	80					N	736034	3358428	Rec (V)			
33				A								W	736034	3358428	Circular			
34				A	105	93	12	1				W	736034	3358428	Rec (V)	Rec		
35				A	54	50	40					W	736034	3358428	Arched			
36				A	43	36	7	1	28	15	3	NW	736034	3358428	Rec (V)	Rec		
37				A	220	160	112	2				NW	736034	3358428	Apse	Throne-Shaped		
38				A	507	307	-	1	105	110	37	W			Rec (V)	Rec		
39				A	75	70	-					W			Rec (V)			
40				A	94	51	18	1	57	31	7	NNW			Rec (V)	T-Shaped		
41				A								W			Square	Square		
42				A								W			Rec (V)			
43				A								NNW			T-shaped	Rec		
44				A	31	20	3	1	23	18	D	NNW			Mushroom			
45				A	17	26	13					E			Rec (V)			
46				A	-	100	48					S			Arched			
47				A	24	12	12					W			Mushroom			
49				A	117	100	38					W			Arched			
50				A	70	94	59					W			Arched			
51				A	58	38	15					NW			Rec (V)	Rec		
52				A				2				NW			Rec (V)	Rec		
53				A	100	94	53					NW			Arched	Arched		
54				A	22	10	12					SW			Arched			
55				A	50	46	25					SW	735989	3358373	Rec (V)			
56				A	80	44	12					SW	735989	3358373	Arched			
57				A	30	23	8					SW	735989	3358373	Rec (V)			
58				A	120	130	34					NW	735989	3358373	Square		Stairs and Platform	
59				A	105	66	26					NW	735989	3358373	Rec (V)			
60				A	-	136	41					NW	735989	3358373	Rec (H)	Circular	Tomb	
61				A	56	37	7	1	H	20	7	E	736054	3358603	Rec (V)	Rec	Tomb	Water Channels

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
62				A	89	50	16					E	736063	3358603	Rec (V)		Tomb	
63				A	46	36	10					E	736063	3358603	Rec (V)			Water Channel
64				A	50	33	7					ENE	736059	3358591	Arched		Tomb	
65				A	71	43	16		33	43	16	SE			Rec (V)		Triclinium	
66	539	XXIX.2		A	94	74	32	2				ESE	736022	3358543	Rec (V)	Rec	Triclinium, platform	
67				A	58	38	-					SE	736022	3358543	Rec (V)		Triclinium, platform	
68	539	XXIX.4		A				1	46	31	20	SE	736022	3358543	Arched	Arched	Triclinium, platform	
69	539	XXIX.4		A	70	62	-	1	64	37	7	SE	736022	3358543	Arched	Horned Betyl	Triclinium, platform	
70				A	57	113	50					SE	736022	3358543	Rec (H)		Tomb	
71				A	48	29	22					SE	736022	3358543	Arched	Arched		Water Channel
72				A	34	100	30					SW	735928	3358630	Rec (H)		Tomb	
73				A	130	150	55	1	108	65	43	W	736024	3358430	Rec (V)	Horned Betyl		
74				A								W	736024	3358430	Rec (V)			
75				A	-	70	30					N	736024	3358430	Rec (H)			
76				A	120	64	70	1	100	55	21	W	735975	3358372	Rec (H)	Rec		
77	708	XXXII.25		A	73	93	70					N	735975	3358372	Rec (V)	Multiple	Enclosed Room	
78				A								N			Square		Triclinium	
79				A	368	296	211					W	735975	3358372	Rec (V)			
80				A	128	59	33					W	735975	3358373	Rec (V)			
81				A	37	60	8					N	735975	3358372	Rec (H)		Enclosed Room	
82				A	25	22	12					N			Arched		Enclosed Room	
83				A	56	46	22					N			Square		Enclosed Room	
84				A	66	103	18					NE	735926	3358322	Arched		Tomb	
85				A	70	110	27					SW	735926	3358322	Arched		Tomb	
86				A	54	70	31					NW			Square		Tomb	
87				A	46	32	26					NNW			Rec (V)		Platforms	
88				A	80	58	12					SW			Arched	Arched	Triclinium	
89				A	104	52	25					NW			Arched		Triclinium	
90				A	178	109	50					NW			Arched		Triclinium	
91				A	20	18	13					NW			Circular		Triclinium	

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
92				A								NE			Basin		Triclinium	
93				A	98	83	93					NW	735931	3358311	Square			
94				A	94	114	32					NW	735931	3358311	Rec (H)			
95				A	98	68	36					NW	735931	3358311	Rec (V)			
96				A	54	37	50					NW	735931	3358311	Rec (V)			
97				A	54	45	23					WNW	735931	3358311	Rec (V)			
98				A	60	54	14					WNW	735931	3358311	Rec (V)			
99				A	628	270	250					WNW	735885	3358268	Rec (V)			
100				A	98	56	12					WNW	735885	3358268	Arched			
101				A	84	80	16					W	735885	3358268	Rec (H)		Rock-cut room	
102				A	54	48	16					NNE	735885	3358268	Tear-drop			
103				A	50	57	8					NNE	735885	3358268	Arched			
104				A	208	74	6					N	735885	3358268	Arched			
105				A	33	38	16					N			Arched			
106				A	70	49	16					N			Rec (V)			Water channels
107				A	90	79	84					NW			Arched			
108				A	25	20	10					W			Rec (V)		Tomb	
109				A	50	32	17					NNE			Arched		Tomb	
110				A	81	51	24					E			Rec (V)		Tomb	
112				A	150	100	30					N			Rec (V)			Above a cistern
113				A	51	50	32					N			Rec (V)	Arched		Above a cistern
114				A	27	16	4					N			Rec (V)			Above a cistern
115				A	80	64	14					NNW			Rec (V)		Rock-cut room	
116				A	82	70	18					NE			Rec (V)		Rock-cut room	
117				A	51	44	14					NW			Rec (V)			
118				A	30	40	14					NW			Rec (H)			
119				A	20	24	11					NW			Arched		Rock-cut room	
120				A	56	38	22					NNW			Rec (V)			
121				A	23	11	-					WSW			Rec (V)			
122				A	27	24	14					WSW			Square			

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs					
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape	Betyl or Interior Niche Shape	Structural Associations	Water Associations
123				A								SW			Rec (V)			
125				A	77	64	28					NW			Rec (V)			
126				A	78	55	34					S			Arched		Rock-cut room	
127				A	130	83	54					W			Arched		Rock-cut room	
128				A	61	47	19					NNW			Rec (H)			
129				A	76	67	30					NNW			Arched		Rock-cut room	
130				A	74	45	40					NNW			Rec (V)			
131				A	164	80	82					NNW			Rec (V)			
136				A								N			Rec (V)		Triclinium	
137				A								SW			Rec (V)			
138				A								SW			Rec (V)			
139				A								SW			Rec (V)			
140				A								SW			Rec (V)			
141				A								SW			Rec (V)			
142				A								SW			Rec (V)			
143				A								SW			Rec (V)			
144				A								SW			Rec (V)			
145				A								SW			Rec (V)			
146				A								SW			Rec (V)			
147				A								SW			Rec (V)			
148				A								SW			Rec (V)			
1				B	150	132	-	1	160	0.66		W	735859	3358840	Rec (V)		Tomb	Rec
2				B	50	112	57					S	735837	3358704	Rec (H)		Enclosed Room	
3				B	-	20	70					E	735837	3358705	Rec (V)		Tomb	
4				B	65	-	20					SW	735783	3358679	Rec (V)		Triclinium	Water Channels
5				B	102	20	12					SW	735783	3358680	Rec (V)			
6				B	37	27	20	1				N	735770	3358703	Arched	Rec	Tomb	
7				B	51	32	6					NW	735784	3358735	Rec (V)		Tomb	
8				B	-	94	27					W	735776	3358755	Rec (V)		Tomb	
9				B				1				N	735776	3358756	Beehive	Rec	Tomb	

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
10				B				2				N	735776	3358757	Rec (H)	Rec	Tomb	
11				B	-	36	11					NNE	735742	3358497	Rec (V)		Tomb	
12				B	-	137	50					SSW	735767	3358473	Rec (H)			
13				B	107	216	60					E	735403	3358522	Rec (H)		Tomb	
14				B	140	100	120					W	735403	3358523	Rec (V)		Tomb	
17				B	40	27	2	1	H	12	D	E	735816	3358509	Rec (V)	Rec		
19			4	B	-	60	23					S	735855	3358667	Rec (V)		Tomb	
21				B	32	27	9					E	735828	3358648	Rec (H)		Tomb	
22				B	66	120	50					W	735920	3358657	Rec (H)		Tomb	
23				B	37	140	18					N	735920	3358657	Rec (H)		Tomb	
24				B	54	40	18					S	735920	3358657	Rec (V)		Tomb	Cistern
25				B	-	100	39					W	735920	3358657	Circular		Tomb	Cistern
26			1	B	63	40	43					W	735909	3358704	Rec (V)			Water Channels
27				B	-	100	47					NW	735853	3358755	Rec (V)			water channel, cistern
28				B	-	79	22					E	735885	3358696	Rec (V)		Site 14,	Water Channel, Cistern
29			2	B	107	73	26					E	735885	3358696	Arched		Site 14,	Water Channel, Cistern
30			3	B	-	90	13					E	735885	3358696	Rec (V)		Site 14,	Water Channel, Cistern
1				C	46	40	14					E	736014	3358636	Square			Water Channels
2				C	52	204	50					E	736034	3358642	Rec (H)			Water Channels
3				C	-	50	36					NW	736034	3358642	Rec (V)			Water Channels
4			5	C	67	60	48					W	736034	3358642	Square			Water Channels
5				C	-	90	36					W	736034	3358642	Rec (H)			Water Channels
6				C	53	90	36					W	736034	3358642	Square			Water Channels
7			6	C	63	50	14					E	736034	3358642	Rec (V)			Water Channels
8			7	C	61	37	13					E	736034	3358642	Rec (V)			Water Channels
9				C	58	66	30					E	736034	3358642	Rec (H)			Water Channels
10				C				2				E	736153	3358796	Rec (H)	Rec	Tomb	
11				C				1				E	736153	3358796	Rec (V)	Rec	Tomb	
12				C				1				S	736153	3358796	Rec (V)	Horned Betyl	Tomb	
13				C				1				E	736148	3358806	Rec (V)	Rec	Tomb	

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
14				C				1				E	736148	3358806	Rec (V)	Rec	Tomb	
15				C	163	92	65					NW			Rec (V)		Tomb	
16				C								NW	736107	3358856	Rec (V)		Tomb	
17				C	156	80	65					W	736060	3358884	Rec (V)		Tomb	
19				C	92	44	16	1	35	20	3	NW	736001	3358699	Rec (V)		Site 11	Water Channels
20				C	130	80	25	1	48	30	9	E	736091	3358693	Rec (V)		Site 10	Water channels, cistern
21				C	64	54	10	1	23	31	5	S	736102	3358680	Rec (V)		Tomb	
22				C	80	55	27					N	736166	3358671	Rec (V)		Tomb	
23				C	-	135	58					E	736166	3358671	Rec (H)		Tomb	
24				C	66	55	25					S	736166	3358671	Rec (V)		Tomb	
25				C	70	110	40					SSE	736204	3358697	Rec (V)		Tomb	
26				C	57	60	20					E	736208	3358742	Square		Tomb	
27				C								E	736229	3358718	Square		Tomb	
28				C								E	736229	3358718	Square		Tomb	
29				C	53	109	34					SE	736229	3358718	Rec (H)		Tomb	
30				C	120	93	50					SE	736229	3358718	Rec (V)		Tomb	
31				C	36	97	20					E	736229	3358718	Rec (V)		Tomb	
32				C	140	151	130					E	736068	3358728	Rec (V)		Site 10	Water Channels
33				C								S	736219	3358693	Rec (H)		Tomb	
34				C								E	736219	3358693	Rec (H)	Rec	Tomb	
35				C								E	736034	3358642	Arched			Water Channels
1				D	150	250	30					W	736319	3358832	Rec (H)		Tomb	
2				D	-	120	60					NW	736287	3358751	Rec (H)		Tomb	
3				D								SSW	736241	3358747	Arched		Tomb	
4				D	210	110	50					SE	736230	3358739	Arched			
5				D	74	38	33					W	736258	3358765	Arched			
6				D	27	17	10					W	736258	3358765	Arched			
7				D	-	118	22					W	736251	3358777	Rec (H)			
8				D	73	30	56					W	736251	3358777	Arched			
9				D	56	56	23					WSW	736251	3358777	Arched			

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs					
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape	Betyl or Interior Niche Shape	Structural Associations	Water Associations
10				D	160	110	2					WSW	736251	3358777	Rec (H)			
11				D	77	43	6					W	736251	3358777	Rec (V)			
12				D	-	-	70					W	736243	3358797	Arched			
13				D	45	30	17					W	736243	3358797	Arched	Arched		
14				D	60	42	20					W	736243	3358797	Arched			
15				D	47	20	4					WSW	736243	3358797	Rec (H)	Rec		
16				D	75	75	100					W	736243	3358797	Rec (V)	Rec		
17				D	27	22	7					W	736243	3358797				
18				D	42	40	16					E	736233	3358776	Rec (V)			
19				D	27	23	10					E	736233	3358776	Rec (V)			
20				D	50	30	17					E	736233	3358776	Arched			
21				D	37	47	20					E	736232	3358773	Rec (V)			
22				D	32	23	17					E	736232	3358773	Rec (V)			
24				D	34	32	10					E	736216	3358812	Square			
26				D	40	50	22					WSW	736222	3358819	Square	Rec		
27				D	53	96	38					WSW	736240	3358823	Rec (H)			
1				SM								NNW	736285	3358691	Arched			
2				SM								NNW			Arched			
3				SM								NNW			Arched			
4				SM								NNW			Arched			
5				SM								NNW			Arched			
6	598			SM								NNW			Rec (V)	Arched		
7				SM								NE			Square			
8				SM								NE			Square			
9				SM								N			Rec (V)			
10				SM								N			Rec (V)			
11				SM								N			Rec (V)			
12				SM				1				N			Rec (V)	Rec		
13				SM								N			Arched			
14				SM								N			Rec (V)			

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
15				SM								N			Rec (V)			
16				SM								N			Arched			
17				SM								N			Arched	Arched		
18				SM								NNE			Square			
19				SM								NNE			Rec (V)			
20				SM								NNE			Rec (V)			
21				SM								NNE			Rec (V)			
22				SM				1				SSE			Rec (V)	Square		
23				SM				1				SSE			Rec (V)	Rec		
24				SM	41	32	13					SSE			Arched			
25				SM	47	42	15					SSE			Rec (V)			
26				SM	29	20	15					W			Rec (V)			water channel
27				SM	47	38	15	2	16	20	4	W			Rec (V)		Platform	water channel
28				SM								W			Rec (V)		Platform	water channel
29				SM								W			Rec (V)			water channel
30				SM								S			Rec (V)			water channel
31				SM								S			Rec (V)			water channel
32				SM								NNW			Rec (V)			
33				SM				1				NNW			Square			Rec
34				SM								NNW			Rec (V)			
35				SM								NW			Rec (V)			
36				SM								NW			Rec (V)			
38				SM								NW			Arched		Platform	
39				SM								NW			Arched	Rec	Platform	
40				SM								NW			Rec (V)		Platform	
41				SM								NW			square		Platform	
42				SM								NW			Arched		Platform	
43				SM								NW			square		Platform	
44				SM								NW			Rec (V)		Platform	
45				SM								NW			Rec (H)		Platform	

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
46				SM								N			square		Platform	
47				SM								N			Rec (V)	Rec	Platform	
48				SM								N			Rec (V)	Arched	Platform	
49				SM								N			Rec (V)	Rec	Platform	
50				SM								N			Rec (V)	Rec	Platform	
51				SM								SE			Rec (V)			
52				SM								SE			Rec (V)	Mushroom		
53				SM								SW			Rec (V)	I -Shaped		
54				SM	43	-	7	2				SE			Square	Rec	Platform	
55				SM				1				NW			Rec (V)	Rec	Platform	
56				SM	250	100	80					S			Rec (V)	Multiple	Platform	
57				SM								S			Rec (V)			
58				SM								S			Arched		Platform	
59				SM								S			Square			
60				SM								S			Rec (V)	Rec		
61				SM								S			Rec (V)			
62				SM								S			T-Shape			
63				SM								SW			Rec (V)		Platform	
64				SM								SW			Rec (V)			
65				SM								SW			Rec (V)			
66				SM								S			Rec (V)		Platform	
67				SM								S			Rec (V)			
68				SM								E			Multiple			
69				SM								E			Multiple			
70				SM								E			Multiple		Platform	
71				SM								NE			Apse			
72				SM								N			Arched			
73				SM								NW			Rec (V)			
74				SM				1				W			Rec (V)			
75				SM								W			Rec (V)			

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
76				SM								W			Rec (V)			
77				SM								W			Rec (V)			
78				SM								W			Rec (V)			
79				SM								W			Rec (V)			
80				SM								NW			Arched		Platform	
81				SM								NW			Rec (V)			
82				SM								S			Rec (V)	Rec	Platform	
1				JD	77	54	10					SW	734479	3358609	Rec (V)			
2				JD	174	114	24	1	66	49		W	734308	3358695	Rec (V)	Rec		
3				JD	91	70	30					W	734199	3358659	Rec (V)			
4				JD	82	70	50					W	734199	3358659	Rec (V)			
5				JD	174	80	23					E			Arched			
6				JD	73	51	30					E			Rec (V)			
7				JD	23	17	11					SE			Rec (V)	Rec		
8				JD	213	95						SW			Rec (V)			
9				JD	50	33	15					SW			Rec (V)	Rec		
10				JD	-	93	17					SE			Rec (V)			
11				JD	80	185	90					E			Rec (H)			
12				JD	39	23	14					E			Arched			
1				WS								NNE	736994	3357198	Rec (V)	Nephesh		
2				WS								NNE	736910	3357227	Rec (V)			
3				WS								NNE	736910	3357228	Rec (V)			
4				WS								NNE	736910	3357229	Rec (V)			
5				WS	80	80						NW			Square			
6				WS	80	80						NW			Square			
7				WS	72	71	23					NE			Square			
8				WS								NNW			Arched			
9				WS				1				NNW			Rec (V)	Anthropomorph		
10				WS	-	104	14					N			Rec			
11				WS	-	102	24					N			Rec			

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
12	137			WS								SE			Arched			
13	138			WS								SE			Arched			
14	136			WS								N			Arched			
15				WS	197	155	60	1	43	97	15	NE			Rec (H)	Rec		
16	141			WS	44	26	10					N			Rec			
17	144			WS								SW			Rec (V)	Anthropomorph		
18	146	V.12		WS	100	174	24	2				W			Rec (V)	Rec		
19				WS	45	30	13					SW			Arched			
20	147	V.14		WS				10				SE			Rec (H)	Rec		
21	150	V.17		WS	64	60	7	3				N			Rec (V)	Rec		
22	149	V.16		WS	112	59	7					NNW			Rec (V)	Eroded		
23				WS								NNW			Apse	Circular		
24	155	V.23		WS	85	40	10	1	47	20		NNW			Apse	Rec		
25	156			WS	95	47	7	1	52	17		NNW			Apse	Rec		
26				WS	35	34	28					NNW			Rec (V)			
27				WS	72	45	7					NNW			Rec (V)			
28				WS	51	34	28					NNW			Rec (V)			
29				WS	71	50						NNW			Arched	Rec		
30				WS								NW			Rec (V)	Square		
31				WS								NNE			Rec (V)	Eroded		
32				WS								NE			Square	Rec		
33				WS								NE			Rec (H)	Rec		
34				WS								NE			Square			
35	163	V.31		WS								ENE			Rec (V)			
36				WS								E			Rec (V)	Rec		
37				WS								SE			Square			
38				WS								SE			Rec (V)			
39				WS								SE			Rec (V)			
40				WS								SE			Rec (V)			

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
41				WS								SE			Arched			
42				WS								SE			Square	Rec		
43				WS								N			Square			
44				WS								N			Rec (V)	Rec		
46				WS								SSE			Rec (V)			
47				WS								SSE			Rec (V)			
48				WS								SSE			Rec (V)			
49				WS				1				S			Rec (V)	Eroded		
50				WS				1				N			Rec (H)	Rec		
51	172	V.45		WS				3				S			Arched	Rec		
52	168			WS								W			Rec (V)			
53	167	V.38		WS								W			Square			
54	169			WS								W			Rec (V)			
56				WS	25	16	10					SW			Rec (V)			
57				WS	13	28	4					SW			Rec (V)			
58				WS	45	27	2	1	34	7		ESE			Rec (V)	Rec		
59				WS	23	13	8					SW			Rec (V)			
1				Beid	187	180	90					S			Rec (V)			cistern
2				Beid	-	21	8					SW			Rec (V)		Tomb	
3				Beid	-	21	6					SW			Rec (V)		Tomb	
4				Beid	-	18	8					NE			Rec (V)		Tomb	
5				Beid	-	21	9					NE			Rec (V)		Tomb	
6				Beid	124	103	42					N			Arched		Tomb	
7				Beid	39	28	17					E			Arched	Arched		
8				Beid	54	38	20					NW			Rec (V)			
9				Beid	17	17	8					W			irregular			
11				Beid	56	79	36					N			Basin		Tomb	
12				Beid	128	88	89					S			Rec (V)			
13				Beid	45	60	40					N			Rec (H)	near Tombs		

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
14				Beid	-	70	16					NW			Rec (H)			
15				Beid	52	55	20					W			Rec (H)			Cistern
16				Beid	65	204	25					W			Rec (H)			Cistern
17				Beid	158	80	30					W			Rec (H)			Cistern
18				Beid	56	80	39					SE			Rec (V)			Water Basins
19				Beid	56	45	40	1	45	28	6	SE			Rec (V)	Rec		Water Basins
21				Beid	117	106	80					S			Arched			
22				Beid	-	50	15					S			Arched			
23				Beid	-	50	15					S			Arched			
24				Beid	-	106	30					S			Rec (V)			
28				Beid								SW			Rec (H)			
29				Beid	138	66	30					S			Arched		Triclinium	
30				Beid	170	80	46					NNW			Rec (V)		Triclinium	
31				Beid	74	60	20					S			Rec (V)		Triclinium	Cistern
32				Beid	90	56	17					S			Rec (V)		Triclinium	Cistern
33				Beid	92	60	27					S			Rec (V)		Triclinium	Cistern
34				Beid	48	53	22					E			Rec (H)		Triclinium	
35				Beid	60	40	26					E			Rec (V)			Water Channels, Cistern
36				Beid	57	66	20					N			Rec (V)			
37				Beid	-	64	20					N			Rec (H)			
38				Beid	16	9	6					E			Rec (V)	Rec		
39				Beid								W			Rec (V)			
40				Beid								N			Rec (V)			
41				Beid								N			Rec (V)			
42				Beid								E			Rec (V)			
43				Beid	30	-	15					S			Basin			
46				Beid											Arched			
47				Beid	52	37	24					W			Arched			
48				Beid	5	16	9					S			Basin			
49				Beid	26	15	11					N			Arched			

Table A.1. Continued.

	Previously Recorded				Niche Dim.				Betyl Dim.				UTMs			Betyl or Interior Niche Shape	Structural Associations	Water Associations
Niche	Dalman	Roche	Johnson	Area	H	W	D	Betyl	H	W	D	Orien	Easting	Northing	Shape			
50				Beid	109	122	95					SE			Basin			Cistern
51				Beid								S			Rec (V)			
52				Beid								W			Arched			

APPENDIX B - GLOSSARY OF ARCHITECTURAL TERMS

Glossary

The following terms have been selected from Judith McKenzie's glossary in her 1990 publication (181-185). They are provided here to aid the reader in understanding the architectural terms used in this thesis. The text has been indented to show that it is quoted material.

> ***Acroterion* (-ai):** the decoration, such as vases or eagles, which stands at the lower corners of apex of a pediment on the *acroterion* base.
>
> ***Acroterion* Base:** the small projection which may support an *acroterion*.
>
> ***Adyton*:** inner sanctuary of a temple.
>
> ***Anta*: (-ae):** a pilaster forming the front end of the side wall of a temple. When there are columns between them they are said to be *in antis*.
>
> ***Anta*-Type Capital:** moulded capital supported by a pillar, not a pilaster, usually on a doorway.
>
> **Apse-Shaped Niche:** niche of semi-circular plan, often with a conch at the top.
>
> **Arch:** curved structure, originally free-standing and formed by voussoirs to bear weight across an entrance, but also in the same form rock-cut.
>
> **Arched Entablature:** an entablature which is vertically curved into a complete semi-circle to form an arch.
>
> **Architrave:** the lowest member, below the frieze and cornice, of a classical entablature.
>
> **Attic:** structure above a main order of normal height, often consisting of a dwarf order placed above another of greater height.

Attic Base: a base consisting of a torus, cavetto and torus, with a cavetto or other moulding around the tip at Petra.

Base: the lowest member of a vertical support. Various types: Acanthus Column Base, Attic Base, Beveled Base, Moulded Base, Quarter Round Base.

Bay: the area between two vertical supports.

Beveled Base: a base with a flat oblique profile sloping outwards towards the ground.

Beveled capital: a capital with a flat oblique profile receding downwards.

Beveled Moulding: large moulding with a flat oblique profile receding downwards.

Beveled ovolo: a moulding with a flat oblique profile receding downwards. At Petra, often used in place of an ovolo.

***Biclinium* (-a):** room with benches along two sides on which to recline while dining.

Capital: the top member of a vertical support. Various types: Alexandrian Corinthian, Anta-type, Beveled, Corinthian, Doric, Floral, Hellenistic Corinthian, Ionic, Italic-Corinthian, Moulding, Nabataean, Normal Corinthian, Zoomorphic.

***Cavea* (-ae):** auditorium (seating area) of a theatre.

Cavetto: concave moulding of a quarter round profile.

***Cella* (-ae):** central chamber of a temple.

Column: free-standing vertical support with a circular cross-section.

Concave Entablature: an entablature which is curved inwards.

Conch: interior surface of a quarter section of a sphere. Used at the top of an apse-shaped niche. The conch may be decorated with a clam shell or coffering.

Corinthian Capital: bell-shaped capital with a collar of acanthus leaves around its base and spirals on the corners.

Cornice: the upper member, above the architrave and frieze, of a classical entablature.

Crown moulding: top moulding of an architrave or other element.

Crow Steps: battlements crenellations with stepped sides, used on Nabataean tombs. Often referred to as Assyrian crow steps because they occurred in Assyria.

Curved Entablature: an entablature which is vertically curved into a segment of a circle or ellipse.

Doric Capital: a capital characteristic of the Doric order for shape.

Doric Frieze: the frieze from the Doric order decorated with alternating triglyphs and metopes. When referred to an occurring on an entablature at Petra, the term includes the regulae and guttae below the triglyphs, although strictly speaking, these are on the architrave.

Doric order: conventional system of columns and entablature such as on the Parthenon, used originally in mainland Greece and western Greek colonies.

Dwarf Pilaster: a pilaster of small height, often used in upper orders at Petra.

Engaged Column, Half Column: engaged vertical support with semi-circular cross-section.

Entablature: horizontal element of an architectural order consisting of an architrave, frieze and cornice, carried by vertical supports. Various types of entablatures: Arched, Broken forward or back, Concave, and Curved.

Façade: front face of a building. At Petra, the building fronts carved out of the living rock.

***Fascia*:** Long large flat band. An architrave may be decorated with one, two or three *fasciae*. Fasciae may also be used on jambs and lintel of a doorway.

Fillet: small flat moulding.

Frieze: the middle member between the architrave and cornice, of a classical entablature.

***Gutta* (-ae):** the small cone shaped block, six of which decorate the underside of a regula on a Doric architrave. They also decorate the mutules.

Half Column, Engaged Column: engaged vertical support with semi-circular cross-section.

***Helix* (-ices):** Spirals on the face between the corner volutes of a Corinthian capital.

Jamb: vertical member on either side of a doorway supporting the lintel.

Libation Hole: hole for receiving liquid offerings. At Petra, usually of hemispherical shape, sometimes carved into the step at the entrance to a chamber.

Lintel: horizontal beam across the top of a doorway. At Petra they were often inset, indicated by a rock-cut groove on the inner side of the doorway.

***Locullus* (-i):** Long recess cut in tomb chambers for placing the body in: sometimes with shelves, or with one or more graves carved into the floor.

***Metope*:** plain or decorated panel between the triglyphs on a Doric frieze.

Modillion: bracket on the underside of the corona of a cornice.

Moulded Base: a base consisting of a series of mouldings.

Moulded Capital: a capital consisting of a series of mouldings.

Moulding: continuous profile or contour of definite shape given to the edge of an architectural member.

Mutule: small slap carved on the underside of a Doric cornice; one above each triglyph and each metope. They are usually decorated with guttae.

Order: the total assemblage (distinctively Doric, Ionic or Corinthian) of architectural members comprising the vertical support (column or pilaster) and its appropriate entablature. The primary divisions of the vertical support are: base, shaft, and capital. The primary divisions of an entablature are: architrave, frieze and cornice.

Ovolo: convex moulding of quarter round or quarter ellipse profile receding downwards.

Pedestal: platform on which a statue or column stands.

Pediment: the part (originally triangular in shape) crowning the front of a building, especially the portico. Various types: Broken, Hollow, Segmental, Syrian, Triangular, Volute.

Peristyle: open court or garden with a colonnade around it. Also the colonnade around the outside of a building.

Pilaster: engaged vertical support with a rectangular, rather than semi-circular, cross section. Unlike a pillar, it has a Doric, Ionic or Corinthian capital or their derivative.

Pillar: engaged, usually narrow, vertical support of flat rectangular cross-section crowned by a beveled or moulded capital; unlike a pilaster, which is crowned by a Doric, Ionic or Corinthian capital or their derivative.

Plain Attic: a plain area above an entablature in which a pediment may be placed. It may be decorated with a moulding along the top, but does not include pilasters.

Quarter Pilaster: engaged vertical support consisting of half, or less, of a pilaster, usually in place of a quarter column.

Quarter-round Base: a base with a quarter circle convex profile.

Ranking Cornice: the sloping cornice on a triangular pediment.

***Regulla* (-ae):** small projecting bar below the taenia on a Doric architrave. There is one below each triglyph and usually decorated with guttae.

Rock-cut: carved or cut from or into the living rock.

Segmental Arch: an arch with the shape of a segment of a circle or ellipse, rather than a semi-circle. It may consist of a curved entablature with architrave, frieze and cornice, or *fasciae* and cornice.

Segmental Pediment: a pediment with the ranking cornices replaced by a segment of a circle or ellipse.

Segmentally Vaulted Ceiling: ceiling which is carved or curved so that its cross-section is a segment of a circle or ellipse.

Shaft: the part of a vertical support (column or pilaster) between the base and capital.

Sima: crown (top) moulding of a cornice.

Square Hollow Modillion: square with a recessed center on the underside of the corona of a cornice. They may alternate with flat grooved modillions or have a diamond shape between them. They are distinctively Alexandrian.

Support: the vertical member of an architectural order or structure which carries the entablature or architrave. These may be divided into columns or piers if free-

standing, or pilasters if engaged. Various types: Anta, Column, Coupled Quarter Columns, Dwarf Pilaster, Engaged Column or Half Column, Heart-shaped Pier, Pier, Pilaster, Pillar, Quarter Column, Quarter Pilaster, Three-quarter Engaged Column.

Three-quarter Engaged Column: engaged vertical support with a cross-section of three-quarters of a circle engaged along a chord.

Triangular Pediment: triangular part originally crowning the front of a building, especially the portico.

***Triclinium* (-a):** room with benches around three sides, on which to recline whilst dining. In Petra, these benches are rock-cut; in Pompeii, they were free-standing.

Triglyph: grooved panel alternating with metopes on a Doric frieze.

Type I Alexandrian Capital: a Corinthian capital derived from the Hellenistic Corinthian Capital with the Hellices springing from directly beside the corner volutes and facing each other.

Type I Floral Capital: a capital at Petra related to Alexandrian Corinthian capitals but with florals in place of the Helices.

Type I Nabataean Capital: a capital formed by blocking out a Type I Floral Capital. Used by the Nabataeans as a finished form of capital.

Type 2 Foral Capital: a capital at Petra related to the Type IV Alexandrian capital but usually with florals in place of the spirals between the corner volutes.

Type 2, 2A, 2B Nabataean Capitals: the Capitals formed by blocking out Type 2 Floral capitals. Used by the Nabataeans as a finished form of capital.

Type III Alexandrian Capital: a Corinthian Capital with the Helices back to back, facing away from each other, springing from beside the corner volutes.

Type 3 Nabataean Capital: A Capital formed by blocking out a Type 2 Nabataean capital.

Type IV Alexandrian Capital: A capital with a small leaf under the corner volutes which curl back on themselves into two spirals back to back.

Vault: continuous arch; arched or vertically curved roof.

Volute Pediment: a pediment formed by two S-shaped curves (volutes).

REFERENCES

Avner, U.
1984 "Ancient Cult Sites in the Negev and Sinai Deserts" in *Tel Aviv* 11:115-31

Bartlett, John
1979 "From Edomites to Nabataeans" in *Palestine Exploration Quarterly* 111: 53-66.
1990 "From Edomites to Nabataeans: the problem of continuity" in *Aram* 2:25-34.

Bedal, Leigh-Ann
2003 *The Petra Pool-Complex: A Hellenistic Paradeisos in the Nabataean Capital.* Gorgias Press, Piscataway.

Beeston, A.F.L.
1968 "The 'Men of the Tanglewood' in the Qur'an" in *Journal of Semitic Studies* 7:222-33.

Binst, Oliver
2000 *The Levant: History and Archaeology in the Eastern Mediterranean.* KonemannVerlagsgesellschaft, Cologne.

Bosworth, C.E.
1984 "Madyan Shu'ayb in Pre-Islamic and Early Islamic Lore and History" in *Journal of Semitic Studies* 29:53-64.

Bowersock, Glen Warren
1983 *Roman Arabia*. Cambridge, Massachusetts: Harvard University Press.
1986 "An Arabian Trinity" in *Harvard Theological Review* 79:117-121.
2003 "The Nabataeans in Historical Context" in *Petra Rediscovered*, edited by Glenn Markoe, Harry N. Abrams, Inc., New York.

Buhl, F.
1913 "Dhu 'l-Shara" in *Encyclopedia of Islam* I: 965-66.
1936 "Al-Lat" in *Encyclopedia of Islam* III:18-19

Caskel, W.
1926 *Das Schicksal in der altarabischen Poesie*. Leipzig: Eduard Pheifer.

Dalman, G.
1908 *Petra und seine Felsheiligtumer*. Leipzig: J.C. Hinrichs.
1912 *Neue Petra-Forschungen und der Heilige Felsen von Jerusalem*. Leipzig: J.C. Hinrichs

Diadorus Siculus, ed. and trans. R.M Greer
1954 *Diodorus of Sicily Books XIX.66-110 and XX*. London: Heinemann.

Drijvers
1980 *Cults and Beliefs at Edessa*. Leiden: E.J. Brill.

Dussaud, R.
1905 *Notes de Mythologie Syrienne*, Paris, p. 170.
1955 *La Penetration des arabes en Syrie avant l'Islam*. Paris: E. Leroux

Epiphanius of Salamis, trans. F. Williams
1994 *The Panarion of Epiphanius of Salamis. Books II and III*. Leiden: E.J. Brill.

Fahd, T.
1968 *Le Pantheon de l'arabie centrale a la veille de l'Hegire*. Paris: P.Geuthner.

Flood, Finbarr Barry.
2001 *The Great Mosque of Damascus: Studies in the Makings of an Umayyad Visual Culture*. Leiden: Brill, 2001.

Frankfurter, David
1997 *Religion in Roman Egypt – Assimilation and Resistance*. Princeton University Press, Princeton.

Gawlikowski, M.
1982 "The Sacred Space in Ancient Arab Religions" in *Studies in the History and Archaeology of Jordan*:301-03
1990 "Les Dieux des Nabateens" in *Aufstieg und Niedergang der romischen Welt II Principat, Band 18, Religion 4*: 2659-77.

Graf, David F.
1990 "The Origin of the Nabataeans" in *Aram*, 2, 45-75.

Graf, David F. and Sidebotham, Steven
2003 "Nabataean Trade" in *Petra Rediscovered*, edited by Glenn Markoe, Harry N. Abrams, Inc., New York.

Glueck, Nelson
1965 *Deities and Dolphins*. New York: Farrar, Straus and Gioux.
1970 *The Other Side of the Jordan*. Cambridge,. MA: American Schools of Oriental Research.

Hammond, Philip C.
1968 "The Medallion and Block Stone Relief at Petra" in *Bulletin of the American Schools of Oriental Research* 192: 16-21.
1977-1978 "Excavations at Petra 1975-1977" in *Annual of the Department of Antiquities of Jordan* 22:81-101.
1990 "The Goddess of the Temple of the Winged lions' at Petra, Jordan" in *Petra and the Caravan Cities* edited by F. Zayadine: 115-30.
1996 *The Temple of the Winged Lions: Petra, Jordan 1974 – 1990*. Fountain Hills, Arizona: Petra Publishing.
2003 "The Temple of the Winged Lions" in *Petra Rediscovered*, edited by Glenn Markoe, Harry N. Abrams, Inc., New York.

Harding, G.L.
1964 *Archaeology in the Aden Protectorates*.

Healey, John F.
1993 *The Nabataean Tomb Inscriptions of Mada'in Salih*. Oxford: Oxford University Press.
2001 *The Religion of the Nabataeans: A Conspectus*. Leiden: Brill.

Herodotus, ed. Rosen
1987 *Herodotus. Historiae I*. Leipzig: Teubner.

Henninger, J.
1954 "Uber Sterndunde und Sternkult in Nord- und Zen- tralarabien" in *Zeitschrift fur Ethnologie* 79: 82-117.

Hofner, M.
1965 "Die Stammesgruppen Nord- und Zentralarabiens in vorislamischer Zeit" in *Gotter und Mythen im vorderen Orient. Worterbuch der Mythologie I/1* (ed. H.W. Haussig). Stuttgart:E.Klett.

Ibrahim, Khalil Moh'd Khalil
1993 The Geology of the Wadi Gharandal Area" in *Geological Bulletin No. 24:* 56.

Jaussen, A., and R. Savignac
1909 *Mission Archeologie en Arabie I: De Jerusalem Au Hedjaz Mada'in Saleh* Reedition – Le Caire – 1997. Institut Francais D'Archaeologie Orientale Ernest Leroux, Editeur, Paris, France.

Jones, R.N., et al.
1988 "A Second Nabataean Inscription from Tell esh-Shuqafiya, Egypt" in *Bulletin of the American Schools of Oriental Research* 269:47-57.

Johnson, David J.
1987 *Nabataean Trade: Intensification and Culture Change*. Doctoral Dissertation. University of Utah.

Johnson, D.J.; J. Janetski; M. Chazan; S.Witcher; and R. Meadow
1999 Preliminary Report on Brigham Young University's First Session of Excavation and Survey at Wadi al-Mataha, Petra, Jordan. in *Annual of the Department of Antiquities of Jordan* 43: 249-60.

Josephus, Flavius, trans. W. Whinston, .
1960 *The Works of Flavius Josephus (The Antiquities of the Jews and the Wars of the Jews)*, London: 1847; reprinted Grand Rapids.

Joukowsky, Martha Sharp
1997 "Petra: Recent Finds" in *Oxford Encyclopedia of Archaeology in the Near East IV*, edited by E.M. Myers: 306-08.
1998 *Petra Great Temple Vol. 1: Brown University Excavations 1993-1997*. Providence.
2003 "The Great Temple" in *Petra Rediscovered*, edited by Glenn Markoe, Harry N. Abrams, Inc., New York.

Krone, S.
1992 *Die altarabische Gottheit al-Lat*. Frankfurt: Peter Lang.

Lane, E.W.
1863-93 *An Arabic-English Lexicon*. London/Edinburgh: Williams and Norgate.

Lawlor, John Irving
1974 *The Nabataeans in Historical Perspective*. Grand Rapids, Michigan: Baker Book House.

Lidzbarski, M.
1915 *Ephemeris fur Semitische Epigraphik, III*, 1909-1915. Giessen: A.Topelmann.

Maximus of Tyre, ed. M.B. Trapp
1994 *Maximus of Tyre. Dissertationes*. Stuttgart/Leipzig: Teubner.
1997 *Maximus of Tyre, The Philosophical Orations*. Oxford: Clarendon.

MacDonald, Julie K.
2006 *The Ritual Use of Water by the Nabataeans at Petra*. Masters Thesis, Department of Anthropology, Brigham Young University, Provo, Utah.

McKenzie, Judith.
1990 *The Architecture of Petra*. Oxford: Oxford University Press.
2003 "Carvings in the Desert: The Sculpture of Petra and Khirbet et-Tannur" in *Petra Rediscovered*, edited by Glenn Markoe, Harry N. Abrams, Inc., New York.

McKenzie, J.S.; S.Gibson; and A.T Reyes.
2002 "Reconstruction of the Nabataean Temple Complex at Khirbet et-Tannur" in *Palestine Exploration Quarterly* 134:44-83.

Meza, Alicia I.
1996 "The Egyptian Statuette in Petra and the Isis Cult Connection" in *Annual of the Department of Antiquities in Jordan 40: 167-76.*

Milik, J. T.
1958 "Nouvelles inscriptions nabateennes" in *Syria* 35: 126-129

Milik, J.T. and J. Starcky.
1975 "Inscriptions recemment decouvertes a Petra" in *Annual of the Department of Antiquities in Jordan 20:*111-30

Mittmann, S. et al. (ed.)
1987 *Der Konigs Weg. 9000 Jahre Kunst und Kultur in Jordanien*. Mainz: von Zabern.

Negev, Avraham
1977 The Nabataeans and the Provincia Arabia" in *Aufstieg und Niedergang der romischen Welt II Principat, Band 8*: 520-686.

Niehr, H.
1998 *Religionen in Israels Umwelt*. Wurzburg:Echter.

Parr, P. J.
1967-68 "Recent Discoveries in the Sanctuary of the Qasr Bint Far'un at Petra. I. Account of Recent Excavations" in *Annual of the Department of Antiquities Jordan*. 12/13:5-19.

Patrich, J.
1990 F*ormation of Nabataean Art: Prohibition of a Graven Image among the Nabataeans*. Jerusalem: Magnes.

Renfrew, Colin, and Paul Bahn
2000 *Archaeology: Theories, Methods, and Practices*. Thames and Hudson, New York.

Resto, J.
1999 "Nabataean origins – once again" in *Proceedings of the Seminar for Arabian Studies.* 29:115-118.

Roche, Marie-Jeanne
1985a Niches a Betyles et Monuments Apparentes a Petra Texte T.1: These detroisieme cycle sous la direxion de Madame L. Kahil, Paris X (Nanterre). Paris: Universite de Nanterre.
1985b Niches a Betyles et Monuments Apparentes a Petra Texte T.2: These detroisieme cycle sous la direxion de Madame L. Kahil, Paris X (Nanterre). Paris: Universite de Nanterre.
1995 "Le culte lunaire a Petra" in *Transeuphratene* 10:57-66.

Ruben, Isabelle, editor
2003 *The Petra Siq: Nabataean Hydrology Uncovered*. Amman: The Petra National Trust.

Ryckmans, G.
1934 *Les noms propres sud-semitiques I-III*. Louvain: Bureaux du Museon.

Schmid, Stephen G.
2001a "The Nabataeans: Travelers Between Lifestyles." *The Archaeology of Jordan*. Great Britain: Sheffield Academic Press, 367-415.
2001b "The 'Hellenisation' of the Nabataeans: A New Approach." *Studies in the History and Archaeology of Jordan VII: Jordan by the Millenia*, 407-419.

Starcky, J.
1966 "Petra et la Nabatene" in *Dictionnaire de la Bible. Supplement* 7: cols 886-1017, *eds. H. Cazelles and A. Feuillet. Paris: Letouzey et Ane.*
1968 "Le temple nabateen de Khirbet Tannur: a propos d'un livre recent" in *Revue Biblique* 75: 206-35.

Strabo, ed. and trans. H.L Jones.
1930 *The Geography of Strabo*, Cambridge, MA: Harvard University Press.

Teixidor, J.
1977 *The Pagan God: Popular Religion in the Greco-Roman Near East.* Princeton, NJ: Princeton UP.

Thomas, David Hurst
1989 *Archaeology*, second edition. Holt, Rinehart and Winston, Inc., Fort Worth, Texas.

Villeneuve, Francois, and Zeidoun Al-Muheisen
2003 "Dharih and Tannur: Sanctuaries of Central Nabataea" in *Petra Rediscovered*, edited by Glenn Markoe, Harry N. Abrams, Inc., New York

Wenning, Robert
2001 "The Betyls of Petra" in *Bulletin of the American Schools of Oriental Research*, No. 324, Nabataean Petra. November, pp. 79-95.

2003 "The Rock-cut Architecture of Petra" in *Petra Rediscovered*, edited by Glenn Markoe, Harry N. Abrams, Inc., New York.

Wenning, Robert and Helmut Merklein
1997 "Die Gotter in der Welt der Nabataer" in *Petra. Antike Felsstadt zweschen arabischer Tradition und griechischer Norm*, edited by Weber, T and R. Wenning Mainz: von Zabern: 105-10.

Wilkinson, Richard H.
2003 *The Complete Gods and Goddesses of Ancient Egypt*. London: Thames and Hudson.

Will, Ernest.
2000 "South Arabian Architecture and its Relations with Egypt and Syria." in *The Archaeology of Jordan and Beyond: Essays in honor of James A. Sauer,* 516-519.

Winnet, F. B.
1940 "The Daughters of Allah" in *The Moslem World* 30: 113-30.

Wright, G.R.H.
1969 "Strabo on Funerary Customs at Petra" *Palestine Expedition Quarterly* 101, 113-116.

Zayadine, Fawzi
1975 "Un ouvrage sur les Nabateens" in *Revue Archeologique* 70:333-338.
1981 "L'Iconographie d'al-'Uzza-Aphrodite" in Mythologie Greco-romaine, mythologies peripheriques. Etudes d'iconographie (ed. L.Kahil and C. Auge). Paris:Editions du CNRS. 113-119.
1989 "Die Gotter der Nabataer" in *Lindner* (ed.) 113-123.
1990 *Petra and the Caravan Cities*. Amman: Department of Antiquities
2003 "The Nabataean Gods and Their Sanctuaries" in *Petra Rediscovered*, edited by Glenn Markoe, Harry N. Abrams, Inc., New York

Zayadine, F. and S. Farajat
1991 "Excavation and Clearance at Petra and Beida" in *Annual of the Department of Antiquities of Jordan* 35: 275-95.