

**THE NABATAEANS AND TRADE:
CONTRIBUTING ELEMENTS**

by

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ABSTRACT

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This thesis is an examination of the information which pertains to Nabataean commercial activity. By exploring the factors which influenced their economic prosperity, it will be shown that the Nabataeans' success in this area was due entirely to their own efforts and was not the result of Roman administration. While the trade activities of the Nabataeans are often noted in passing, there is, as yet, no study which deals with the range of problems associated with Nabataean economics. This paper compiles and examines information from ancient sources, archaeological data, ethnographic records, and discussions in modern scholarship to establish an overall view of Nabataean commercial enterprise.

Chapters I and II discuss the history, geography and social structure of the Nabataeans in order to provide the background for their commercial activity. Chapter I outlines the history of the Nabataeans and describes the environmental conditions of the regions which they inhabited. Chapter II uses ethnographic parallels and ancient literature and physical remains to create a profile of Nabataean social structure. This chapter argues that the Nabataeans were not simply nomads, but also developed other modes of living which facilitated trade activity.

Chapter III contains an outline of the routes travelled in the ancient Near East. The development of the Nabataean trade network is examined and the major trade centres are described. The evidence for the geographical distribution of Nabataeans outside of Nabataea is also provided.

Chapter IV lists the main Nabataean commodities according to region of origin and considers the general characteristics of the products. Because of

their importance to Nabataean trade, frankincense and myrrh are discussed in detail.

Chapter V focusses on the technology of Nabataean trade. Maritime shipping and land transport are described and compared with respect to the aromatics trade. The supervision and support system which allowed the trade network to function efficiently are discussed. Information concerning taxation is presented and methods of exchange employed by the Nabataeans are described.

Chapter VI considers the problem of Roman involvement in the Near Eastern trade. It is the conclusion of this chapter that Roman administration was not responsible for the commercial success of Nabataea. The history of contact between Rome and Nabataea is outlined and the role of Romans in the Eastern trade is considered.

The conclusion contains a brief restatement of the summary findings of the main text. Although the lack of explicit evidence from the Nabataean period means no model of the trade can be accepted without question, it is hoped that the outline provided here will prove a satisfactory base for further study.

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INTRODUCTION

While there are many Arabian tribes who use the desert as pasture, the Nabataeans far surpass the others in wealth, although they are not much more than 10,000 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 (Diodorus 19.94.6).¹

Camel-traders travel back and forth from Petra to [Leuke Kome] in safety and ease, and in such numbers of men and camels that they differ in no respect from an army (Strabo 16.4.23).

The Nabataeans were commercial overlords of over a thousand sites (Hammond 1979: 9).

Every discussion, ancient or modern, that mentions the Nabataeans notes that this people were famous for their activities in trade. But, because of the general tendency to glorify political and military ventures, the commercial exploits of the Nabataeans have been largely ignored or belittled. Too often the economic prosperity of the Nabataeans is credited to Roman administration. In part, this bias is due to the fact that most of the scholarship on the Nabataeans has been carried out by classical historians. Since the Nabataeans have been studied from the perspective of the Greeks and Romans, the full value of their accomplishments has often been overlooked. Although this paper will occasionally employ a classical time-frame, it is hoped that a sense of the Nabataeans' own history will emerge in this analysis of their trade activities.

It is the contention of this thesis that economic activity defines the Nabataeans in the same manner that other peoples are known for their conquests. Rather than seeking military or political power, the Nabataeans concentrated their efforts on trade and established a vast commercial network.

¹ All translations of Greek or Latin texts are from the Loeb Classical Library except for quotations from the *Periplus Maris Erythraei* for which Casson's (1989) text was used.

Although the commercial nature of the Nabataeans is assumed by numerous scholars, they are very often dismissed as being of no political importance. Interest in the economic activity of the ancient Near East is growing, but as yet there is no study which explores Nabataean commerce in any depth. This thesis attempts to assemble all the information which pertains to Nabataean commerce. The economy of the Nabataeans is examined in the context of the numerous factors which influenced it, in order to highlight the difficulty of their task, the uniqueness of their approach, and the independent nature of their achievement.

Chapter I provides a basic outline of Nabataean history and gives a brief description of the environment which they inhabited. This section is intended to place the Nabataeans in space and time and to illustrate the harsh conditions of the land they settled.

Chapter II discusses the social structure of the Nabataeans, drawing upon scattered information from the ancient sources and extrapolations from archaeological data and ethnographic parallels. The premise behind this chapter is that the nomadic origins of the Nabataeans facilitated trade activity and that the development of alternative lifestyles further expedited economic activity.

Chapter III traces the geographical distribution of Nabataean trade along the routes of the Near East. This section describes the character and evolution of the routes in order to illustrate how the trade network developed and which regions were commercially most important; the emphasis is on their use by the Nabataeans and the major trade centres are described. Physical and historical evidence is provided for Nabataean presence beyond their borders.

Chapter IV is mainly concerned with providing a catalogue of the major Nabataean commodities. These products are classified according to region of

origin. Special emphasis is given to the aromatics, frankincense and myrrh, which constituted the bulk of the Nabataean trade.

Chapter V explores the technological aspects of the Nabataean economy to elucidate the actual development of the trade. Methods of land and sea transport are described and compared. The provisions for supervision of the trade and the means of furnishing supplies are discussed. The financial topics of taxation and methods of exchange are also outlined.

Chapter VI considers the impact of Rome upon the Nabataean trade. This chapter argues that Rome was in no way responsible for Nabataean commercial success. The political history of contact between Rome and Nabataea is outlined and special reference is made to Arabian expeditions carried out by the Romans. The role of Rome as a market for Nabataean goods is appraised, as is the position of Roman merchants in the Near Eastern trade. The balance of the chapter concerns any repercussions the annexation of Nabataea had upon the trade.

The Conclusions contains a brief summary of the main points in the text. Through this examination of the factors which influenced Nabataean commercial success, it is shown that the prosperity of this trade was due to numerous factors. The Nabataeans settled in the region at the hub of the Near Eastern trade network. They counteracted arid climatic conditions with advanced techniques in hydraulic engineering and expanded their territory. They chose to concentrate on trade in the low-bulk, high-value commodities, mainly aromatics, which suited camel transport, the method of transport most familiar to them. They established and maintained a system of watchtowers which guarded the security of trade in their territory and applied taxes and tariffs to the goods which moved through Nabataea. The initial demand for Nabataean commodities was in the Near East and although the Romans provided a

welcome second market, they were in no way responsible for Nabataean commercial success.

CHAPTER I

The Nabataeans and Nabataea

The Nabataeans, a tribe of Arab extraction, established themselves during the Hellenistic period in the region now occupied, for the most part, by the modern Hashemite Kingdom of Jordan. The Nabataeans have often been depicted as simple wandering merchants who confined their activities to managing caravans in the desert. "In most of our historical sources, which were primarily interested in political events, the Nabataeans most often appear as commercial traders whose rich caravans passed to and fro from Petra" (Peters 1977: 264). Economic activities were of great importance to the Nabataeans; they were an influential people whose trade took them to many parts of the Near East and throughout the Mediterranean.

This chapter is intended to place the Nabataeans within their historical and geographical framework. The first part of this chapter will briefly outline what is known about the history of the Nabataeans; their relations with the Romans will be explored more thoroughly in Chapter VIII. The remainder of the chapter contains a discussion of the geographical and environmental conditions in the regions inhabited by the Nabataeans.

I.A.Origins and History of the Nabataeans

The origin of the Nabataeans is the subject of much speculation and many theories (Shahîd 1984: 5; Negev 1961: 123; Bowersock 1983: 14; Hart 1987: 290). An Arab tribe, the Nabataeans' origins lie in the Arabian peninsula. What has not been established is when they left the peninsula and through what intermediate regions they passed before settling themselves in Nabataea. The earliest historical reference to the Nabataeans

dates to the late fourth century B.C. (Diodorus 19.94.1-100.3, see below), but the details of this account indicate that they were already an established entity; they were recognizably wealthy due to their trade activities and were organized enough to fight and parley with the Seleucid rulers. Some scholars believe that the Nabataeans were present in southern Jordan during the Persian period (by at least the sixth century B.C.; Rostovtzeff 1932: 23; Hadidi 1982: 18). Negev (1986: 2, 5, 100-101) offers several ideas as proof that the Nabataeans had a long history: they used Aramaic, the official language of the Persian empire; their techniques of water collecting must have evolved over a period of centuries; and Herodotus (III.5.7-9) mentions a powerful group of Arabs living in the area they are later known to occupy.

A key to the origins of the Nabataeans may be their relationship to the Edomites mentioned in the Old Testament.¹ Older scholarship claimed that the Edomites abandoned their kingdom and that the Nabataeans moved into the resulting vacuum, as a distinct culture (Glueck 1935: 139). This chronological gap between the Edomites and Nabataeans is usually based upon the pottery stratigraphy at various sites. One recent study concludes that the proposed break in occupation between the Edomites and Nabataeans is in fact non-existent, and that they may be related groups (Bartlett 1979). This report makes a case for continuity between the two peoples by pointing out that the pottery chronology lacks "clear controls"²

¹ The origins of the Edomite culture can be dated to the Late Bronze Age by the Mycenaean IIA, IIA, and IIIB pottery found on early Edomite sites. As a kingdom, Edom is dated by a Biblical passage (*1 Kings* 22:47) to approximately 868 B.C. The end of the kingdom seems to have resulted from a Babylonian campaign in the sixth century although the culture probably continued on an "unorganized" level (Bartlett 1989: 68-9, 115, 161-3).

² Dates for the styles of Edomite pottery seem to have been assigned to correspond to the perceived view of the historical events, i.e. since there was a break in occupation, the latest Edomite pottery must date to before it (Bartlett 1979: 54).

and that "in three major centres of ancient Edom, and probably in many lesser centres as well, occupation continued at some level ... into the Nabataean period" (Bartlett 1979: 54, 55). This theory seems to be supported by the archaeological evidence of the 'Ain La'ban site (Roller 1983: 179), which shows no break in occupation. Although Hart (1986a: 57) sees a gap between the Edomites and the Nabataeans, he thinks that Bartlett's theory is tenable: a dwindling Edomite population slowly lost its cultural identity as it was assimilated by the Nabataeans. Hart's survey shows that the Edomites were still present in the Wadi Araba in the fifth century B.C. (1987: 287, 290). As the Nabataeans are historically documented as being present and consolidated in the Edomite Plateau in the fourth century B.C, the chronological gap between the two cultures is narrowed considerably. Further excavation is needed, however, before any definite conclusions can be reached.

In an account based upon Hellenistic sources, Diodorus Siculus reports a Seleucid attack on the Nabataeans in 312 B.C.³

Now that Antigonus without a fight had gained possession of all Syria and Phoenicia, he desired to make a campaign against the land of the Arabs who are called Nabataeans <τὴν χώραν τῶν Ἀράβων τῶν καλουμένων Ναβαταίων> Deciding that this people was hostile to his interests, he selected one of his friends, Athenaeus, gave him four thousand light foot-soldiers and six hundred horsemen fitted for speed, and ordered him to set upon the barbarians <βαρβάροις> suddenly and cut off all their cattle as booty (19.94.1).

The Nabataeans were accustomed to gather together at certain seasons for holding a market. When this occurred they would leave the

³ Diodorus' narrative and its credibility are discussed in Chapter II.

women, children and old men "on a certain rock <πέτρας (Petra?)>" to look after their possessions.

After waiting for this season, Athenaeus set out for the rock with his army in light marching order ... he escaped the attention of the Arabs and seized the rock at about midnight. Of those that were caught there, some he slew at once, some he took as prisoners, and others who were wounded he left behind (19.95.2-3).

Antigonus⁴ was interested in expanding his territory, but another motivation for the raid was the wealth of the Nabataeans: "of the frankincense and myrrh he gathered together a large part, and about five hundred talents of silver" (19.95.3). The Greek soldiers had taken the Nabataeans by surprise, but few of them returned to their own land:

When [Athenaeus] and his men had marched without pause for two hundred stades, they made camp, being tired and keeping a careless watch as if they believed that the enemy could not come before two or three days. But when the Arabs heard from those who had seen the expedition, they at once gathered together and, leaving the place of assembly, came to the rock; then being informed by the wounded of what had taken place, they pursued the Greeks at top speed. While the men of Athenaeus were encamped with little thought of the enemy and because of their weariness were deep in sleep, some of their prisoners escaped secretly; and the Nabataeans, learning from them the condition of the enemy, attacked the camp at about the third watch, being no less than eight thousand in number. Most of the hostile troops they slew with their javelins as they awoke and sprang to arms. In the end all the foot soldiers were slain, but of the horsemen about fifty escaped, and of these the larger part were wounded (19.95.3-5).

⁴ Antigonus I (382-301 B.C.E.) Macedonian general, controlled royal army in Asia after 321 B.C.E. Attempted to re-create Alexander the Great's empire in which he was opposed by the other "successors" to Alexander.

This account is interesting because it reveals that the Nabataeans were firmly established as a distinct culture with a stable economic base at what is considered an early stage of their history. They were involved in the trade in aromatics and were exploiting the asphalt produced by the Dead Sea (Diodorus 19.94.5, 19.99), activities which made them a wealthy people. This success was made possible by the fact that the Nabataeans were a coherent social group. Diodorus' account also strongly suggests that the Nabataeans had already established Petra with its acropolis of Umm el Biyara as their centre. Nevertheless, the actual site of this "rock", and its possible identification with Selah of the Edomites (near Buseira, 45 km north ;"selah" also means "rock", v. *II Kings* 14.7) are still debated (Starky 1965: 886; Hammond 1973: 42; Hart 1986: 93).

The Nabataeans became a significant power in the Near East during the later Hellenistic period. As the Seleucid kingdom declined, the Nabataeans, together with other groups, expanded to fill its place. The original form of the Nabataean kingship is disputed, but it probably evolved from the role of tribal chief or sheikh. The first documented Nabataean king was Aretas I, who came to power in the middle of the second century B.C. (*II Macc.* 5.8, v. Hammond 1973: 15-16). One factor in particular may have contributed to the seemingly late beginning of the kingship. The tribal system of sheikhs common in the Near East is easily adaptable to a centralized monarchy, but only when nomadism is no longer the primary mode of life-style (Hammond 1973: 106). Earlier leaders would have been tribal chiefs rather than actual kings.⁵ Although a later development, the Nabataean

⁵ Tribal chiefs lead groups of people which are not all from the same settlement or site. The position is hereditary and the candidate is chosen from a (select) group of families. The chief wields a great deal of authority but is required to consider input from either a council or an informal group of respected community members. Kings rule over numerous population groups which may possess subordinate leaders (for example, princes). Succession is restricted to the next

kingship very quickly became securely established. Succession was hereditary, and so rarely disputed that kings had a lengthy life-expectancy; the Nabataeans had only eleven kings between ca. 150 B.C. and A.D. 106.

Table 1: Nabataean Chronology

<u>Early Nabataean Period</u>	
tribal organization	c.700 B.C.?- c. 168 B.C.
Aretas I	c. 168 B.C.
Aretas II	c. 120/110-96 B.C.
Obodas I	c. 98-85 B.C.
<u>Middle Nabataean Period</u>	
Rabel I	85 B.C.
Aretas III	85-62 B.C.
Obodas II	62-60 B.C.
Malichus I	58-30 B.C.
Obodas III	30-9/8 B.C.
Aretas IV	9/8 B.C.-40 A.D.
Malichus II	40-70/71 A.D.
<u>Late Nabataean Period</u>	
Rabel II	70/71-106 A.D.
<u>Roman Period</u>	
<i>Provincia Arabia</i>	106-313 A.D.
<u>Byzantine Period</u>	
<i>Palestina Tertia</i>	313-635 A.D.

The historian Josephus, although writing in the first century A.C., provides important information about earlier Nabataean history. He relates that around 100 B.C. the Nabataeans became involved in territorial wars with the Hasmonaean rulers of Judaea. These struggles continued for several decades, and were still under way when Pompey arrived in the East in 63 B.C. The Nabataeans paid a "tribute" to the Romans, but Nabataea

eligible family member and the new king may be a juvenile. Kings perform as figure-heads for their people and they possess absolute power. (Orme 1981: 143)

was virtually the only kingdom which remained undiminished by Pompey's settlement.

Nabataea was annexed to the Roman empire as part of the *Provincia Arabia* in A.D. 106. The fact that Nabataea remained independent for so long is puzzling in view of the region's strategic and economic importance, but the Romans probably were reluctant to take over a territory with many nomadic people and no crucial resources. Trajan, however, was interested in expanding the eastern frontier of the empire and needed to secure the regions behind him as he marched against the Parthians.

On the basis of inscriptional evidence, some scholars have postulated that a Malichus III, son of Rabel II set up or was set up in a client kingdom in the Hijaz at Mada'in Saleh after A.D. 106 (Eadie 1985: 414; cf. Milik 1958: 283). Such an occurrence would not be unique in the Roman empire (v. Josephus *AJ* 20.7.1-138 and *Res Gestae* 27). However, the translation of the inscription upon which this theory is based (*RES* 1434, no. 92) is disputed (Graf 1988: 186). No conclusive evidence has survived of any southern continuation of the Nabataean kingdom after A.D. 106, and most of the Hijaz was probably annexed at the same time as the rest of Nabataea.

The Nabataeans remained a distinct people, even after the annexation of their kingdom, but it is difficult to separate their later history from that of the Roman empire. The Romans did not extend general *civitas* in the East until A.D. 212, and this exclusion from Roman citizenship helped Arab groups to maintain their cultural identity (Shahîd 1984: 11). The Nabataeans were influential throughout the Byzantine period in areas such as the Negev. Hamameh (1982: 347) cites information which shows that the Nabataeans continued as traders to Medina into Islamic times and that they

supported the Arab rising. During the Islamic period, they were slowly absorbed into the general population and lost their individuality.

I.B. Environmental Conditions in Nabataea.

A culture is influenced by the environmental conditions under which it develops. This section will explore some of the environmental factors that affected Nabataean economic success, including geographical (location, topography, and coastal access) and climatic conditions. Nabataea was well supplied with certain natural resources, but the geography and climate of the region were, to some extent, restrictive. It is a measure of Nabataean ingenuity that the Nabataeans were able to capitalize on the available opportunities.

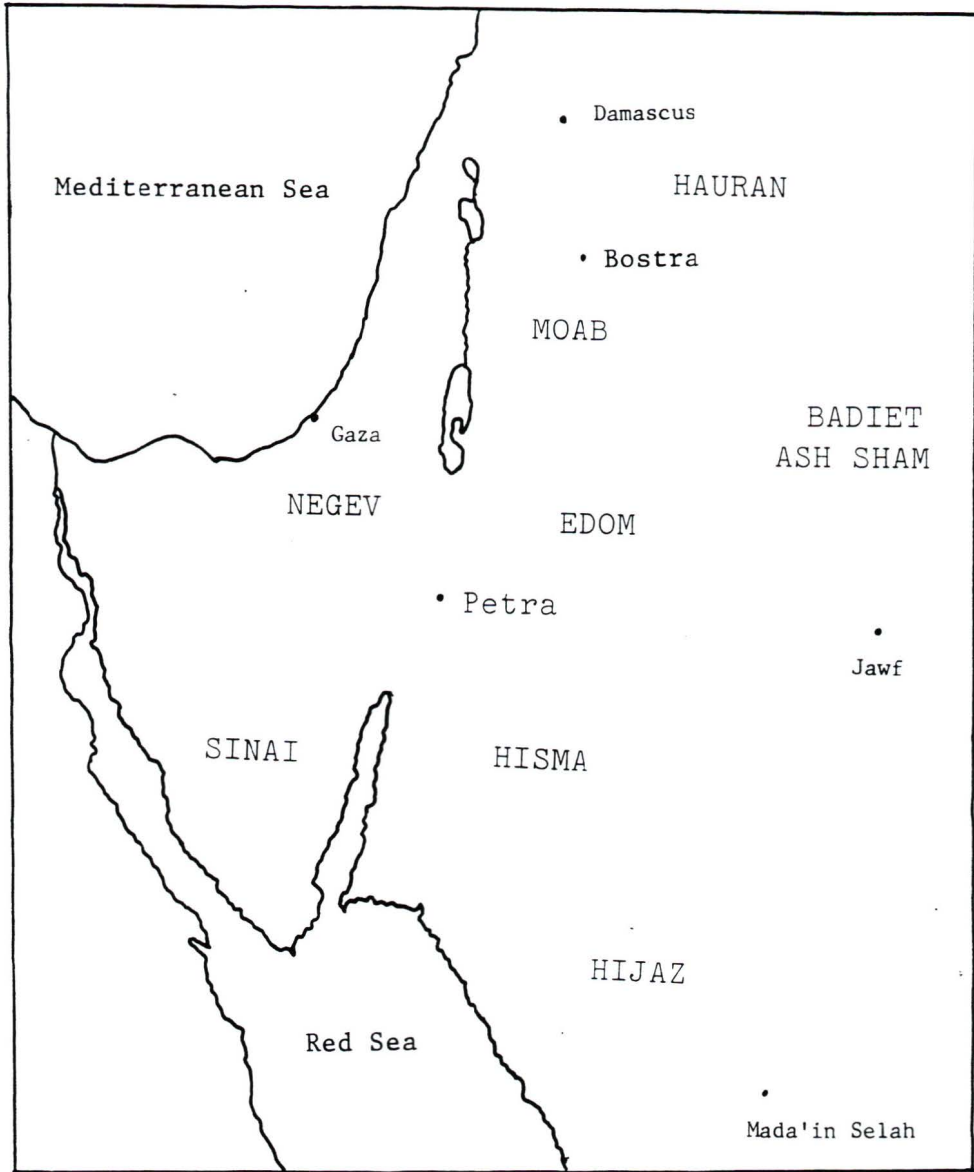
I.B.1 Geographical Conditions.

I.B.1.a. General Location on Land Bridge.

From its small beginnings in the Edomite plateau, Nabataea grew into a sizeable kingdom extending into Moab, the Hauran, the Negev, the Sinai peninsula, the Hisma, the Hijaz, and into the Syrian desert (see Map 1).⁶ Nabataea covers most of the zone which connects Eurasia with Africa. Central Nabataea (the Edomite Plateau, Moab, Gilead) is located, quite literally, where continents collide; the Jordan Rift is formed by the junction between the Arabian plate and the Sinai microplate (Abed 1985: 81). Being situated at the focus of converging continents, Nabataea has been heavily travelled as peoples moved back and forth incessantly along the routes of passage (Baly 1985: 22). Detailed descriptions and a map of the major trade

⁶ A rough, chronological development of the growth of the kingdom is discussed in Chapter II.

Map 1: The Nabataean Kingdom



routes will be given in Chapter V. At this point Nabataea's centrality is the theme.

Nabataea is situated on one of the main routes between the Middle East (Mesopotamia) and the Mediterranean. Although there were routes further to the north, much of the travel between the Middle East, India, and ultimately China, and western regions such as Greece and Rome, crossed this region. Several routes out of Nabataea led eastward across the desert to the head of the Persian Gulf, while others headed southeast to Oman. The most direct route from Nabataea to the Mediterranean terminated at Gaza. Nabataea straddled the routes that moved through the central Near East from South Arabia to Asia Minor. The passes in the Hijaz mountains led from the peninsula into the Edomite plateau. The Jordan Rift guided travellers moving from Aqaba to the Sea of Galilee. The alternative route along the Wadi Sirhan funnelled those coming from southern Arabia into the Hauran. The Nabataean region also offered access to Egypt from Syria and Arabia. The track across the Sinai which led from Nabataea to Egypt was second in importance only to the *via Maris*, which followed the coast.

Nabataea was a perfect location for merchants who functioned as go-betweens, since it lay between important suppliers and the major consumers of the ancient world. Several areas peripheral to the Mediterranean world were the sources of goods which were in great demand in ancient times: especially Africa (Ethiopia), Arabia, and India. The Nabataeans were well positioned to act as middlemen for two of those areas. India and Arabia were well supplied with specialty items such as aromatics and spices for which the Mediterranean cultures paid great prices. The Nabataeans profited from the production of these goods by transporting them to Mediterranean ports.

I.B.1.a. Landscape.

The landscape of the Near East is varied, some regions are desert, others are extremely fertile. Nabataea contains many different types of topographical region, from barren, rugged mountains to fertile coastal plains. A general description of each region inhabited by the Nabataeans will demonstrate the adaptability and resourcefulness of this people.

By at least 259 B.C. the boundaries of Nabataea had extended north into the Hauran, encompassing the "lava lands" around the Jebel Druz.⁷ These highlands are composed of rich volcanic soil and thus are excellent for agricultural purposes. Towards the east, the basalt shield drops down to Badiet ash Sham of the Syrian desert.

Moab is essentially the region to the east of the Dead Sea, a plateau eroded by deep wadis that flow into the Dead Sea. Further to the east, the plateau slopes down into the Wadi Sirhan region. North-south traffic often travelled along the east edge of the plateau, but there was a route, the King's Highway, through the central region. This route was, and is, heavily travelled, in spite of the wadis which slow movement. Dry-farming techniques were employed in this area during the classical period and supported a substantial population (Parker 1987: 37).

The area to the east of central Nabataea (Moab and Edom) is the Badiet ash Sham, part of the Syrian Desert. The region is an upland plateau of rock and gravel crossed by many wadis, the most important of which is the Wadi Sirhan. Plant life on the plateau (grass and scrub steppe vegetation) is conducive to the activities of pastoral nomads. There are several oases in the region, including Sakaka and Jawf.

⁷ One of the Zenon papyri of this date explicitly names both the Hauran region and the Nabataeans (Starcky 1964: 904).

Like the lava-lands, the Edomite plateau is agriculturally rich land. In combination with the caravan trade, agriculture in this region supported quite a large population in the classical period (Parker 1987: 87). Erosion in the wadi beds has formed deep canyons in the plateau. The area of Edom is defined by the Wadi el-Hasa, the Wadi Arabah and the al-Shera escarpment.

The Hisma is a sand desert which extends south from the al-Shera range into what is now Saudi Arabia. The desert is broken by spectacular out-croppings of eroded sandstone and granite. A major route of communication runs along the Wadi Yutm to Aqaba.

The Hijaz is a rugged, mountainous region in the northwest corner of the Arabian peninsula. The elevation of the mountains is highest in the north, and recedes gradually to Mecca in the south. The western wall of the mountain range drops sharply to the Red Sea, resulting in few coastal plains and few natural harbours. The eastern slopes are cut by wadis which flow into the desert plains.

The Negev is part of the desert belt that extends across North Africa into Southwest Asia. The region roughly falls inside a triangular outline traced from just south of Gaza to the southern tip of the Dead Sea and down to Aqaba, but these boundaries are indistinct, especially in the desert regions. Over 90% of the Negev is composed of hills or mountains of sedimentary rock. There are also gravelly plateaus and cultivable, loess-covered plains (Hillel 1982: 74).

The Sinai includes the area east of the Negev to the Suez along the Mediterranean coast and, of course, the peninsula proper. The northern region consists of sandy coastal plain. South from the Mediterranean, the

land increases in elevation; the southern regions are largely mountainous. A limestone plateau occupies about two-thirds of the peninsula.

The Nabataeans' success in expanding their territory can be attributed partly to their ability to adapt to and exploit all types of topography. Since the Nabataeans originated as desert nomads, their achievements in the arid regions of their territory are not surprising. They did, however, surpass the accomplishments of all other peoples who have inhabited the same areas. The reason the Nabataeans flourished in the desert was that their methods of water collection were well developed. "The Nabataeans excelled all previous efforts, and indeed developed the science, and art, of desert agriculture and desert living in general to a degree that we find astonishing even today" (Hillel 1982: 121). They constructed cisterns, dams, and occasionally aqueducts in a sophisticated system of water collection (Oleson 1987; v. Chapter VII for further discussion). Diodorus (19.94.6) states: "[the Nabataeans] take refuge in the desert, using this as a fortress; for it lacks water and cannot be crossed by others, but by them alone." To many other peoples the desert was a barrier, to the Nabataeans it was a place of safety.

The Nabataeans were also able to exploit the fertile regions which they entered. This change in lifestyle, for desert nomads to stop and establish agrarian settlements, is very unusual (Khazanov 1987: 160). Nor did the Nabataeans cultivate just the fertile areas of their territory. Their abilities were such that they could turn marginal zones into good agricultural regions, as in the Negev (Evenari 1971). The Nabataean talent for extracting the most from their opportunities was the cornerstone of their economic success.

I.B.1.c. Coastal Access.

Even though the Nabataeans were a desert people, access to the sea was of paramount importance to them. Their maritime activities are mentioned in the historical sources and are backed up archaeologically by traces of their presence in a number of ancient harbours. Nabataea is the only territory suitably placed so as to offer access to the three main maritime avenues of the Near East: the Mediterranean Sea, the Red Sea, and the Persian Gulf. This centrality of location facilitated the trade opportunities available to the Nabataeans.

The Nabataeans had a significant presence in a great number of ports in the Mediterranean Sea (this is documented in Chapter V), but their activities in their own territory along the Mediterranean are not well known. The Nabataeans controlled the Negev and the Sinai for much of their history, but details of their sovereignty along the coastline in these regions are vague. For instance, they held the territory around Gaza but do not seem to have ruled the city itself (v. Josephus *AJ* 13.360). Their ventures in this port are, however, historically well documented, as are their activities in other Mediterranean ports such as Rhinocolura, Straton's Tower (later Caesarea), Sidon, and Beirut. Nabataean enterprise in these harbours is supported by their presence in cities elsewhere in the Mediterranean, such as Delos, Rhodes, Miletus, Ostia, Puteoli, and Rome.

The only coastal access which lay securely within Nabataea was on the Red Sea. There are classical references which mention Nabataean maritime activity, describing piratical expeditions in this region (for example, Strabo 16.4.18). Three Red Sea ports are recorded as belonging to the Nabataeans: Aila, Leuke Kome and Egra (Pliny *NH* V.12.65, *Periplus* 19, Strabo 16.32.145). Aila (Aqaba) is situated at the North end of the Gulf of

Aqaba. It is not recorded who exactly used this port or how frequently. The wind and shoal conditions in the gulf are less than satisfactory (Casson 1989: 144), but that may not have been a strong deterrent to sailors (cf. similar conditions at Clysma, Suez, which was used regardless). Most goods coming by ship from the south, however, probably stopped at Leuke Kome, located at the mouth of the Gulf of Aqaba (Kirwan 1979). The *Periplus* (19) states that Leuke Kome marked the end of Nabataean territory, but Strabo reports (16.4.24) that the harbour of Egra (Meda'in Saleh, also called Egra) was under Nabataean control. The author of the *Periplus* may have ignored Egra if it did not have proper harbour facilities or unique commodities, and he states that he kept away from the Arabian coast south of Leuke Kome. Egra was probably a small, local harbour that could accommodate larger fleets during an emergency. The Nabataeans also had access to the ports on the Persian Gulf, in spite of the distance from Nabataea. Ancient sources relate that the Nabataeans traded along the Euphrates River and at the head of the Persian Gulf. Pliny (6.32.145) mentions "the people from Petra, who make the journey ... to Charax." Nabataeans could also be found at Gherra in Oman (v. Rostovtzeff 1932: 29). The Nabataeans were journeying to the eastern ports to receive goods in the Indian, Afghani, and Chinese trade.

I.B.2. Nabataean Relations with Other Peoples.

The question of the boundaries of Nabataean occupation, or cultural and economic control, is a difficult one. The Nabataeans seem to have maintained definite borders in the Dead Sea region. They wanted to control the bitumen and balsam produced there, since these resources contributed significantly to their economy (Hammond 1973: 63). In other areas the borders of Nabataea were more fluid. Of course, in desert landscapes it is

not easy to establish strict boundaries even today, and the nature of their rule is uncertain: "we have little idea of how the Nabataeans exercised political control [even] over those areas where their presence and sovereignty is well attested" (Peters 1977: 263). In unsettled areas, the Nabataeans maintained military posts in order to protect the trade routes. This seems to have been the case along the routes to Mesopotamia and southern Arabia (Rostovtzeff 1953: 867; Bowsher 1986: 24).

"Nabataean geographical expansion seems directed towards control of caravan routes and transshipping points" (Hammond 1973: 65). The Nabataeans expanded their territory to follow major trade routes, as can be seen in the Hauran, the Negev, the Sinai, and the Hijaz. Their ideas of control were less political than economic, or at least geared more towards keeping commercial environments secure than simply extending their borders. Most of the historically attested incidents in which they are mentioned in a military context show them protecting their resources. For example, the Nabataeans' battled with Antigonos' forces over the bitumen of the Dead Sea (Diodorus 19.100.1-3).

In certain cases the Nabataeans were content to let others police the territories the trade passed through. This pragmatic attitude may explain the nature of Nabataean presence on the road between Bostra and Damascus. The region became unsettled in the early first century, and in 85 B.C. the Nabataeans were invited by the people of Damascus, who feared Tigranes I.⁸ to take control of the city (Josephus *BJ* I.103). Concerned for the safety of the trade routes, they did so. The fact that the Damascenes asked the Nabataeans to protect them indicates that there must have been some

⁸ Tigranes I of Armenia, ruled from 100-56 B.C. Expanded his territory throughout the Near East until restricted to Armenia by Pompey in 66 B.C.

relationship between the Damascenes and Nabataeans, and that the Nabataeans were an important force in the East. The Nabataeans must have had some degree of military strength and, at the same time, a reputation for not being harsh rulers (or at least better than the alternative). What actually happened is puzzling; Tigranes did take Damascus and briefly ruled it, yet no hostilities are recorded in the sources. After his departure the Nabataeans made no move to recover the city, a disinterest one scholar refers to as "odd" (Peters 1977: 266). Perhaps by this time the area was secure enough that the Nabataeans felt political control of the city was unnecessary (Miller 1983: 113). They did not, however, completely abandon the city, since the episode of Paul's escape from Damascus (*II Cor* 11: 32-3) mentions the presence of a Nabataean official (ethnarch) there.

The boundaries of Nabataea were fluid and often fluctuated, but at its greatest extent in the first centuries B.C. and A.C., Nabataea included the Negev, the Sinai, the land east of the Jordan River as far north as Damascus, east to the desert site of Jawf, and south to Medina (see Map 1). Nabataean territory will be discussed more thoroughly in Chapter III, with the geographical distribution of the Nabataeans, since the land they controlled and the area they were present in were not necessarily mutually inclusive.

I.C. Climate of Nabataea.

I.C.1. General Description.

Central Nabataea is in a transitional position between the Mediterranean and the arid climates to the east and south (Shehadeh 1985: 25). This intermediate location results in climatic variations according to region.

Shehadeh reports: "Rainfall decreases considerably from west to east and from north to south. The eastward decrease is mainly caused by the

adiabatic heating of the moist winds in the lee slopes of the eastern mountains. The rate of eastward rainfall decrease is often very rapid and considerable. The decrease of rainfall from north to south is attributed to the increased distance from the main tracks of the Mediterranean depressions and small number of depressions which travel along the southern Mediterranean track" (1985: 30). The winter season starts in October or November and runs to May. This is the wet season, with about 60-80% of the annual rainfall occurring between December and March (Shehadeh 1985: 30). The rainfall pattern enforces and benefits the use of dryfarming techniques. Temperature varies with the season, longitude, and latitude; average annual temperature ranges between 18°C and 40°C (Shehadeh 1985: 32).

I.C.2. Climate during the Nabataean Period.

The climate of the Near East seems to change in a slight but regular pattern over a period of centuries (Shehadeh 1985). According to Shehadeh (1985), who bases his studies upon the work of Butzer (1955, 1961), climatic fluctuations were favourable during the Nabataean period. In the fifth century B.C. the climate was "wet", but the next three centuries were drier. Annual rainfall increased at the beginning of the first century B.C., and conditions remained moist into the second century A.C. when the rains began to taper off (Shehadeh 1985: 27). A dry period began in the third century and continued into the seventh. This theory of climatic fluctuations is disputed by Rubin (1989) who argues that the expansion of arable land and the larger populations of the Greco-Roman period were due only to human effort. Hillel (1982: 110) agrees that any climatic fluctuations must have been of a minor nature, but notes that in marginal areas small changes can have great

impact. Shehadeh himself agrees that the climatic oscillations were very small (1985: 27), but cites ancient legends of "running waters" and archaeological evidence of bridges and piers to support his theory. If the climate was wetter in ancient times, it would have had a beneficial effect on Nabataean agriculture and life in general. Increased water supply in the Nabataean period, whether the result of climatic change or human effort alone, would have allowed the Nabataeans to populate and cultivate areas otherwise marginal or completely uninhabitable. This relative abundance of available water in the Nabataean period would have eased existence and encouraged further development because more time and energy could be devoted to trade activities.

CHAPTER II

Nabataean Social Structure

This chapter will outline what is known about the Nabataeans' social formation and determine in what ways the makeup of their culture may have influenced their economic development. Certain aspects of the topic will be explored more fully in later sections. At this point, the goal is simply to present an outline of Nabataean social structure drawn from the information available from literature, archaeology and ethnography.

II.A. Ancient Evidence.

II.A.1. Literary Sources.

Unfortunately, the Nabataeans left no written historical records of their own. Thousands of graffiti and short inscriptions survive, but for the most part these shed only an indirect light on the social history of the people (v. Negev 1986: 6-116, 149). The most useful sources of information for the social organization of the Nabataeans are references and discussions in the works of classical authors.

One problem associated with classical references to tribal cultures is that -- because of a general lack of consistency in identifying tribes -- it is often very difficult to determine exactly which group is under discussion. Shahîd (1984: 6) complains that classical historians ignored the ethnic background of Arab groups in favour of tribal designations. Similarly, sub-groups were not always identified by tribe. Often, too, groups were named with a tag (such as "tent-dwellers <σκηνῖται>", Strabo 16.4.2) with no other reference. Generalizations of this type will be apparent in the passages cited here. For example, in Diodorus' discussion of the Nabataeans (19.94.10) he adds "There are also other tribes of

Arabs <γένη τῶν Ἀράβων> [inhabiting the same general region] some of whom even till the soil", without explaining their relationship to the Nabataeans. The fact that classical historians are often vague in their descriptions will obviously have significant impact on our understanding of Nabataean culture.

II.A.1.a. Diodorus.

Diodorus¹ used as his main source for information concerning the Nabataeans a fourth-century writer, Hieronymus of Cardia.² Hieronymus had been the leader of the Macedonian expedition which Antigonos³ sent in 311 B.C. to take over the bitumen resources of the Dead Sea. It is generally accepted that Diodorus took Hieronymus' first-hand account of the Nabataeans virtually unchanged (Hornblower 1981: 149). Therefore, the information about the Nabataeans given by Diodorus more accurately reflects the late fourth century B.C. than his own era. Diodorus provides the following account:

"[Arabia < Ἀραβίαν>] is situated between Syria and Egypt, and is divided among many peoples of diverse characteristics. Now the eastern parts are inhabited by Arabs, who bear the name of Nabataeans < Ἀραβες οὓς ὀνομάζουσι Ναβαταίους> and range over a country which is partly desert and partly waterless, though a small section of it is fruitful. And they lead a life of brigandage, and overrunning a large part of the neighbouring territory they pillage it, being difficult to overcome in war. For in the waterless region ... they have dug wells at convenient intervals and have kept the knowledge of them hidden from the peoples of all other nations and so they retreat in a body into this region out of danger ... Consequently the Arabs who inhabit this

¹ Diodorus Siculus wrote a History of the World based upon the works of numerous other historians Sacks (1990) argues that Diodorus was a reasonably careful historian, and not just a "mere copyist". Diodorus died about 21 B.C. (OCD).

² Hieronymus of Cardia, historian active in the politics of the Hellenistic Near East (Hornblower 1981). His works covered the period from the death of Alexander (323 B.C.) to the death of Pyrrhus (272 B.C.). Only fragments of his histories remain (OCD).

³ Antigonos I (c.382-301 B.C.):Macedonian noble, general in Alexander's army. Given command of the Asian armies after Alexander's death, he attempted to recreate Alexander's Empire (OCD).

country being difficult to overcome in war remain always unenslaved; furthermore they never at any time accept a man of another country as their overlord <ἡγεμόνα> and continue to maintain their liberty unimpaired. Consequently neither the Assyrians of old, nor the kings of the Medes and Persians, nor yet those of the Macedonians have been able to enslave them, and although they led many great forces against them, they never brought their attempts to a successful conclusion (2.48.1-5).

The above passage acknowledges Nabataean success in inhabiting diverse ecological zones. The mention of their wells, placed "at convenient intervals" implies that their nomadic movements were not aimless wanderings but had a pattern, and thus purpose. The brigandage described is typical of most Eastern nomadic groups and is not a strictly Nabataean characteristic (v. Sweet 1970; Khazanov 1983; Lewis 1987). The passage also emphasizes Nabataean strength and independence during the early Hellenistic period.

The remaining part of Arabia, which lies towards Syria contains a multitude of farmers and merchants of every kind <γεωργῶν καὶ παντοδαπῶν ἐμπόρων> who by seasonable⁴ exchange of merchandise make good the lack of certain wares in both countries by supplying useful things which they possess in abundance (2.54.3).

This passage from Diodorus emphasizes the mix of agriculturalists and merchants inhabiting the region between Arabia and Syria (i.e. Nabataea). It also explicitly refers to their position as middle-men who supply goods to both countries.

They live in the open air ... 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. ... Some of them raise camels, others sheep, pasturing them in the desert. While there are many Arabian tribes who

⁴ εὐκαιρός: might be more accurately translated as "opportune" rather than "seasonable", which has connotations of referring to specific times. If "in season" was meant, καιρός would be accompanied by ἔχει κ. τι or ες κ.

use the desert as pasture, 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 from those who convey them from what is called Arabia Eudaemon <Εὐδαίμωνος ...Ἀραβίας>, ... They themselves use as food flesh and milk and (suitable) plants ... There are also other tribes of Arabs <γένη τῶν Ἀράβων>, some of whom even till the soil, mingling with the tribute-paying peoples and have the same customs as the Syrians, except that they do not dwell in houses.(19.94.2-10).

This passage indicates that the Nabataeans were basically a nomadic people, but notes some sedentarized groups. Diodorus states that the Nabataeans had strict laws against agricultural practices, but he also mentions the presence of farmers, who may have been Nabataeans although not identified as such. The "true" Nabataeans supported themselves with pastoralism and gathering (suitable) wild plants. Nabataean involvement in the trade of aromatics and spices is also discussed, and their success in this activity noted. Water supply is of vital importance in arid regions, and Diodorus carefully reports upon Nabataean skill in hydraulic technology (19.94.6-8; v. Chapter V). The Nabataeans described by Diodorus were an independent people, able to maintain their identity and freedom through times of strife.

II.A.1.b. Strabo.

Strabo, who lived between 64/3 B.C. and c. A.D. 21, also provides some information about the Nabataeans. His knowledge of the Nabataeans' life-style came from a certain Athenodorus, a contemporary who, Strabo tells us, had been in Petra (16.4.21). Consequently, Strabo's works may give an accurate picture of Nabataean society as it was at the beginning of the Roman imperial period.

The first people who occupy Arabia Felix, after the Syrians and Judaeans, are farmers <γεωργοί>. After these the soil is sandy and barren, producing a few palm trees and a thorny tree and the tamarisk, and affording water by digging ... and it is occupied by tent dwellers and camel herders <σκηῖται δ' ἔξουσιν αὐτὴν Ἰσραβες καὶ καμηλοβόσκοι> (16.4.2).

In this passage Nabataea is depicted as a country of varying terrain which supports a population of agriculturalists and nomadic pastoralists. In another section, Strabo describes a society very different from that referred to by Diodorus:

The Nabataeans are a sensible people, and are so much inclined to acquire 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. 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 ... 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 (16.4.26).

Changes in Nabataean lifestyle seem to have taken place in the interval between Hieronymus' and Athenodorus' visits. According to Strabo's description, although certain groups remained nomadic, most of the Nabataean population was now sedentarized. This change in lifestyle may simply reflect the fact that Athenodorus was more familiar with town life in Nabataea. But even in this new environment, the king's activities are reminiscent of those of a chieftain, or sheikh (Orme 1981: 143). Strabo alludes to the wealth of the

Nabataeans, and notes that they were still heavily involved in trading aromatics: "Camel-traders travel back and forth from Petra to [Leuke Kome] in safety and ease and in such numbers of men and camels that they differ in no respect from an army" (16.4.23, *FgrH* #677:3C:6a.346). Pastoralism and agriculture are also indicated as important activities.

II.A.1.c. Josephus.

Other important sources for Nabataean social history are Josephus' works, the *Bellum Judaicum* (*BJ*) and *Antiquitates Judaicae* (*AJ*), which he wrote between the end of the Jewish War in A.D. 70 and his death (c. A.D. 95).⁵ The role the Nabataeans play in his histories shows the extent to which there was significant involvement between the Jewish and Nabataean royal courts. Although the kingship was a late development in Nabataea, it was well established and accepted by the other political powers of the Near East. Josephus notes several occasions on which aristocratic Jews sought political asylum at the royal court at Petra (*BJ* 1.267, 590). For example:

It was he [Antipater] who now persuaded Hyrcanus to seek refuge with Aretas, king of Arabia <βασιλεῖ τῆς Ἀραβίας>, with a view to recovering his kingdom, and at the same time urged Aretas to receive Hyrcanus and reinstate him on the throne ... Having thus prepared both parties for action, Antipater one night fled with Hyrcanus from the city, and, pushing on at full speed, safely reached the capital of the Arabian kingdom, called Petra <Πέτραν...βασιλείον αὐτῆ τῆν Ἀραβίας ἐστίν> (*BJ* 1.125-26).

This passage reveals that the Nabataeans were considered by the Jews to have enough power to serve as a refuge in such a situation. The Nabataeans were accepted as an equal political power, and, at times, alliances were formed

⁵ Josephus was a Jewish priest and a general during the first Jewish Revolt. Captured at Jotapata, he then served the Flavians and was pensioned off by them. He settled in Rome where he wrote his histories (Rajak 1983 discusses his validity, although is mainly concerned with the *BJ* .).

between the Nabataean and Jewish royal houses. Herod the Great's father married a Nabataean noblewoman:

Antipater had married a lady named Cypros, of an illustrious Arabian family, by whom he had four sons - Phasaël, Herod afterwards king, Joseph, and Pheroras - and a daughter, Salome. He had, by kind offices and hospitality, attached to himself persons of influence in every quarter; above all <μάλιστα>, through this matrimonial alliance, he had won the friendship of the king of Arabia (*BJ* 1.181).

This passage indicates that the good-will and support of the Nabataeans was considered important to the Jewish rulers. Antipater's daughter Salome also became romantically involved with a Nabataean, although she was not permitted to marry him (*BJ* 1.487, 534, 566). Herod Antipas was married to one of Aretas IV's daughters, whom he divorced in order to marry his niece Herodias (*AJ* 18.109ff.). The Jewish rulers might rely heavily upon these alliances; when the Jewish leader, Antipater, fought against the Parthians, he sent his children and his wealth to Petra for safe-keeping (*BJ*. 181, 276). On occasion the Nabataeans were convinced to send military aid in support of the Jews (*BJ* 1.187) or Jewish factions (*BJ* 1.126). This is not to say that all the interactions between the two groups showed such co-operative spirit. Herod was disappointed in the reaction he received *en route* to Petra during an escape from the Parthians (*BJ* 1.274-77):

Herod, in the belief that his brother was still alive, was now accelerating his march to Arabia, hastening to obtain from its king the money by which alone he hoped to move the avaricious barbarians on behalf of Phasaël. For, should the Arab prove unduly forgetful of the ties of friendship with his (Herod's) father and too mean to make him a present, he counted on borrowing from him the amount of the ransom and leaving in pledge the son of the prisoner whom he wished to redeem...He found, too, that the

Arabs were no longer his friends. For their king, Malchus, forwarded peremptory orders to him instantly to quit his territory, pretending to have received formal notice from the Parthians to expel Herod from Arabia to leave the country forthwith, on the pretext that the Parthians had formally demanded the expulsion of Herod from Arabia; in reality he was determined not to repay his debts to Antipater, nor to be forced by any sense of shame into making the slightest return, for all he had received from the father, to his children in their hour of need.

Sometimes the friendly links of co-operation would break down, resulting in military conflict between the Jews and Nabataeans. Alexander Jannaeus (103-76 B.C.) attacked the Arabs who were "overrunning Gilead and Moab and imposing tribute on the inhabitants" (*BJ* 1.89). This action resulted in a battle with Nabataean troops led by King Obodas himself, in which the Jewish forces were decimated. Herod also came into conflict with the Nabataeans. At Cleopatra's urging, he marched on the Arabs inhabiting Coele-Syria, and several battles were fought. Herod won the final battle, although he does not seem to have gained anything except prestige (*BJ* 1.385). The divorce of Aretas IV's daughter by Herod Antipas mentioned above also led to conflict between the Nabataeans and Jews.

Josephus' histories give an interesting insight into Nabataean society in the context of its interaction with the Jews. Nabataea is shown to be a highly organized kingdom with a strong and capable military force. The Nabataeans played an important role in many of the political events of the Near East; this is revealed clearly in the works of Josephus in, for example, mention of events in Gaza (*AJ* 13.360) and Damascus (*BJ* 1.103). While there is little evidence for the actions the Nabataeans did take, it is clear that their neighbours considered that they were able (and willing ?) to do so. Marriage alliances between Jewish kings and Nabataean women are proof of the value the Jewish leaders placed upon such connections. This is made explicit in the passage which notes that

the friendship of the Nabataean king is "above all" the influential contacts Antipater had made (*BJ* 1.181).

II.A.2. Archaeology.

Archaeological data, especially those obtained in recent excavations, have revealed important information about the Nabataeans. Early work in Nabataean archaeology concentrated on the spectacular architectural accomplishments such as the rock-cut monuments at Petra and Mada'in Selah. Recently, emphasis has shifted to an interest in exploring the everyday aspects of Nabataean life. The result has been to reveal more about the social structure of their culture.

II.A.2.a. Sites.

Harlan (in MacDonald 1988: 45) describes the Nabataean period as the first in which "the number of sites represented indicate a substantial human occupation". In this discussion Nabataean sites will be classified as settlements, agricultural sites, and temporary campsites, in order to explore various aspects of Nabataean life-style. These categories are not necessarily mutually exclusive for any given site, but the separation allows us to note their respective characteristics more easily.

Settlements. Nabataean presence can be detected in a great many cities of the ancient world (Wenning 1986: *passim*), but the consensus among scholars is that the Nabataeans had no true urban settlements of their own (Segal 1988). Negev (1986a: 36,40) refers to Petra as a ritual centre, a site where no-one (except tent-dwelling caretakers) actually lived. Gawlikowski (1982: 303) suggests that the passage in Diodorus which states that the Nabataeans were forbidden to build houses (19.94.2), refers only to "sacred spaces". At such special sites, including Petra, housing would have been

particularly slow to develop, but by the end of the first century B.C. formal habitations had been constructed there (Russell 1990:4). At other sites too, for example the small agricultural centre and caravan stop of Humeima, substantial houses were constructed during the late first century B.C. (J. Oleson: forthcoming). Much more work remains to be done before the true nature of the "city" sites becomes explicit.

Agricultural centres. Although nomadic pursuits, such as pastoralism and trade, constituted the primary activities for the Nabataeans, they also established agricultural settlements. The number of agricultural sites increased throughout the Nabataean period as security and the need to provide for the growing trade network also increased. Describing the Wadi Arabah, the following statement is true of many regions in Nabataea; "il ne s'agissait pas seulement de simples relais a l'usage de caravanes mais aussi de véritables centres agricoles" (Al-Muheisen 1989: 6-7). A number of Nabataean farmsteads have been identified at the oasis of `Ain La'ban (Roller 1987: 180). Several of these farms occur in conjunction with stone wadi barriers, although the dams are undatable.⁶ Other features at agricultural sites include retaining walls for terraced gardens, as at Abu Khusheiba (Lindner 1989: 4), and reservoirs which drain into the fields, for example those at Siq el Bajeh (Al-Muheisen 1989: 6-7) and Humeima (Oleson 1988).

The traditional opinion of scholars is that the Nabataeans developed an agricultural base in response to dwindling returns from the caravan trade (Finklestein 1988: 251). New information suggests that this was not the case. Excavation at Humeima indicates that the water system which provided the *raison d'être* for the settlement was constructed in the first century B.C. (Oleson:

⁶ Water conservation features here and at many other sites have been repaired and reused throughout the centuries making dating their original construction difficult or impossible.

1988). Agriculture was probably encouraged as a means of supporting the caravan trade, not necessarily as an alternative to it. Harlan (in MacDonald 1988: 46) believes that many of the hydraulic projects the Nabataeans carried out in the more arid regions were designed to supply forts and garrisons which protected the trade network. Oleson (forthcoming) postulates that the design of the water system at Humeima (v. Chapter V) was intended to encourage both agriculture and trade.

Temporary Campsites. Housing remains do not always indicate settlements. In the Near East it is not uncommon for people to spend long periods of time in a place and not build there, or conversely, to build structures for storage but not habitation. MacDonald (1988: 207-8) discusses several sites which showed extensive evidence of Nabataean activity, including farming camps, yet yielded no traces of permanent settlement. Köhler-Rollefson (1987: 538) found that three-fifths of her test village's population was transient and only resident part-time; forty percent of the houses were owned by tent-dwellers and were used only for storage purposes. Nomads who own property gain an increase in status (J. Oleson: private communication). To confuse the situation further, house-dwelling villagers frequently pitch tents for various purposes (Köhler-Rollefson 1987: 538-39).

The campsites of nomadic groups are very difficult to identify, and as a result not much work has yet been done on them. Banning designed a project in the Wadi Ziqlab to search for the remains of pastoral camps. He notes: "attempts to account for the apparent absence of pastoral camps in the archaeological record, by suggesting that pastoralists do not use pottery and are especially thorough in packing up belongings when they migrate, are not supported by ethnographic or ethnohistorical examples" (1987: 323). A. Negev (1986: 22) indicates that he has identified Nabataean encampments which featured

hearth-stones and pottery sherds. The sites he discusses seem to be permanent (long-term) sites inhabited by tent-dwellers, rather than briefly occupied camps. This distinction is indicated by the fact that the stones had been brought from some distance away. Similar campsites were recorded by Haiman (1989) in his survey of the western Negev. Sixty-five of the seventy Nabataean sites recorded were campsites (Haiman 1989: 187), a proportion which reflects the importance of the associated lifestyle and the need for its further study. Nabataean society cannot be studied only in terms of its permanent settlements.

Köhler-Rollefson (1987) has carried out ethnographic studies which indicate that there are fundamental conflicting behaviors in nomadic and sedentary lifestyles which create friction between the two groups. The basis of the conflict is competition for water and fertile land. Because these two resources are limited, expansion by either group must be at the expense of the other. Nevertheless, in the village that she studied, nomadic, semi-nomadic and sedentary groups co-existed peacefully most of the time (v. also Doughty 1888: *passim*). When strife does break out, nomadic groups are usually in a stronger position because they are mobile and have fewer target possessions such as crops and houses. A strong central authority can usually maintain a balance in the competition between pastoralists and agriculturalists, or at least enforce an uneasy peace.

II.A.2.b. Artifact Analysis.

The "small finds" aspect of archaeology is also of use in understanding social structure. The types of belongings recovered may give some indication of the lifestyle of the people. Variations in finds between habitations, sites or regions may reflect corresponding differences in the lives of the people who lived there.

Comparison between "sets" of small finds is often the only way to distinguish the people who once inhabited an area.

Ceramics are useful artifacts for analysis since they are ubiquitous and do not disappear from the archaeological record as more ephemeral goods do. Once the typological and chronological evolution of a ceramic series is established, new finds can be dated by comparative analysis. The framework chronology of Nabataean pottery is outlined by Schmitt-Korte (1975). A corrected and expanded pottery chronology of Nabataean ware is being prepared by Kenneth Russell (forthcoming).

Pottery appears relatively late in Nabataean history, about the same time as the rise of the kingship (Schmitt-Korte 1975: 3). It is thought that these two developments indicate the period at which a larger proportion of the Nabataean population became sedentarized. Nomads seldom make pottery, as their lifestyle inhibits its use. Some nomads, however, are known to carry ceramic vessels with them (Banning 1987: 323), and perhaps the Nabataeans were such a group. Negev asserts that Nabataean ware was too fragile to be transported (v. 1986: xix), but this statement is disputed by Parr (1978: 205). Glueck suggested that the boundaries of Nabataea could be defined by ceramic remains and drew a line running from the tip of the Dead Sea through Ma'dabah (1966: 6). He proposed that the Nabataeans ruled in the Hauran but did not settle the area in significant numbers. Glueck's theory has been disproved by the discovery of large deposits of Nabataean pottery near Bostra (Dentzer 1985). In any case, Graf (1986: 792) points out that Glueck's ceramic frontier is "misleading and incorrect". He states that the "cultural fabric" of Nabataea was diverse and cannot be measured by ceramic finds. The presence of Nabataean pottery may indicate the presence of the people, but its absence does not necessarily indicate the reverse. The area in which

Nabataean pottery has been recovered is substantial, however, and provides a core region for the kingdom.

Aceramic sites create problems for archaeologists, particularly since they are difficult to identify. Banning (in MacDonald 1988: 15) reports that the majority of sites discovered in the Wadi el-Hasa survey were "very unobtrusive", i.e. could not be seen from a distance. This is also true, of course, for many ceramic sites, but when the tell-tale sherds are absent the chance of a site being located is much less. Negev (1986: 20; also Banning 1987: 323) notes that nomads do leave traces behind: bits from camel harnesses, storage containers, personal belongings, hearths. It is just a matter of being able to identify the sites from elusive clues. Although Haimam's camps (1989: 187) were all identified by means of sherd scatters, study of the other features -- stone circles, heaps and hearths -- may facilitate the identification of campsites. When the means of tracing or recognizing such sites are developed, they will provide a more complete picture of Nabataean life.

II.B. Ethnography.

Ethnographic comparisons are valid and valuable sources of information for the archaeologist (v. Hodder 1982; Orme 1981). In general, archaeological information is combined with the earliest ethnographic reports to give the most complete information. In the case of the Nabataeans, it is fortunate that the earliest reports are contemporary with the society under discussion. Furthermore, we can use more recent accounts of Near Eastern bedouin to supplement the ancient sources.

The comparisons must be valid ones. Social groups must inhabit similar environments and display similar characteristics for any ethnographic comparisons to be truly useful. For the Nabataeans, the controls are as stable as can be achieved. The geographical area is essentially the same, and no

radical climatic changes have been recorded (Rubin 1989). The feeling among Near Eastern scholars is that very little changed from ancient times until the late nineteenth century (Hammond 1987: 153). Finklestein (1984: 196) notes that present day bedouin camps often occupy the same ecosystem and subsistence pattern as ancient sites. Under these circumstances parallels may be drawn and similarities noted between modern (recent) bedouin and certain elements of the Nabataean population. The type of leadership displayed by bedouin groups seems to resemble what is called "activity leadership" (Orme 1981: 138). While a bedouin sheikh does not have his power limited to certain activities (for example, hunting or religious rituals), other characteristics are apparent. A leader of this sort has great influence but no power over his companions. He may advise or urge them to carry out a certain action but he cannot command them to do so (cf. Doughty 1888: *passim*, and Tacitus *Germania* 7). The tribal origins of the Nabataean kingship may explain the democratic tendencies of the Nabataean kings mentioned by Strabo (16.4.26).

II.B.2.a. Modern Studies.

Since the dissolution of the Ottoman Empire, the activities of nomads have become of increasing importance to the modern states of the Near East. The capricious imposition of national borders and new lifestyles has had great impact upon bedouin groups, and they no longer fit comfortably into Near Eastern society. Policies of sedentarization have been developed by different governments, but no real solutions have resulted. Studies of nomads have revealed a continuum of nomadism in the tribal peoples, ranging from pure nomads at one extreme to sedentary villagers at the other (UN 1970: 106). In Jordan, the bedouin have been loosely classified into four groups depending on their lifestyle. Since these divisions are similar to descriptions in the ancient sources, they may be valid for the Nabataean period as well: 1) Pure nomads

(people of the camel); 2) semi-nomads (people of the sheep); 3) the tent-dwellers and cultivators of land (settled tribes); 4) the village settlers. The villagers have adopted many customs and habits from the *fellaheen*, the non-tribal peasants. Perhaps this development reflects the statement of Diodorus: "There are also other tribes of Arabs, some of whom even till the soil, mingling with the tribute-paying peoples and have the same customs as the Syrians, except that they do not dwell in houses" (19.93.3).

Modern governments have stressed sedentarization because nomadism is inimical to national development and a cash economy. Lately, however, the belief has grown that there is a better solution. "A more fruitful and realistic policy than sedentarization would be to improve the quality of the herds and to reduce their extreme dependence on rainfall by digging artesian wells in selected grazing areas" (UN 1970: 110). In Nabataean times the situation would have been a little different. The goal of national unity would not have been possible (had the idea even existed) because the borders were fluid; the Nabataeans extended themselves as far as they wanted (although not politically). But the need for peaceful co-existence between nomads and townsmen was there, and the Nabataeans dealt with it in the "fruitful and realistic" manner, as shown by the water-supply systems at sites such as Humeima and Rumm.

II.B.2.b. Charles Doughty's Travel Accounts.

The writings of Victorian travellers can also prove useful as ethnographic studies. Although the attitudes may seem dated, many of these reports contain valuable information about native groups in the pre-modern era. Charles Doughty's *Arabia Deserta* is the best source for Arab bedouin groups.

Doughty was one of a number of Victorian explorers who travelled through Arabia gathering information for publication in England. What makes

Doughty of particular interest is that he neither identified with nor patronized the Arabs. Certain scholars who have noted contradictions in Doughty's text have concluded that they indicate a lack of truthfulness. In reality, Doughty recorded his impressions as they were at the time, leaving us a realistic depiction of the circumstances. While Doughty respected the Arabs (and they him), he did not idealize their culture or lifestyle. His careful scholarship has led anthropologists to regard his work as the most valuable of its type (v. Tabachnick 1987).

When he first managed to enter Arabia, Doughty spent time in one of the watchtowers on the road to Mecca while he waited for the arrival of a guide. As he describes it, the *kella* sounds very much like an ancient fort:

....the *kella* , a tower seventy feet upon a side, square built. Lurid within (*sic*) are these water-stations and all that I entered are of one fashion of building. In the midst is the well court, and about it the stable, the forage and store chambers. Stairs lead upon the gallery which runs round above, whereupon in the north and south sides are the rows of small stone dwelling chambers. Staircases lead from this gallery to the terrace roof, where the garrison may suddenly run up in any need to the defence of the *kella* (I: 133).

Doughty discusses in some detail the ways in which the watchtowers were maintained by the Turkish government: methods and amounts of payment, numbers of men, and length of service. He notes that it was a lonely life for the men in the towers. If the bedouin were hostile, they spent their years locked up in the tower seeing no-one, except during the passage of the pilgrimage. The tower in which Doughty stayed was not so isolated. Certain nomad families were permanently camped around the *kella* . These were poor members of wandering tribes. Unable to afford camels, they could not follow their kinsmen and had to remain there; the price was service to the *kella* (v. I: 135).

After he left the *kella*, Doughty spent most of his time travelling with a bedouin tribe. The group roamed the desert until summer. At this time "All the Aarab (*sic*) are withdrawn to their great summer water-stations and remain in standing camps" (I: 484). Doughty describes the summer as a time of great hardship: there is little water, the camels have gone dry and the date harvest is not yet ready. "The summer I passed thus fasting and resting beduin-wise(*sic*), lying upon the elbow" (I: 490).

Doughty described the bedouin thus:

Perilous rovers in the field, at home fathers of hospitality to all that seek the night's harbour. A guest enters, sitting down among them, they observe honourable silence, asking no untimely questions ... until he have eaten or drunk somewhat and by 'bread and salt' there is peace established between them for two nights and a day (I: 269).

When Doughty asked what kind of reception he would have received had they encountered him during their travels, the bedouin replied: "There is not a man among us that meeting you abroad in the desert had not slain thee, were it only for the beast under thee. '*The stranger is for the wolf.*' " (I: 319) Similar behavior may be observed in many desert tribes. Bowersock (1983: 19-20) postulates that the accounts in *Maccabees* indicate different tribes (*I Macc* : 5.25-6 which explicitly names the Nabataeans, and *II Macc* : 12.10-12), because the brothers receive various kinds of treatment from those they meet. This may be the case, but if not, it is not an "open contradiction" but a reflection of desert protocol.

The system of raiding that was carried out by the bedouin tribes is also discussed several times by Doughty. For example, while Doughty was staying in the *kella*, the flocks were raided. The herdsman was set upon and made to name the owner of every sheep and goat. The bandits spared those animals which belonged to the *kella* itself but took all which belonged to the Fukara

tribe with which they had a feud. About half of the total flock was lost (Doughty 1888 I: 233-34). Sweet (1970) postulates that the raiding was a means of distributing wealth among the nomads. Since the circulation of wealth through raiding was a means of maintaining a balance, tribes were seldom left with nothing. There was also provision within the tribe for those who suffered this type of loss. The nomad tribe which Doughty travelled with had its camels raided and he describes the procedure for compensation: "a calamity as this is general, and borne by the tribe. None which had lost their cattle today would be left destitute; but the governing sheikh taxing all the tribesmen, the like would be rendered to them out of the common contribution" (1888 I: 390). Raiding was also a means of proving manhood or gaining status and thus was engaged in by all tribes. Therefore, those who lost in one raid might be the plunderers in another.

Doughty's accounts continually underline the fact that strong ties could exist between bedouin tribes and townspeople. In bad times the bedouin could receive hospitality in the towns. Sometimes, however, a dispute would arise and the bedouin would overrun the towns (II: 132). The most interesting account of a relationship between nomads and settlers discusses a system of economic interdependence (II: 133):

Even the villagers' houses are held betwixt them and the absent nomads; at midsummer the nomads return to gather their part of the date harvest. Every *bèled* is thus a double inheritance; there is a beduin landlord and a black villager partner and each may say "it is mine." The villagers are free husbandmen; they may sell their half-rights, they may neglect the holdings. If the villager sows the soil the harvest is his; some impoverished beduwy(*sic*) dwell there and become settlers. The absent tribesmen's land-right is over no more than the palms. As these decay the

villager should set out new ones [but he does not have to] and the beduwy must pay him.

This does not seem to have been a unique case. The relationship between "desert and sown" is not so fraught with conflict as it is often described. The same groups can at one time be bitter enemies and at another staunch friends (cf. Köhler-Rollefson 1987).

II.C. Summary.

The shift in Nabataean lifestyle between the Hellenistic and Roman Imperial periods (perceived by numerous scholars in Diodorus' and Strabo's accounts) from nomadic to sedentarized was neither sudden nor complete.⁷ Nabataean society seems to have consisted, at all times, of a complex blend of nomads (pastoralists and traders) and settled farmers and villagers. Diodorus conveys an image of the Nabataeans as a people who have neither houses or crops, but who, as pastoral nomads, subsist on the bounty of their flocks and wild plants. Strabo gives quite a different picture; his Nabataeans are urbanized, inhabit stone houses, and are given to stockpiling material wealth. Diodorus does mention farmers and "other tribes that till the soil" who inhabit the land of the Nabataeans, and he also says that those who exploit the bitumen "live about the [Dead] sea" (19.93.3, 99.1). Strabo records the existence of "tent-dwellers and camel herders" (16.4.2). Neither, however, records these groups as belonging to the Nabataeans. Both accounts are vague about the identification of splinter groups. Perhaps if Diodorus' source had been from the settled regions and Strabo's informant an outsider observing from the frontiers, the bias in the accounts would have been reversed and scholars would now be trying to

⁷ The apparent enforcement of sedenterization is discussed in Chapter VII.

account for the "nomadicization" of the Nabataeans as opposed to the perceived sedentarization.

As the Nabataeans became more established and adept at exploiting the resources at hand, no doubt more people did become sedentarized. The addition of new occupations, however, did not require a complete cultural upheaval. Finklestein (1984: 199) notes that "new sources of livelihood lessen reliance on pastoralism and enable desert peoples to establish permanent settlements in which field crops have a larger economic role." But even in agriculturally favourable conditions, bedouin often choose deliberately to remain nomadic. "In the eyes of nomads an agriculturalist is a slave because he is tied to one place and is enslaved by his own arduous labour" (Khazanov 1987: 160). It should also be noted that not all nomads are pastoralists. The Solubba of Northern Arabia are a hunting people (v. Doughty 1888 I:324-5; Betts 1989).

Transient populations, such as segments of Nabataean society, can be very difficult to trace, and this has led scholars to ignore their existence. For example, when discussing the apparent gap between the Edomites and Nabataeans, Parker (1989: 5) refers to "low population" areas when "low settlement" (in terms of permanent, traceable dwellings) would probably be more accurate. It is unlikely that the land was completely abandoned. Estimates of population are difficult to make, even when there is tangible evidence to work with. A reverse situation in the Negev during the British Mandate is mentioned by Finklestein (1984: 198), who notes that ca. 60,000 bedouin inhabited the region but left behind few material remains. He further points out that, without the contemporary (and rare) documentation, the population would not be known to have existed.

Another notion that has been over-emphasized and misunderstood is that sedentarization requires permanent dwellings. Bartlett (1979: 54) observes that cave and tent dwelling is usual even for settled peoples in the Near East. This situation is common even in modern times (Herr, et al. 1990:140-41). Diodorus (19.93.3) mentions people who "till the soil", yet "do not dwell in houses". This situation has been noted by some modern scholars (Negev 1986: *passim*), but it has not been stressed enough by the majority. To term the Nabataeans "nomadic" at one point and "sedentarized" at another is to oversimplify matters (cf. Köhler-Rollefson 1987).

From the ancient accounts it appears that nomads, semi-nomads and settled groups all co-habited the same (or overlapping) areas. The case is no different in modern times, especially when a firm government is in control (UN 1979). The groups do not even have to be related to one another by blood. Like other cultures, the Nabataean displayed a mixture of the two types of interaction between nomadic and sedentary elements (Finkelstein 1980: 250). In the first case, the two groups inhabit different ecological zones and have an unequal relationship. Lewis (1987: *passim*) discusses how Near Eastern villages of the nineteenth century would pay "protection" money to the various nomadic tribes. Perhaps there is a parallel to this in Diodorus' "tribute paying people" (19.94.3). The second case results in the formation of a single economic socio-political entity as nomads move into the settlements and become absorbed into the population. Such would have been the situation during the increased sedentarization of the Nabataeans. Studies done by anthropologists show that there are many examples of pastoral nomads co-existing with settled groups, sometimes even those of different cultures (Orme 1981: 192ff.). Nomadic groups do not live in a vacuum and cannot function totally independently. An

enterprising group such as the Nabataeans would ensure that they had some degree of control over the settlements that supplied many of their necessities.

The Nabataeans inhabited many socio-economic spheres. They show themselves to be very adaptable and their culture to be very complex, able to undergo many changes and still maintain its identity.

CHAPTER III

Movement of Goods and People

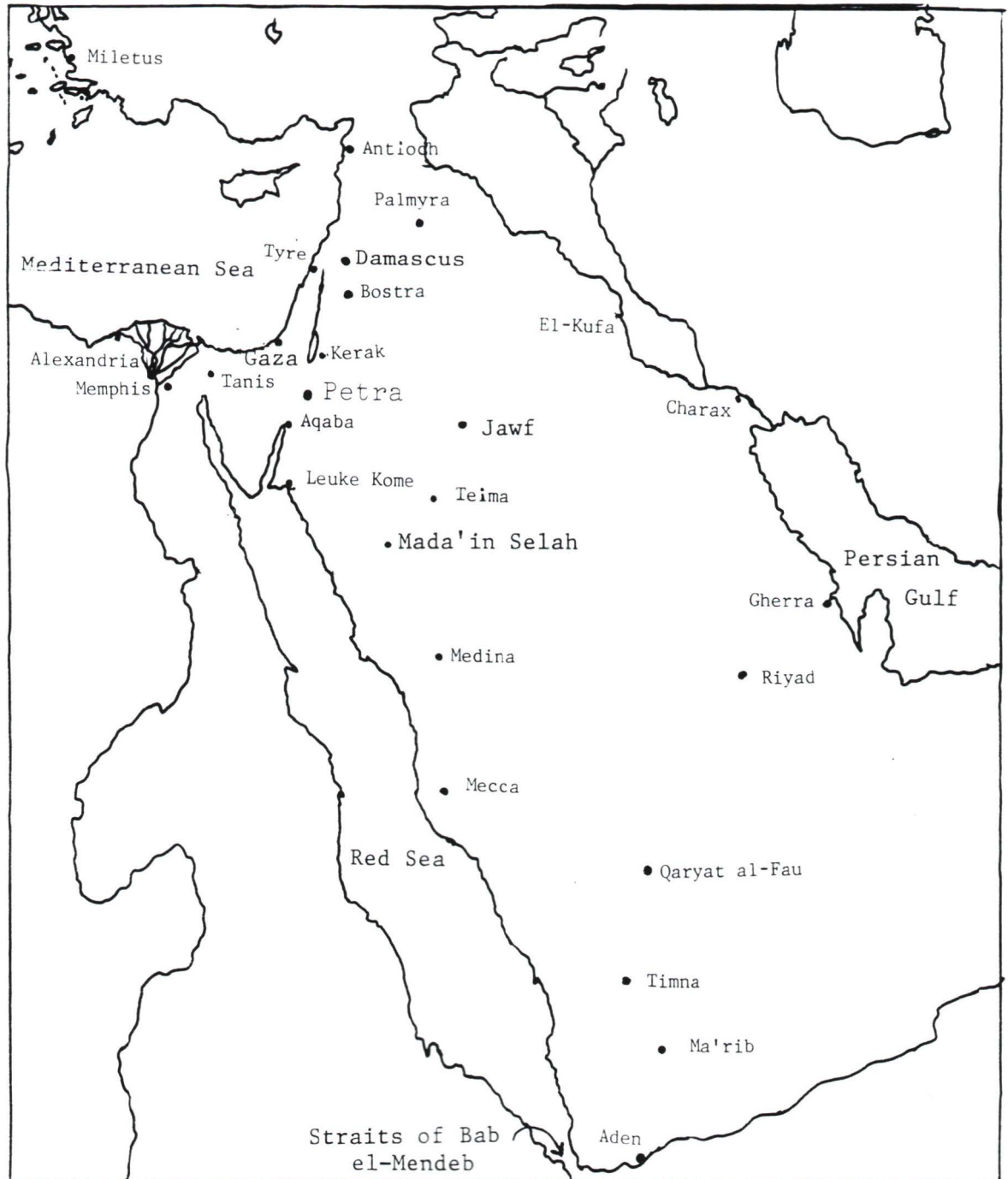
By looking at the geographical distribution of Nabataean trade, we can understand how the trade network developed and which areas were most commercially active. This section describes the character and evolution of the routes along which goods were moved in the ancient Near East, with the emphasis on their use by the Nabataeans. A short description of the major Nabataean trade centres follows. Literary and archaeological evidence for Nabataean presence in areas beyond of their sphere of influence completes the chapter.

III.A. Movement of Goods.

III.A.1. Trade Routes.

Although its actual urban character is still the subject of dispute, Petra was the "first city" of Nabataea, and most of the trade routes of the Near East were directly connected with it. Although the Nabataeans used these routes, they did not establish them. Many of the tracks under discussion have been in use since prehistoric times and are still in use today. Petra's central location contributed to its importance and, as the Nabataeans flourished, traffic in the area grew, creating more routes. Because of its pre-eminent position during the Nabataean period, Petra will be used as the starting point for tracing the trade routes -- which will be grouped according to geographical direction (v. Map 2). This section is intended as a general description of the most important routes of passage in the Near East.

Map 2: Nabataean Trade Routes



III.A.1.a. Northern Routes.

The northern routes that connected Nabataea with the markets of Syria and Asia Minor were important in Nabataean trade, since centres such as Damascus and Antioch formed the main Nabataean market prior to Roman expansion in the East. The most important route northwards from Petra followed the ancient path known as the King's Highway.¹ This route traced its way along the highlands on the east side of the Wadi Arabah, leaving Petra through the Wadi Musa and then heading north-northeast into the Moabite highlands to reach the sites of Bostra and Tafilah on the plateau. The track crossed the plateau, passing through such sites as Cherakmoaba (Kerak), Haj on the Wadi Mujib, Madaba, and Philadelphia (Amman) (v. Parker 1986: 38). One road north from Philadelphia went to Bostra via Garasa (Jerash) of the Decapolis, but the principal road headed northeast to Bostra, from where there was a direct route north to Damascus, the centre of the ancient Near East. Damascus was at the hub of a network of trade-routes which gave access to the markets of Sidon and Tyre on the Mediterranean coast, Baalbek and Antioch to the northwest, and Palmyra to the north-east.

III.A.1.b. Southern Routes.

The routes running south from Petra were crucial to the Nabataeans' trade, because these tracks connected them to the sources of their most valuable trade commodities: the aromatic gums and resins of southern Arabia. From Petra the road led southeast along the edge of the Wadi Arabah. After descending the Shera escarpment and passing through Humeima, the route followed the Wadi Yutm to Aila. To go farther south one could either hazard the sea-route from Aila or follow the eastern coast of the Gulf of Aqaba to Leuke

¹ Named in *Num* 20: 17, v. also *I Kings* 9: 11, 17-18, 26. For a discussion on this route, v. Parker 1986:116.

Kome (Ainounah). At this point, the track swung away from the coast inland to Qurayya, where a Nabataean settlement has been found (Bowersock 1983: 95). The route curved slowly southward to the site of Teima then branched off to Jawf, Riyadh, and Egra (Mada'in Selah²). A second, more direct, route also connected Petra and Mada'in Selah. This route left Petra by way of Udruh and Ma'an, to the east, then turned south. It passed through the sites of Qurayya and Ruwwafa in the Hijaz and then on to Mada'in Selah. The main road from Mada'in Selah continued through Medina and Mecca to Ma'rib in the deep south. Some travellers may have followed the route to its terminus at Aden on the south coast of the peninsula.

III.A.1.c. Eastern Routes.

Routes which ran eastward are mentioned in the ancient sources, but their exact paths are difficult to trace because there are few settlements to use for reference, and because the topography is relatively flat. One route which ran from Petra to Jawf is alluded to by Pliny (6.32.146), but the most important eastern route followed the Wadi Sirhan. From Azraq, near Bostra, this wadi channels traffic to the oasis of Jawf, about one third of the distance to the Persian Gulf. From Jawf one path continued in the same direction to reach Gherra on the Persian Gulf. A route out of Gherra led SSW, passing through Nejran (at which point it connected with the southern route from Petra). Also from Jawf, a track headed due East through Dumaetha to reach Forat and Charax on the Euphrates River. Another route from Jawf extended in a more northerly direction to terminate at El-Kufa, also on the Euphrates River. Jawf also seems to have been in connection with Teima on the southern routes (v. above A.1.b.).

² This site will be referred to by its modern name to avoid confusion with its harbour, also called Egra.

III.A.1.d. Western Routes.

The western routes were very important to the Nabataeans because they connected them with important markets in Egypt, and Judaea, and with the Mediterranean ports.

The best attested of the western routes is the Petra to Gaza road. Leaving Petra through the Wadi Musa, it crossed the Arabah to the northwest. Moje 'Awad was the first site on the far side of the Wadi Arabah (Cohen 1982: 243). After this point, the track climbed to the Negev Highlands, passing several small stations *en route* to Avdat (Oboda). From this settlement the road ran north-west through Elusa and Birsama to Gaza on the coast (Cohen 1982: 244). According to Strabo (16.2.30), Gaza was directly connected to Aila as well. The port of Rhinocolura (El Arish) was also a terminus for tracks leading through the Negev.

Several routes led across the Sinai to Egypt. The northernmost route, the *via maris*, followed the Mediterranean coast from Gaza through Rhinocolura, Pelusium and Daphnae. At this point the road branched. One path led to Tanis, while the other passed through modern Tel-el Shuqafiya and ended at Memphis (Jones et al. 1988: 53). The most important Sinai route left the Petra-Gaza road between Oboda and Elusa and travelled parallel to the coast through the northern Sinai. Passing through Nessana, it struck out across the desert near Jebal Magahara and past the site of modern Ismailia (Zayadine 1985: 162). It then led up the Wadi Tumilat, through Tel-el Shuqafiya and on to Memphis (Jones et al. 1988: 53). Many traces of Nabataean presence have been uncovered in the Wadi Tumilat region (Jones et al. 1988: 53-4). Another route ran from Petra to Gharandal and then across the Sinai to Suez. The shortest path between Old Cairo and Petra could be covered in five days (Zayadine 1985: 163).

Sea-trade between Nabataea and Egypt (v. Glueck 1966: 530) was probably not extensive, since Nabataean resources (bitumen, balsam, etc.) were concentrated in northern Nabataea and could be moved faster along the land routes. Furthermore, Egypt had its own access to the commodities of South Arabia by sea. The *Periplus* makes no mention of the imports or exports available at Leuke Kome, which probably indicates that there were none of special interest to the author.

Diodorus mentions Nabataean settlements in the Sinai along the Aqaba Gulf which were involved in maritime trade and later resorted to piracy (3.43.5; cf. Strabo 16.4.18):

About the (Gulf of Aqaba) are many inhabited villages of Arabs who are known as Nabataeans. This tribe occupies a large part of the coast and not a little of the country which stretches inland. Now in ancient times these men observed justice and were content with the food which they received from their flocks, but later, after the kings in Alexandria had made the ways of the sea navigable for their merchants, these Arabs not only attacked the shipwrecked, but fitting out pirate ships preyed upon the voyagers. Some time afterwards, however, they were caught on the high seas by some quadriremes and punished as they deserved.

This account may reflect not so much the result of a trade conflict as the exploitation of a new source for raiding expeditions. There is no evidence to show that the Nabataeans ever carried out maritime commerce on a significant scale, although excavation at their harbour sites may change this picture. Strabo's account of a Roman campaign in the region indicates that Leuke Kome could accommodate the Roman fleet (16.4.24), but this detail may simply mean that the harbour basin provided a large enough anchorage without any reference to port facilities (cf. Kirwan 1979). The harbour at Egra was also able

to handle the Roman fleet when the Romans pulled out. The *Periplus* (19) notes that the port at Leuke Kome was only used by small Arabian craft. The harbour up the gulf at Aqaba and the harbour at Egra are not mentioned at all.

III.A.2. Chronology and Evolution of Trade Patterns.

The first trade routes used by the Nabataeans were probably those that ran north and south between the supply of aromatics in Arabia and the Syrian markets. The Nabataeans originated in the peninsula and would have been well placed at an early date to serve as middlemen between Syria and Arabia. As the Nabataeans expanded their activities, routes to Egypt were added, to allow exploitation of the Dead Sea's bitumen resources, a material highly regarded for the process of mummification. Some scholars have asserted that the Nabataeans only became active in Egypt after the Roman annexation (Meredith, in Littman 1954: 243), but Diodorus states explicitly that the Nabataeans were trading in Egypt in the fourth century B.C. One of the Seleucid attacks on the Nabataeans was for control of the Dead Sea bitumen; discussing the conflict, Diodorus adds: "the barbarians who enjoy this source of income take the asphalt to Egypt" (19.99.3). Connections to the Mediterranean ports were probably added next, as the demand for luxury goods from Arabia and India increased in the West. These routes were fed by the Arabian tracks, supplemented by new paths to the East which linked up with the Indian trade.

Some scholars postulate that, around the mid first century A.C., the Nabataean royal court became more involved in the Hauran, and the Wadi Sirhan became the focus of Nabataean trade activity (Kennedy 1982: 142). This theory is unproven. According to Sidebotham (1986:100), "there is little or no extant evidence that the Wadi Sirhan was a regular commercial caravan route." The increased importance of the northern, Palmyrene, route does not necessarily indicate a decline in southern Nabataea. During the heyday of

Palmyra and also in the Byzantine period, many goods from the Far East travelled along the Euphrates River. The shortest route for Arabian commodities, however, was still through the caravan cities of the Nabataean heartland, and these continued in use in the third and fourth centuries A.C. (Levine 1975: 108). The Arabian trade did not by-pass the Nabataeans; they are known to have been trading in Medina in the Byzantine period (Hamarnah 1982: 347).

Scholars used to assume that the Roman annexation of Nabataea caused immediate shifts in the major trade routes (Issac 1980). Recent studies have shown that this is not the case. There were some changes in trade routes, but these did not occur until late in the Roman period. For example, the theory that the *Via Nova Traiana* by-passed Petra (Issac 1980: 893) is now discredited. Graf notes that distances were calculated from Petra until the Severan period, and that the route past Udruh was a secondary route which became important at a later date (1989: 11-12). Another example is the Petra-Gaza road, which was considered to have been abandoned upon the annexation of Nabataea (v. Isaac 1980: 889). Recent excavation shows that the route continued in use well into the second century A.C. (Cohen 1982). It is possible that in the Late Roman period the bulk of the traffic shifted along a different branch of the route, by-passing Oboda in favour of Mampsis (Cohen 1982: 241), but the entire route continued to be used into Byzantine times.

III.A.3. Major Trade Centres.

Desert landscape makes the imposition of strict borders difficult, so it is not always possible to be certain which centres actually lay within Nabataean control or influence. The following sites, however, seem to have been important trade centres within the Nabataean sphere of influence. They would have served as *entrepôts*, centres of collection, storage and distribution of goods. A

general description of the site will be given, including proof of Nabataean presence when not obvious. The sites will be discussed in order, approximately south to north.

Mada'in Selah (ancient Egra) was the major site in the Nabataean Hijaz. The Nabataeans took over control of the trade routes from southern Arabia in the region of this town (Bowersock 1979: 222). This inland site had access to the coast through control of a harbour also called Egra. The rock-cut monuments, similar to those of Petra, have been well known to the Western world since they were recorded by Doughty (1888). Many Nabataean inscriptions have been found in the surrounding region (for example, nearby Al'Ula; Bowersock 1983: 95). Mada'in Selah housed a Nabataean garrison and probably a customs office (Bowersock 1986: 24, 25).

Leuke Kome was apparently the most important Nabataean port.³ The exact location of the site has been disputed, but it was probably situated outside the Gulf of Aqaba. A proposal has been made for its location at the northernmost reaches of the Red Sea (proper), modern Ainounah (Kirwan 1979). Previously it had been placed at various sites as far south as Medina (v. discussion in Casson 1989: 143-44). The *Periplus* (19) describes the site thus:

There is another harbour with a fort called Leuke Kome, through which there is a way inland up to Petra... This harbour also serves in a way the function of a port of trade (emporion <ἐμπορίου>) for the craft, none large, that come to it loaded with freight from Arabia. For that reason, as a safeguard, there is dispatched for duty in it a customs officer to deal with the (duty of a) fourth on incoming merchandise as well as a centurion with a detachment of soldiers.

³ Of the Nabataean harbours, Leuke Kome is mentioned most often in the sources.

Some of the difficulties in accepting Kirwan's location of Leuke Kome can be resolved if the next statement in the *Periplus* is taken as referring to the Arabian peninsula as a whole, and not necessarily to a political boundary: "Immediately after this harbour begins the country of Arabia, extending lengthwise far down the Erythraean Sea." If this interpretation is correct, this passage offers no contradiction to locating the harbour at modern Ainounah. This area offers a suitable, well sheltered, and sizeable harbour, an abundant water supply, and it lies on the ancient Spice Route (Kirwan 1979). Nabataean artifacts discovered in the area support this location as the site of Leuke Kome (Casson 1989: 144).

Aila (Aqaba) was the Nabataean port at the north end of the Gulf of Aqaba. The Nabataeans were not the first to occupy the area; Aqaba has been used as a harbour since the Late Bronze Age. The Nabataean site has been identified here, but the actual extent of the settlement is not known (Khouri 1988: 138). The sea traffic to this port may not have been extensive, due to dangerous shoals and unfavourable winds in the gulf (Casson 1989: 144). As at Leuke Kome, position on the land routes was a major factor in the site's importance. Aila sits at the cross-roads of tracks from Southern Arabia, the Persian Gulf, Syria, Egypt, and the Mediterranean. Trajan's *Via Nova* terminated here.

Petra⁴ was the major city of the Nabataean kingdom for most of that nation's history. The geographical location of Petra was ideal for supervising both the overland trade routes and the seaports of Coele-Syria (Hammond 1973: 41). The topography provided a natural fortress, useful for protecting the trade against the attacks which inevitably came (v. Diodorus 19.94-98). There were facilities around the site, such as the artificial caverns of El-Barid, which

⁴ The Nabataean (Semitic) name for Petra was *Reqem* (Starky 1965: 886).

served as transshipment bases (Hammond 1973: 66). The sanctity of the site may have relegated commercial activities to outside the city, where most of the caverns are located.

Gaza was the main Nabataean outlet to the Mediterranean. Nabataeans are attested in other harbours, such as Straton's Tower (Levine 1975: 8) and Sidon (*C/S* II.160), but their main coastal depot was Gaza. Although there are shoals off the coast, ships can still be safely landed and moored at this site (Glucker 1987: 12). An abundant water supply and the fertility of the region also made Gaza an important stop on the land route between Egypt and Palestine (Glucker 1987: 2).

Bostra was an important centre in the Hauran. The site of Bostra itself has a permanent water supply, and the area around it receives sufficient rainfall, a combination that allowed productive dry farming on the fertile soil (Miller 1983: 111). Nabataeans settled the area beginning in the third century B.C. (Dentzer 1982: 152), and Bostra is thought to have served the Hauran as a local seat of government. Rabel II, the last of the Nabataean kings, may have moved the capital here from Petra, but there is dispute about the nature of this transfer (Miller 1983 :113). A regional administration centre in the Roman period,⁵ Bostra was also strategically important to *Provincia Arabia* ; a Roman legion was stationed there (Feima 1988: 13-14). As a major site on the Jawf-Damascus route and the King's Highway, Bostra served as a market and transshipment point for both long distance and local trade (Miller 1983: 119). The centre also was connected with Caesarea Palestinae on the Judaeian coast (Levine 1975: 55).

⁵ The theory that Bostra served as the capital of the Roman province has been discredited by Feima (1988).

III.A.4. Analysis of Patterns.

The primary factors which influence the direction of any trade are those of supply and demand. Once a market was established in the ancient Near East, the actual paths routes followed were determined by water sources and topography. Availability of water is crucial in the Near East, where it is in short supply. Desert routes especially were dictated by the location of oases. Topography also influenced the routes of passage. Obstacles such as mountains and wadis, for example, had to be crossed or by-passed. That the desert itself was not considered an obstacle is indicated by the presence of so many routes across it. Goods could have travelled from Gherra to Jawf via Charax, but the direct route, a longer desert crossing, was not avoided. There was rarely only one route between two major cities, even in the desert regions. This pattern indicates that commodities were taken directly to their markets as often as possible, a result of the economics of travel. Goods that had to take a circular route would be longer in transit and therefore would be more expensive. Travel times for several of the routes will be calculated in Chapter VII.

III.B.Nabataeans outside Nabataea.

Historians have theorized that caravan merchants did not travel very far out of their own regions, and that goods were passed from tribe to tribe (Brice 1954: 84). This method of transporting goods was not always used, however, for a great number of groups (Sabaeans, Minaeans, Bactrians, and others) have left traces of their presence far outside their own territories (Rostovtzeff 1953: 867). The cosmopolitan atmosphere of first-century Jerusalem is depicted in *Acts* 2: 5-11:

And there were dwelling at Jerusalem, devout men, out of every nation under heaven ... Parthians, and Medes, and Elamites, and the dwellers in Mesopotamia, and in Judaea, and Cappadocia, in Pontus and Asia, Phrygia, and Pamphylia, in Egypt, and in the parts of Libya about Cyrene, and strangers of Rome, Jew and proselytes, Cretans and Arabians...

There may even have been Nabataeans in the crowd Peter addressed, Josephus (*passim*) notes their presence in the city. The Nabataeans could be found elsewhere beyond their own borders, and sometimes they settled in the lands they travelled. Many of these wanderers were merchants, although occasionally we hear of Nabataeans acting in other capacities in foreign regions. Such movements are attested in the literary sources and are backed up by the archaeological evidence.

III.B.2. Geographical Range of Nabataean Movement.

III.B.2.a. North.

Nabataeans were to be found in many areas north of their own territory.

Josephus relates that the Nabataeans were in control of Damascus in the first century B.C. (*BJ* I.103). Although the Nabataeans ruled Damascus for only a short time, they remained active in the city for much longer. It has been postulated that there were enough Nabataeans in the city to form their own community (Hammond 1973: 37; cf. Bowersock 1983: 68, who argues for control of entire city). This theory is based upon the account of St. Paul (*II Cor.* 11.32-33)⁶ (dating to the mid first century A.C.) in which he escaped over the walls of Damascus from a Nabataean ethnarch: ἐν Δαμασχωῶ ὁ ἐθνάρχης Ἀρέτα τοῦ βασιλέως ἐφρούρει τὴν πόλιν Δαμασχηνῶν πιάσαι με. The Nabataeans were probably active in Damascus long afterwards, for they are known to have been in the Palmyrene area until the mid-third century A.C. The number of

⁶ The parallel account (*Acts* 9.23-25) states that Paul was escaping from the Jews who plotted to kill him.

Nabataeans in the region was sufficient to warrant their establishment of a cult of Be'lshamen (Teixidor 1973: 409). The trade routes of Syria were shared by the Arab groups until Zenobia's reign (Teixidor 1973: 405). The Nabataeans were active in Baalbek, probably as merchants, and even left traces of their presence in Antioch (Wenning 1987: 23). The northernmost point of Asia Minor reached by the Nabataeans seems to have been the city of Edessa (Segal 1970: 16). Nabataean coins have been discovered at Dura-Europos on the Euphrates River; Nabataean presence is not proved by the coins alone, but is likely in view of their activities in the nearby cities of Palmyra and Edessa.

III.B.2.b. South.

Some scholars have considered the Nabataean hold on the regions south of Edom to be tenuous, and south of the Hisma to be non-existent (v. Hammond 1973: 31). But the discovery of settlements at Ruwwafa and Qurayya has shown that the Nabataeans occupied the southern reaches of the Hijaz (Bowersock 1983: 95-8). The large numbers of Nabataean inscriptions in the Al'Ula region are thought to mark the southern extent of Nabataean control (Bowersock 1979: 222). Strabo places Egra within the territory of Obodas, but he also mentions a kinsman of Obodas, Aretas, who commands territory in the region (16.4.24). It is likely that Nabataeans were also active beyond their distinct sphere of influence in the south, as they are known to have been in other areas. To date there are few positive proofs of presence, but there are sites in the deep south where Nabataean pottery has been uncovered, including Qaryat al-Fau (Parr 1979: 50) and Ma'rib (Zayadine 1985: 159). Only one Nabataean inscription has been found in Southern Arabia (*RES* 4153).

III.B.2.c. East.

Most of our information about Nabataeans in the East comes from literary sources. Pliny (6.32.145) reports: "[Forat] is resorted to by people from Petra,

who make the journey from there to Charax." Both of these towns are located on the Tigris-Euphrates River. A Nabataean inscription discovered between Dumaetha and Forat supports Pliny's statement (Rostovtzeff 1953: 867). It is possible that the Nabataeans travelled even further, since Nabataean coins have been recovered at Susa (Meshorer 1975: 41, n. 118). Nelson Glueck proposes that Nabataean traders reached Hatra in Parthia (1966: 209). Strabo notes that the Gerrhaeans, of Oman, carried aromatics to Petra (16.4.18), and the Nabataeans were known to trade along this route also (Rostovtzeff 1932: 27, Glueck 1966: 380).

III.B.2.d. West.

Nabataean activity in western regions was extensive. Their presence in the neighbouring regions of Judaea and the Sinai is not surprising, but the Nabataeans extended further, into many parts of Egypt. Nor did they stop at the coast, Nabataeans could be found throughout the Mediterranean, as far west as Italy. Josephus' histories provide evidence for Nabataean activity in Judaea. He describes the diplomatic journeys which Syllaeus made to the Judaeian court (*AJ* 16.221) and mentions that Herod had an Arab (by implication Nabataean) bodyguard (*BJ* 1.572). Commercial contacts are not noted, but, in view of the trade-routes between the countries, they must have been extensive. Finds of Nabataean pottery at Straton's Tower indicates some degree of exchange (Levine 1975: 8). An inscription found at Hippos shows that Nabataeans were present in the region of the Sea of Galilee (Graf 1986: 792).

The Sinai peninsula cannot strictly be considered to be outside of Nabataea, but activity in an area long considered marginal deserves special mention. Diodorus (3.43.5) notes that there was extensive Nabataean settlement along the west side of the Gulf of Aqaba; Strabo (16.4.18) adds that the Nabataeans also colonized the islands off the coast. The Nabataeans could

also be found in the western regions of the peninsula. They seem to have been exploiting the turquoise and copper mines near Tel-el Mekaret in the Wadi Feiran area (Bowersock 1979: 240). Nearby, a Nabataean sanctuary was located at Jebal el Munajah (Zayadine 1985: 161). Nabataean presence is also attested along the entire length of the Sinai trade-routes (Jones et al, 1988).

Nabataean activity in Egypt is surprisingly extensive. Presence in the Wadi Tumilat, which connects Suez and the Nile, is supported by several inscriptions (Clermont-Ganneau 1919; Jones et al. 1988). An inscription discovered near Leukos Limen points to Nabataean involvement in the Red Sea ports (Whitcomb and Johnson 1981: 21); further evidence of activities in this area are the scores of Nabataean inscriptions found along the trade-routes in the desert east of the Nile (Littmann 1953, 1954). Some inscriptions have even been recovered in regions west of the Nile (Littmann 1954: 211). The dates range from the first century B.C. to the third century A.C. The Nabataeans were also present in many Mediterranean regions. Inscriptions show that they reached several island sites: Cos (Della-Vida 1938), Delos (*Inscriptions de Délos*: 2321), and Rhodes (*SEG* III, 674.34). There is also some evidence for their presence on Cyprus (Wenning 1987: 23). The eastern port sites they frequented included Miletus (Kammerer 1929: 210-11 in Glueck 1966: 377), Priene (Hiller von Gaertringen *Die Inschriften* 1906 no. 108, v. Wenning 1987: 22), Beirut (*Syria* 45: 53), and Sidon (*CIS* II.160). Nabataean inscriptions have even been found at Puteoli (*CIS* II 157-158) and Rome (*CIS* II 159).

III.B.3. Settlement.

Nabataean activity in regions (v. above) far from their own nation was not merely of a transient nature. Although Nabataean merchants did continually travel along the trade routes, there is also evidence that the Nabataeans settled in some of the areas through which they frequently passed.

It is postulated that the city of Edessa was founded in 132 B.C. by a king of Nabataean background (Segal 1970: 16). The presence of a Nabataean sanctuary in the Palmyrene regions indicates a stable Nabataean population in the area (Teixidor 1973: 409). Strabo's account of the Gallus campaign (v. discussion Chapter VI.D) records the presence of a southern kingdom apparently ruled by a kinsman of Obodas (16.4.24). This kingdom may have been an offshoot realm established by the Nabataeans of Petra. The ruler of this southern kingdom was called Aretas, a name associated with the Nabataean monarchy. Pliny (12.44) mentions a colony of Nabataeans who settled in "Cave-dweller's Country", in north-east Africa. Rostovtzeff postulated that the Nabataeans established colonies along the trade-routes to Mesopotamia (1953: 867). Settlements in Egypt are indicated by the inscriptions found there; the number of Nabataeans was great enough in north-east Egypt that a sanctuary of Dushara was established at Daphnae (Jones et al. 1988). Nabataeans also seem to have colonized the Blemmyes of Egypt (Trimingham 1979: 252). The Nabataeans are well attested in the eastern Decapolis cities, such as Jerash and Philadelphia (Graf 1986: 790). Using an inscription recovered at Hippos, Graf proposes that there were small trading colonies of Nabataeans in the western Decapolis cities as well (1986: 792). A Nabataean community at Salamis on Cyprus has been postulated on the basis of architectural forms discovered there (Wright 1972: 177). There may even have been Nabataean settlements in Italy; Ripa (1989) suggests that a group of submerged structures, including Dushara altars, near Pozzuoli was built by a Nabataean community. Reverse movement of architectural detail may also provide information about Nabataean travel. Oleson (personal communication) believes that the Nabataeans borrowed their techniques of cistern roofing from

examples observed on Delos. The Nabataeans probably served an important role in the spread of cultural ideas.

Some of the Nabataean foreign settlements may have been established in order to exploit or secure control of the trade-routes. But communities within foreign countries would have provided a support system for the merchants (cf. medieval trade settlements, such as the Muscovy Trading Company).

Sidebotham suggests that the number of different occupations listed in the Egyptian inscriptions -- cameleer, plasterer, priest, patcher of clothes -- prove that Nabataean communities existed in the larger Nile emporia (1986: 95). A priest of Dushara is unlikely to have been present simply as an immigrant labourer.

The purpose of Nabataean colonies such as those in Ethiopia and Egypt does not seem to have been to facilitate political expansion. The inscription found near Dumaetha shows that the Nabataeans were mainly interested in ensuring access to the water supply in desert regions (Rostovtzeff 1953: 867).

III.C.Summary.

Josephus reports that the Nabataean kingdom extended from the Euphrates to the Red Sea (*AJ* 1.221). This statement is refuted by historical fact, and actually refers to the land held by Arab groups. The Nabataeans were undoubtedly one of the most prominent of Arab tribes, and Josephus is correct in that their commercial activities were that wide-spread. Nabataeans could be found in nearly every region between Mesopotamia and the Mediterranean; indeed their presence reaches much further. As noted above, Nabataeans were active in the Aegean and as far west as Italy. The importance of commerce to the Nabataeans is indicated by the geographical range of their settlements. They solidified commercial connections by establishing communities in areas where there is no question of intent to create political control, for example in Palmyra.

The Nabataeans do not seem to have been interested in political domination, but of their commercial importance there can be no doubt.

CHAPTER IV

Commodities and Trade Patterns

IV.A.Trade Goods

An analysis of the trade goods in which the Nabataeans dealt can contribute to the understanding of the success of their commercial activities. The Nabataeans controlled or had access to many rare or unique products which allowed them to establish and maintain their importance in contemporary trade.

IV.A.1.Exports

Within Nabataean territory could be found several resources which were in demand throughout the Near East and Mediterranean. While the volume of goods exported cannot always be measured, the exports (and possible exports) themselves can be discussed.

IV.A.1.a.Bitumen.

One of the most important natural resources available to the Nabataeans was asphalt, or true bitumen.¹ This mineral product was probably the Nabataeans' largest export. Pliny reports: "the only product of the Dead Sea is bitumen" (35.178). Asphalt production is also mentioned in Strabo (16.763), Josephus (*BJ* 4.476), Tacitus (*Hist.* 5.6) and Vitruvius (8.3.9). Diodorus (19.98-99) gives the following account:

From its [the Dead Sea's] centre each year it sends forth a mass of solid asphalt, sometimes more than three plethra in area, sometimes a little less than one plethrum. When this happens the barbarians who live near habitually call the larger mass a bull and the smaller one a calf. When the asphalt is floating on the sea, its surface seems to those who see it from a distance just like an island. It appears that the

¹ Asphalt: Bituminous substance resulting from petroleum by evaporation of lighter hydrocarbons and partial oxidation of the residue; *Merck Index* 10th ed. p. 122. For its uses in antiquity see Forbes 1964a: 56ff., discussed at end of section.

ejection of the asphalt is indicated twenty days in advance, for on every side about the sea for a distance of many stades the odour of the asphalt spreads with a noisome exhalation, and all the silver, gold, and bronze in the region lose their proper colours. These, however, are restored as soon as the asphalt has been ejected... When the asphalt has been ejected, the people who live about the sea on both sides carry it off like plunder of war since they are hostile to each other, making the collection without boats in a peculiar fashion. They make ready large bundles of reeds and cast them into the sea. On these not more than three men take their places, two of whom row with oars, which are lashed on, but one carries a bow and repels any who sail against them from the other shore or who venture to interfere with them. When they have come near the asphalt they jump upon it with axes, and, just as if it were soft stone, they cut out pieces and load them on the raft, after which they sail back.

The masses of asphalt were sun-dried and could then be "hewn like timber" (Tacitus *Hist* 5.6). The resulting pieces were probably then packed into bags, or corded together, and loaded onto camel back for transport.

In modern times bitumen is found in greater amounts on the east coast of the Dead Sea (Hammond 1959: 42). If the pattern of distribution was the same in antiquity, Nabataean exploitation would have been facilitated by their control of the east coast. Sale of the Dead Sea bitumen generated so much revenue that the Nabataeans were hard pressed to maintain control of the resource: Antigonus mounted an expedition to try to gain control of it (Diodorus 19.100), and Cleopatra had Antony settle the land upon her and then "leased" it back to the Nabataeans at a substantial sum (Josephus *BJ* 1.363).

Bitumen was an all-purpose material in the ancient world, used in mastics, for waterproofing, in road-building, for light and heat, in paints and inlays, as an adhesive, in medicines, in magic and religious rites, for embalming, and -- later on -- in "Greek Fire" (Forbes 1964: 56ff.).

The Dead Sea bitumen seems to have been used almost exclusively for embalming. Diodorus (19.99) states:

The barbarians who enjoy this source of income take the asphalt to Egypt and sell it for the embalming of the dead; for unless this is mixed with the other aromatic ingredients, the preservation of the bodies cannot be permanent.

This statement has often been dismissed as incorrect (v. Hammond 1959: 42), because Herodotus makes no mention of bitumen in his account of Egyptian burial practices. Hornblower (1981: 150) suggests that this omission merely indicates that the Nabataeans were the first people to exploit the Dead Sea asphalt. Hammond notes that Diodorus' discussion of the embalming process indicates familiarity with the subject (Hammond 1959: 46); perhaps dwindling resources of pine-tar (the traditional material) or an increase in embalmed burials created the need for a new material. Modern studies have revealed no conclusive trace of asphalt in actual embalming, but it has been found in a supplementary role, for example, in filling body orifices (Hammond 1959: 45). Forbes believes that bitumen was used in embalming beginning in Ptolemaic times, with its use restricted to "second class" burials (1964: 103). Few of these burials have survived, which may account for the scarcity of traces found by modern analysis (Forbes 1964: 104). There is no doubt, however, that bitumen provided the Nabataeans with a significant source of income.

IV.A.1.b.Pottery and Potting Clay.

The abundance of sherds found on nearly every Nabataean site reveals the practical importance of ceramics in the society. Millions of these sherds are attributed to the Nabataeans themselves, indicating significant production. Certain ceramics originally classified as Roman in origin have been found to be Nabataean imitation of Roman wares ('Amr 1987: 159). Kilns have been

discovered at several sites which are presumed to be centres of production. One kiln has been excavated at Udruh, and another was found at Zurrabah, a suburb of Petra and perhaps the local supplier ('Amr 1987: 16). The "kiln" identified at Oboda (Negev 1974) is disputed for several reasons: it is composed of limestone which would not stand up well to firing, no "wasters" (misfired pots) were noted, and the potter's wheel is more like a grinding stone ('Amr 1987: 17).

There is not much clay to be found close to Petra, but several sources have been located in the plateau to the east, in the geological formation known as the 'Ajlun Series. There are other known sources further north, as well as west of the Jordan River (Amr 1987: 40ff). One of the 'Ajlun clay deposits runs across the site of Tawilan, and Khairy suggests that it may have supplied the industry at Petra (1982: 275).

Fifty sherds of 'Amr's Type 1 Red Ware from Nabataea were analyzed by neutron-activation in a study carried out by Gunneweg et al. (1983, in 'Amr 1987: 26). The results indicated that these particular sherds were not of Nabataean origin and suggested a possible Cypriot or Anatolian source. Using this study, Negev postulated that clay was imported from Cyprus for manufacturing at sites such as Oboda. Extensive trade in ceramics is well documented for ancient times, so there is no reason to assume that the Nabataeans imported the raw materials for these particular pots. Also, 'Amr's study (1987) indicated that several types of the Petra pottery were fabricated from a local clay.

The character of the trade in Nabataean ceramics themselves is more difficult to ascertain. Negev (1986: xix) believes that the costs of transport prohibited trade in everyday ceramics, but 'Amr (1987: 16) notes that trade in coarseware was commonplace in antiquity. Negev also states (1986: xix) that fine-ware goods

would not have survived a trip on camel back. But, despite its thinness, Nabataean pottery is not exceptionally fragile, and it probably travelled well (Parr 1978: 205), as seems to be proved by the discovery of Nabataean pottery in south Arabia (Zayadine 1985: 159). Parr (1978: 205) postulates that Nabataean pottery was not aesthetically pleasing to non-Nabataeans, and that this fact accounts for the absence of ceramic deposits outside of central Nabataea. But early and late Nabataean sherds have since been identified at Qaryat al Fau in south Arabia (in Zayadine 1985: 157) and the varying dates for the ceramics indicate that the pottery was brought there over a long period of time. Nabataean pottery at Strato's Tower, Hellenistic Caesarea (Levine 1975: 8), may also indicate trade in this commodity, since the centre was a large trade market. Perhaps further excavations and more studies such as 'Amr's will help to define the boundaries within which Nabataean painted and unpainted pottery was produced, and the sites to which it was exported.

'Amr's analysis of the pottery from Petra indicates that there may have been specialization in the manufacturing of ceramics. She postulates that Petra and its environs were the centre of the painted-ware industry, and that lamps were produced elsewhere (1987: 187, 198). Parr (in 'Amr 1987: 29) has suggested that the production of lamps at Petra was limited to one workshop. Thousands of piriform unguentaria discovered at Petra led Khairy to theorize that the Petraeans manufactured these containers for packaging ointments and perfumes also produced there (1980: 88).

IV.A.1.c. Mineral Resources.

Nabataea was rich in several mineral resources, but the extent of Nabataean mining and metallurgy is not yet known. Strabo (16.4.26) says that gold and silver are native to Nabataea, but that "[copper] <χαλκός> and iron" are not. The Feinan region of Nabataea, 60 km south of the Dead Sea, was an important

source of copper, and the mines here were worked almost continuously from the Chalcolithic to the Roman periods. Bowersock (1979: 240) reports a Nabataean settlement in Sinai at Tel-el-Mekaret, which was presumably established to exploit the turquoise and copper mines. Production in this area, however, can only be securely dated to the post-annexation period ('Amr 1987: 4). Pliny (37.121) notes that amethysts were found in Arabia Petraea *<in Arabiae quoque parte, quae finitima Syria Petra vocatur >*, although they were inferior in quality to those from India.

The Nabataeans could presumably have taken over the copper and iron mines at Feinan that were used by the Edomites. If there was continuity between the peoples, the Nabataeans would certainly have known of the ore's existence. The Edomites worked the mines until about 400 B.C. producing several thousand tons of copper (Knauf and Lenzen 1987: 86) but Hauptman (1989) found no evidence that the Nabataeans were active in the copper mining of Feinan. The production is dated by analyzing methods of exploitation, so if the Nabataeans assimilated the Edomites, there may not have been a change in techniques to show up in the record. The Romans became involved in the Feinan production in the first century A.C. Although there was no chronological gap between the Nabataeans and the Romans, the archaeological record would reflect the change because the Romans used their own techniques of ore extraction. According to Knauf and Lenzen (1987: 87), the Feinan region was unsettled during the Nabataean period, and thus production would have been unlikely. Khouri (1988: 121), however, notes that Nabataean pottery was found in the area, and that the Nabataeans there were farming extensively. A region too unsettled for mining would not have been safe enough for agriculturalists, so Knauf and Lenzen's argument does not stand.

The Nabataeans required sources of silver and copper to supply their mints. It seems unlikely that they would have imported metals available in their own territory. Strabo notes that silver was native to Nabataea but copper was not. The existence of the local mines shows that he was misinformed. Neutron activation analysis of Nabataean coins might pinpoint the source of the metals.

IV.A.1.d.Tropical Flora.

Some regions of Nabataea were extremely fertile and produced numerous agricultural goods. Strabo (16.4.26) describes Nabataea as "well supplied with fruits". Certain plants were rare or unique to Nabataea and were in high demand, such as ladanum and behen nut (Pliny 12.37; 12.46).

Ladanum (*Cistus creticus*) is a type of aromatic gum. It was said to be collected by goats (Pliny 12.37.73), which, browsing upon the shoots of the plant, would accidentally collect in their beards the gum which oozed from breaks in the shrubs. Pliny refines this statement by saying "this does not take place anywhere else but in the territory of the Nabataei." Ladanum was found in other areas but was collected by different methods. The gum seems to have been most desired for its scent, although it was also used in medicines (for example Celsus 3.21.7.5, 5.2.1.1). Ladanum of the highest quality went for 40 *asses* per pound on the Roman market.²

Petra also supplied a plant called the behen-nut, or *myrobalanum* "perfume nut" (Pliny 12.46.102). Different types of this nut were found throughout the Near East; the Petraean variety was distinguished by a black rind and a white kernel. Pliny describes the Petraean behen-nut as "a long way the best." The nut was used for both perfumes and medicines. It was priced at two *denarii* per pound.

² Prices are those given by Pliny in his discussions.

One of the most important plants for the Nabataeans themselves was the date-palm. Diodorus (2.48.9) notes: "Yet the land (near the Dead Sea) is good for the growing of palms, wherever it happens to be traversed by rivers with useable water or to be supplied with springs which can irrigate it". Doughty records that palms grow at every oasis, around abandoned settlements, and in low desert valleys, wherever there is sufficient water (1888 II: 466).

There may have been some export of dates, but most of the exploitation must have been for local production. If the observations of Doughty (1888: *passim*) can be applied to the Nabataean period, the date was an essential part of the diet of the people, especially the nomadic groups. Pliny describes the types of dates at great length (13.7), but it does not seem that they were readily available in Rome. There may also have been some date-wine production, but again this would have been mainly for local consumption. There is no mention of it in use elsewhere in the Mediterranean world, and the Romans especially may have looked upon this product as a novelty, but hardly as a "wine".

Balsam, too, was an important resource exploited by the Nabataeans -- at least in the early part of their history. "There is also found in these regions in a certain valley (the Jordan) the balsam tree ... from which they receive a substantial revenue, since this tree is found nowhere else in the inhabited world" (Diodorus 2.48.9). By Pliny's time the Nabataeans no longer controlled the balsam. He states that the only country it is found in is Judaea and that "the balsam tree is now a subject of Rome" (12.54)³.

Balsam and balm (an unguent made from balsam) commanded a high price on the Roman market. Pliny lists the cost of balm at between 300-1000 *denarii* per pint (12.54); it was the most expensive scent on the market. Balsam

³ All the territory along the east bank of the Jordan River was administered by the Roman prefect of Judaea after A.D. 44 (*BJ* 2.16).

could be adulterated with ground-pine (Pliny 12.54), the resulting inferior product was available to the unwary (or impoverished) consumer. A large proportion of the unpainted pottery produced at Petra consisted of unguentaria designed for transporting ointments (Khairy 1980: 88), of which balm was the most important.

Balsam provided a significant income to those who exploited it. The balsam plantations alone produced millions of *sesterii* for the Romans during the first five years of their administration (Heichelheim 1975: 229). If there was any decline in the Nabataean economy due to Roman competition (v. Chapter III), it probably resulted from the loss of balsam, and perhaps the loss of monopoly on the bitumen, and not from the any general decline in trade. The Romans may have continued to sell the balsam to the Nabataeans for processing into balm. Khairy postulates (1980: 89, 88) that the Nabataeans controlled the perfume industry and supplied the markets with bottled perfumes made from local or imported goods.

IV.A.2.Imports.

Nabataea seems to have been a territory relatively self-sufficient in necessities. The sources make no mention of any significant imports of agricultural products or food-stuffs. Organic remains at various Nabataean sites along the Petra-Gaza road included many foods, all of native origin (Cohen 1982: 243). The early levels at Humeima did not contain any Greek or Roman wine or oil amphoras, although some Rhodian amphora handles were discovered at Moje 'Awad (Cohen 1983: 243). As bulk agricultural goods were shipped in distinctive containers, the general absence of such amphoras indicates that there was little import of such products, which may have been restricted to certain regions. In his discussion of the Nabataeans (16.4.26), Strabo mentions the commodities imported by them:

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, as also purple garb, styrax, crocus, costaria, embossed works, paintings, and moulded works are not produced in their country.

Strabo's information may not be entirely correct.

Iron deposits are found in the Ajlun mountains near Petra, and Nabataean sherds have been found nearby (Khouri 1988: 56), but this aspect of Nabataean mining and metallurgy is yet to be explored. "Brass" in the above passage is better translated as "copper" <χαλκός>. The question of Nabataean copper mining has already been addressed in section IV.A.1.c.

The term <πλάσμα> which Strabo uses (translated here as "moulded works") can refer to anything formed or moulded. Archaeological evidence shows that quantities of terra sigillata were imported from Cyprus and elsewhere in the Mediterranean (v. 'Amr 1987: 19-24). Decorative ceramic art works, including some lamps, were imported from Rome (Hammond 1973: 68), possibly referred to by Strabo as "moulded works". The term <πλάσμα> can also be used to indicate an "image" or "figure" and so may refer to statuary of some type.

Purple clothing was probably not imported in significant quantities. Its use was restricted in most societies (for example Roman) to the monarchy and nobility. The Nabataeans also seem to have limited the use of purple; Strabo (16.4.26) describes the wearing apparel of the Nabataeans thus: "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". The purple cloth came from the Levantine coast. This region, especially around Sidon and Tyre, was

famous in antiquity for its supply of the murex shell which was crucial for the production of purple⁴.

The plant styrax came from Seleucia in Asia Minor (Pliny 12.60.123). It was another of those plants whose resin was used for perfumes and unguents, as well as in medicines. It cost 17 *denarii* per pound.

Crocus (Crocus sarivus), better known as saffron, was used by the ancients for its yellow dye, and its scent was used in perfumes. Like most spices in antiquity, crocus was also used in medicines. The most highly regarded crocus originated in Asia Minor (Pliny 21.31ff.).

Costeria is only found in this mention by Strabo. According to Liddell and Scott, Strabo is actually referring to *costus*. *Costus* was the root of the plant *Saussurea lappa* which was indigenous to India. Pliny states that *costus* "has a burning taste and an exquisite scent, though in other respects the plant is of no use" (12.24.41). *Costus* was an important ingredient in the preparation of many unguents (Pliny 13.2.16, 18). The higher quality *costus* was priced at 5.5 *denarii* on the Roman market (Pliny 12.24.41).

Strabo also classes the aromatics as native goods, when in fact many of them were not. Certain aromatic plants grew in Nabataea, but the Nabataeans also imported aromatics from southern Arabia and spices from India. They used aromatics in their religious rites and therefore would have retained a certain amount of these goods for their own purposes. Strabo relates: "They worship the sun, building an altar on top of the house, and pouring libations on it daily and burning frankincense" (16.4.26).

The gold Strabo refers to may also have been imported. No other ancient or modern source lists gold as a Nabataean resource. Like the aromatics, it may

⁴ For a discussion on this subject see J.T. Baker, "Tyrian Purple: An Ancient Dye, A Modern Problem." *Endeavour* 33 (1974): 11-17.

have come to Nabataea from elsewhere in Arabia, possibly from Omana (Oman), which was a major supplier of gold (*Periplus*⁵ 36).

IV.A.3.Transit Goods.

IV.A.3.a.From the East (India).

The Nabataeans were involved with the land trade in Indian goods, but the Indian trade probably never contributed significantly to the Nabataean market. Originally, most goods travelling east to west were shipped from India to southern Arabia, where they were transferred to Egyptian traders' ships for the journey up the Red Sea⁶.

After the beginning of the exploitation of the monsoons by western maritime traders, Roman (and probably Indian) merchants would make the entire voyage, which bypassed the southern Arabians to some extent. This change in the sea trade had little effect upon the Nabataeans, since their involvement with the India trade was via the Persian Gulf. This route was never totally eclipsed by the sea trade.

The *Periplus* (36) discusses the Persian Gulf trade between India and the ports of Omana and Apologos:

Customarily the merchants of Barygaza deal with it, sending out big vessels to both of Persis's ports of trade, with supplies of copper, teakwood, and beams, saplings, and logs of sissou and ebony. Both ports of trade export to Barygaza and Arabia pearls in quantity but inferior to the Indian.

⁵ The *Periplus Maris Erythraei* is a sea-captain's manual, written by and intended for merchants involved in trade in the Red Sea, Persian Gulf and Indian Ocean. It dates to the middle of the first century A.C. (v. discussion in Casson 1989: 6-7).

⁶ For the "monopoly" on the Indian trade by the Arabians and the discovery of the monsoons which allowed the western traders to exploit the trade: *Periplus* 57 and Pliny *NH* 6.100-106.

Arab merchants seem to have held a monopoly on the shipment of precious timbers and fragrant woods from India; the *Periplus* does not record movement of the woods to Egypt by sea. The main route along which woods from India were shipped was overland from Gerrha to Petra. Ebony, which was much used by the Romans for furniture and statuary (Thorley 1969: 218), was the most important wood in this trade. Teak, blackwood and, perhaps, sandalwood were also items of exchange.

The Nabataeans may also have carried on the overland route the spices and gems that were available to maritime traders (*Periplus: passim.*). For example, Roman merchants purchased pearls in Indian ports which originated in the Persian Gulf (*Periplus* 36). Perhaps some of these were traded directly overland to the Mediterranean and not via India on the sea route⁷.

The *Periplus* (19) relates that slaves could be purchased at ports on the Ethiopian coast, "better slaves" at that. But the author also says that the majority of these were shipped to Egypt. Some slaves so obtained would have been marketed at Alexandria for points west. The presence of a large slave market at Gaza (Heichelheim 1975: 165) indicates that significant numbers of slaves were brought to the Mediterranean along the Arabian trade routes. They may have come across the peninsula from Omana, which was the main centre of slaves between India and Rome (*Periplus* 36). A certain number of slaves may have travelled the reverse direction, but the types of slaves which the *Periplus* describes in this trade were not particularly hardy -- mostly musicians and dancing girls. Gysens argues that the Nabataean and Safaitic peoples trading in the Italian ports sold slaves as well as other goods (1987: 117). There is

⁷ The Nabataeans probably also dealt in silk. Thorley postulates that the silk that was traded through Petra was considered to be of especially high quality (1969: 216) but the ancient sources he cites do not explicitly name the Nabataeans or Petra (Pliny 11.75[??, no mention of Petra, Nabataeans, or Arabia], Propertius 2.3.15 <*Arabio bombyce*>).

recent ethnographic evidence for the role of Arabia in the slave trade. Slaves, usually children, were imported from Ethiopia, and sold in Mecca during the pilgrimage (Lawrence 1940: 90).

Strabo reports that the Nabataeans had few slaves, but he does not estimate their numbers (16.4.26). Khazanov notes that slavery was characteristic of most nomadic groups of the Near East, but that it was not a significant factor in their economies (1983: 160). Ownership of slaves was on a small scale and for purposes of prestige. Because of the difficulties in supervision, nomads keep few slaves; most slaves are eventually freed and adopted into the society, although they retain their low status (Khazanov 1983: 160). Doughty's evidence (1888: *passim*) supports Khazanov's findings. He observed that most of the nomads' slaves were freed and that they usually settled in the villages.

IV.A.3.b.From the South.

The most significant Nabataean commercial exchange was in trade with the Arabian peninsula. The aromatics, frankincense and myrrh, were of great importance to the religious rites of nearly every culture in the Mediterranean and Near East. Nabataean involvement in this trade is mentioned in nearly all of the ancient sources dealing with the Nabataeans.

The frankincense gathered by the Arabs belongs to several species of the genus *Boswellia*, a member of the Balsam family (v. Groom 1981; Miller 1969). The areas in which the plants grew were limited; Groom notes that the trees could be found between Qana (Kane) and Hadhbarah on the southern coast of Arabia (cf. Van Beek, in Bowen and Albright 1958: 139, only a limited region around Khor Ruri). The frankincense referred to in the ancient sources as "far side" (ex. *Periplus* 10) came from the eastern portion of Somalia and was of a different species from the Arabian frankincense. The Arabian frankincense

tree is more like a low bush; its usual height is about eight feet (Van Beek, in Bowen and Albright 1958: 139). One of the Somalia frankincense trees, *Boswellia frereana*, is a true tree that reaches twenty to forty feet high (Groom 1981: 106). All frankincense trees, however, have resin ducts in their bark. When the tree is slashed, a sap is exuded which hardens into tear-shaped drops. Pliny (12.32.58) describes the harvest:

They make an incision where the bark appears to be fullest of juice and distended to its thinnest; and the bark is loosened with a blow, but not removed. From the incision a greasy foam [seeps out] <*prosilit*>, which coagulates and thickens.

By the time Pliny was writing, an increased demand for aromatics had effected a second harvesting of frankincense:

It used to be the custom, when there were fewer opportunities of selling frankincense, to gather it only once a year, but at the present day trade introduces a second gathering. The earlier and natural [preparation for harvest] <*vindemia*> takes place at about the rising of the Dog-star, when the summer heat is most intense. The frankincense from the summer crop is collected in autumn; this is the purest kind, bright white in colour. The second crop is harvested in the spring, cuts having been made in the bark during the winter season in preparation for it; the juice that comes out on this occasion is reddish, and not to be compared with the former taking (12.32.58, 60).

Frankincense was used in religious rituals; it was burned as an offering or sprinkled on sacrifices (Groom 1981: 5). It was also burned at funerals (for example, the story of Alexander the Great, quoted in Pliny *NH* 12.32.62) and served as a fumigant (Groom 1981: 14). In addition to its aromatic qualities, frankincense also had medicinal uses. In Celsus' *De Medicina* frankincense is mentioned over seventy times; it is included in preparations for chest pains,

bruises, paralysis, ulcers, abscesses, wounds, haemorrhage of the mouth and throat, haemorrhoids, and as an antidote for poisoning. Frankincense is usually regarded by modern scholars as a luxury, but its applications indicate that it was not so regarded by the ancient peoples who used it. Pliny states that the prices of the three grades of frankincense were 3, 5, and 6 *denarii* per pound (12.32.65). Frankincense was not an overly expensive commodity when compared with, for example, malabathrum and lesser quality nard, both of which sold for 40 *denarii* per pound (Miller 1969 26-28 provides a chart of comparative prices).

Myrrh is also a product of the Balsam family, but it belongs to certain species of the genus *Commiphora*. The habitat of this plant overlaps that of frankincense to some degree, but the regions of production extend to the west, both on the Arabian peninsula and in Somalia. *Commiphora myrrha* is a spiny tree which grows between five and fifteen feet high depending on the environment (Groom 1981: 119). The trees are gnarled and thorny, with leaves that grow in clusters. The resin is harvested by incision like frankincense, but in this case the cuts are "made all the way up from the root to those of the branches that are strong enough to bear it" (Pliny 12.35.68). The myrrh was also harvested twice a year, at the same seasons as frankincense (Pliny 12.35.68). Pliny does not distinguish quality between the harvests, but between the types; he values stacte (myrrh oil) at the highest value, then he says: "next after this comes the cultivated kind, and also the better variety of the wild kind, the one tapped in summer" (12.35.68). It is unclear from this account whether the harvest seasons varied with the species of myrrh trees. Myrrh was more expensive on the Roman market than frankincense; it cost 11-16.5 *denarii* per pound; stacte was much more costly. The uses of myrrh were varied. It was highly regarded for perfumes because it had a lasting scent (Groom 1981: 17).

Myrrh was also burnt as incense, but its most important uses were in perfumes, unguents and medicines.⁸

Myrrh was sometimes added to wine to sharpen the taste and to inhibit drunkenness; it could also be used as an ingredient in certain foods (Groom 1981: 19). The medicinal uses of myrrh were extensive. Celsus lists it for dropsy, quartan fever, and as an antidote for poison; It was added to salves for eye diseases, bladder-stones, haemorrhoids, uvula and genital inflammation, earache, inducing menstruation, side and liver pain, abscesses and plastering broken heads. Jesus Christ was offered an infusion of myrrh before the Crucifixion (*Mark* 15:23). It has been suggested that this was intended as an analgesic (Groom 1981: 20). The Egyptians used myrrh for embalming (Herodotus 2.87).

The process of harvesting aromatics is a continuous one carried out over a period of months. According to recent accounts (Thomas in Groom 1981: 145), collection of the resin begins ten days after the initial incisions are made. When a section on the plant is exhausted, a new one is opened up. For example, the incisions of the frankincense trees begin in April and the gum is collected every fortnight over the next couple of months, ending possibly in August. The resin is ready for export about two weeks after being taken from the tree. The method of harvesting aromatics had great impact on the Nabataean trade since its timing conflicted with the sailing season.⁹

The frequency with which frankincense and myrrh are mentioned in the sources for medicinal and religious practices indicates the importance that these aromatics had in ancient societies. Trade in these and other aromatics

⁸ Myrrh is used in modern preparations, such as certain lotions by The Body Shop.

⁹ The advantages of camel transport in the aromatic trade are discussed in detail in Chapter V.

should not be considered as a luxury trade, but rather as necessary to many Near Eastern and Mediterranean cultures.

IV.A.3.c.From the West.

It is uncertain whether the Nabataeans were involved in the trade which moved goods to South Arabia and India, in the manner in which it was being carried out along the sea route. The *Periplus* (6) lists the commodities which Egyptian ships carried to these regions:

In this area there is a market for: articles of clothing for the Barbaroi, unused, the kind produced in Egypt; wraps from Arsinoe; colored *abollai* (cloaks) of printed fabric; linens; double-fringed items; numerous types of glass stones and also of millefiori glass of the kind produced in Diospolis; brass, which they use for ornaments as well as cutting up for coins; copper honey pans for cooking and for cutting up into armlets and anklets for certain of the women; iron which is expended on spears for elephants and the other wild animals as well as for war. Likewise there is also a market for: axes, adzes, knives; large round copper drinking vessels; a little Roman money for the resident foreigners; wine of Laodicia and Italy, limited quantity; olive oil, limited quantity...

Most of the goods on this list are processed materials, very different from the raw materials which seem to have formed the bulk of Nabataean exports.

South Arabian goods do not seem to have been purchased with money (v. Casson 1989: 122), so presumably the Nabataeans bartered with their own products, such as bitumen and balsam. The Nabataeans may have used some of the goods which they themselves imported from the west, to barter for goods in the south and east. For example, the purple cloth which Omana exported to Barygaza and Arabia (*Periplus* 36) may have come from the Mediterranean via the Nabataeans.

IV.B.Summary of General Characteristics.

IV.B.1.Discussion of Types of Goods Traded.

Import and export trade, as discussed above, contributed significantly to Nabataean commercial activity. There are also indications of considerable internal trade. All or most of the commodities listed above, of both native and international origin, could be found in local Nabataean markets. The internal trade seems, however, to have been mainly based upon animal husbandry and food production; trade in sheep, oxen and camels was important for internal trade in Nabataea (Hammond 1973: 67).

Nabataea contained several mineral resources, but only bitumen seems to have been exploited for trade purposes. Surprisingly for an arid region, many of the goods which Nabataea exported were plant products. The region was well known for its special products such as ladanum, balsam, and behen-nut. In the late Roman and Byzantine periods, Nabataea produced agricultural goods in quantities that allowed for limited export, for example, some grain; the Gaza wines were exported to all parts of the empire in the Byzantine period (Glucker 1987: 93-96).

Nabataea was self sufficient in the essentials for life. It had a low population, with little in the way of a true urban society until late in the Nabataean period. There was no need to import foodstuffs to support an urban population as, for example, at Rome. Meat and milk from flocks of sheep and camels, supplemented by grain from desert farms, were enough to feed the small Nabataean settlements. The largest Nabataean centre with a stable population seems to have been Bostra. At this site the surrounding area, more fertile than most regions of Nabataea, could provide enough food to supply the city (Miller 1983). The imports described by Strabo (16.4.24) seem to be mainly status items which were the prerogative of the royal court.

IV.B.2.Special Role of Nabataeans in Transit Trade.

The character of the Nabataean economy was shaped by the transshipment of precious goods from South Arabia and India: aromatics, spices, silk, and exotic woods. The restrictions imposed by camel transport influenced the nature of Nabataean trade goods, which had to be mainly low-bulk, high-value commodities. Traditionally, the Nabataean trade economy has been considered weak (v. Sidebotham 1986: 45) because of its dependence on the demand for these "luxury goods". It has been noted above, however, that spices and aromatics were required for many religious and medical practices and were, therefore, necessities. Moreover, these products could be subject to Roman government price controls (Sidebotham 1986: 45), which is not typical of luxury items. Because such goods as spices and aromatics were considered essentials, the market was fairly secure. There was also trade in true luxuries such as silks and gem stones. The market for these commodities was stabilized by the demand from the wealthy aristocracy of the Roman Empire (v. Pliny 9.58.117).

The scope of Nabataean trade was considerable. The variety of goods and markets in which they were involved reveals their adaptability and high level of commercial competence.

CHAPTER V

Technology of Nabataean Trade

The strength of the Nabataean economy was not in agriculture. Rather, trade was the source of income which raised the kingdom above subsistence level. Although some people in the more fertile regions of Nabataea may have earned their living through crop cultivation, this was not the case generally, since the nomadic tendencies of certain groups restricted their agricultural activities. The Nabataean predilection for trade was also a result of the climate which allowed for the agricultural self-sufficiency of its people, but not for any significant excess in crop production. Although the Nabataeans had certain resources of their own, most of their success was due to the transshipment of goods. Their wealth was derived from supplying specialty items (v. Chapter IV). This chapter will explore the methods of transportation and mechanics of supervision employed by the Nabataeans to carry out and maintain their trade network.

V.A.Methods of Transport.

Long-distance trade requires special ways of shipping commodities. This section will include a brief description of the major methods of transport used in the ancient world, with specific reference to their use in the Near East.

V.A.1.Land Transport.

V.A.1.a.Pack Animals (Camels).

The camel has long been associated with travel in the Near Eastern desert. In his description of the region of Arabia, Diodorus (2.54.6-7) touches briefly on the subject of camels:

This land also breeds camels in very great numbers and of most different kinds, both the hairless, and the shaggy, and those which have two humps, one

behind the other, along their spines and hence are called *dituoli*. Some of these provide milk and are eaten for meat, and so provide the inhabitants with a great abundance of this food, and others, which are trained to carry burdens on their backs, can carry some (900 pounds) of wheat and bear up five men outstretched upon a couch. Others which have short legs and are slender in build are dromedaries and can go at full stretch a day's journey of a great distance, especially in the trips which they make through the waterless and desert region. And also in their wars the same animals carry into battle two bowmen who ride back to back to each other, one of them keeping off enemies who come on them from in front, the other those who pursue in the rear.

Camels are very well adapted to their desert environment, able to withstand high temperatures and to eat vegetation which is highly saline. Most importantly, they have developed very efficient methods of conserving water and thus can survive on infrequent waterings (Bulliet 1975: 31ff; Khazanov 1984: 26). The animals used for the caravan trade were actually dromedaries, since, as Diodorus notes (above) they are better adapted to the long desert trek. Camels can carry a great deal of weight as long as it is secured properly, and thus were the mainstay of the caravan trade. Groom (1981: 160) estimates that a camel load on the Spice Route averaged about 400 pounds (189 kg., 530 Roman lbs.).

As Diodorus notes, camels are also useful as sources of food. Besides supplying meat, they can sustain their owners with their milk supply. The importance of camel milk to the bedouin is made clear in Doughty's reports (1888: *passim*), and their meat is today, once again, becoming an important staple in desert areas (Oleson, private communication). Camels are an extremely useful animal in that they can fulfill the roles of both the pack and herd animal to a degree matched by few other animals -- with perhaps the exception of the reindeer of the Lapps. This double role played by the camel

was, and is, crucial to all the nomadic people of the Near East, including the merchants of Nabataea.

In the settled regions of the Near East, as in the rest of the ancient world, donkey and mule were also used for transport (Greene 1986: 39). Donkeys and mules are very sturdy and hardy animals. Because they need little sleep, they can average about fifty miles per day even though their pace is slow (White 1986: 132). Donkeys can carry loads of about 150-200 pounds (68-91 kg.), mules slightly more, 200-300 pounds (91-136 kg.). These pack animals were used throughout the Mediterranean for small-scale transport (White 1986: 132, v. Varro 11.6.5). They would not, however, have been used for desert caravans, since they need frequent watering. Camels had no competition for desert travel.

V.A.1.b. Wheeled Traffic in Antiquity.

There may have been limited transport of goods by cart in the Near East, but no long distance trade would have used this method. Much of the terrain of the Near East inhibits movement by wheeled vehicle. Even in less rugged regions of the Mediterranean, wheeled transport was limited by the economics of travel. Using Diocletian's *Edictum de pretiis*, Jones (in White 1986: 131) estimates that a wagon-load of wheat would double in price every three hundred miles. Costs of transport could be even higher; Cato (*On Agriculture* 23.3) calculated that prices for a wagon-load of goods nearly doubled over one hundred miles. Because maritime transport was less expensive, most long-distance trade goods were moved to the sea by the shortest route and shipped from there.

Movement by camel was certainly much more economical and efficient for the aromatics trade than wheeled transport. Pliny states (12.32.64) that the cost of a camel load amounted to 688 denarii between Timna and Gaza, a

distance of about fourteen hundred miles (twenty-three hundred km.).¹ Forbes (1964 II: 206) estimates that Pliny's 688 denarii amounts to an increase double the original price, but distance here is fourteen times greater than that which might cause an equivalent increase in the price of goods shipped by wagon.

V.A.2. *Erythra Thalassa*² Transport.

V.A.2.a. Ships and Boats.

The direct trade with India required sturdy ships to withstand the monsoons.

K.D. White says that a standard grain-carrier of the Roman period was 340 tons (Casson 1971: 170-3). There is no reason to believe that an India merchantship would have been larger than a grain carrier, although Casson presumes that the India merchant ships were about 500 tons and could carry 20,000 talents of goods. A larger size does not necessarily mean a stronger ship, nor would the ships have had to be very large to be economical, since the commodities were compact and extremely high in value. The larger ships could be outfitted by a single individual, but more usually several people would contribute towards the cost of the ship and its cargo (Casson 1989: 31-2). These investors were private individuals, as were the merchants they dealt with (Casson 1989: 33).

There was also extensive trade being conducted in the *Erythra Thalassa* by smaller ships. In the Red Sea and along the coast of Africa sailing conditions are not difficult, so trips through these regions could be accomplished by small vessels (Casson 1989: 34).³ Even with the increase in traffic sailing directly to India during the Roman empire, there would have still been a need for the the

¹ Pliny may not have actually have known what the expenses amounted to ,but if his figure is a guess it may be an over-estimation, since he attributes the high cost of aromatics to this cause.

² The *Erythra Thalassa* includes the Red Sea, the Persian Gulf and the Indian Ocean

³ These may have been comparable to the *dhow*s (averaging 100 tons) which Villiers (1970) accompanied on trade voyages out of Kuwait in 1939. Villiers states that the reason this trade survived despite competition from direct sailing steam ships is that the ships warehoused the goods as well as shipped them (1970: 156). The situation would have been the same in ancient times.

coasting trade which carried goods to and from the smaller centres. The merchants who carried out this trade would have been the equivalent of roving pedlars, arriving with all manner of goods from clothing to copper pans, and picking up commodities just as varied: slaves, spices and tortoise shell. The *Periplus* contains many passages describing the various wares available from the Egyptian ships:

In this port of trade there is a market for: wine, principally Italian but also Laodicean and Arabian; copper, tin, and lead; coral and peridot(?); all kind of clothing with no adornment or of printed fabric; multicolored girdles, eighteen inches wide; storax, yellow sweet clover(?); raw glass; realgar; sulfide of antimony; Roman money, gold and silver (49).

The difference in the processed types of goods listed here and the raw goods exported by the Nabataeans was noted in Chapter IV. The Nabataeans may have been involved in the trade of commodities such as those listed above, but it is impossible to trace any such activity, since the goods are characteristic of other cultures. Furthermore, the sources make no mention of this aspect of Nabataean trade, if indeed it existed.

V.A.2.b.Nabataean Shipping.

The ancient accounts which record Nabataean sailing ventures refer to piratical activities in specific terms. Diodorus (3.43.5) uses the word <ληστροικός>, "robber of ships"; Strabo's account (16.4.18) of the Nabataean pirates records that they carried out their thievery <ἐληίζοντο> from rafts, or floats <σχεδίαιας>. Rafts would have been safer craft than boats for unskilled navigators in the reefs and shoals of the Red Sea. Bowersock (1983: 21) has assumed that these pirates were an officially organized and authorized group, but this was unlikely to have been the case. As will be shown, camel caravans had no difficulty in remaining competitive with maritime shipping, so it is unlikely that the piracy was a

protective measure sanctioned by the Nabataean government. The poorer peoples of the *Erythra Thalassa* have always turned to piracy as a means of subsistence (for a modern example, v. Heyerdahl 1981: 112-15). What probably happened is that, as the amount of maritime traffic in the Red Sea increased, the Arab groups living on the coastline decided to take advantage of this new opportunity.

V.A.2.b.i. Ports and Harbours.

The features of ancient harbours varied considerably. Some were just sandy beaches where boats could be drawn up, others were much more elaborate. At Caesarea Palestinae the entire harbour was protected with an artificial breakwater. The port featured a row of arched recesses where newly-arrived crews could land, and in front of these was a circular terrace forming a broad walk for those disembarking (Josephus *BJ* 1.410). Caesarea also featured a lighthouse and a controlled entrance, possibly with a barrier chain (Raban, et al. 1989). These types of constructions and services were rare in the ancient world; the majority of harbours were simply natural basins which supplied enough shelter for ships to anchor or beach.

V.A.2.b.ii. Role in Nabataean Trade.

The Nabataeans controlled at least three harbours on the Red Sea (discussed in Chapter I.B.4): Aila, Leuke Kome and Egra. Information in the ancient sources about these harbours is limited to mention of their names and the following passage from the *Periplus* (19):

To the left of Berenicê, after a voyage of two or three runs eastward from Myos Hormos past the gulf lying alongside, there is another harbor with a fort called Leukê Kômê ["white village"], through which there is a way inland up to Petra, to Malichus, king of the Nabataeans. This harbour also serves in a way the function of a port of trade for the craft, none large, that

come to it loaded with freight from Arabia. For that reason, as a safeguard there is dispatched for duty in it a customs officer to deal with the (duty of a) fourth on incoming merchandise as well as a centurion with a detachment of soldiers.

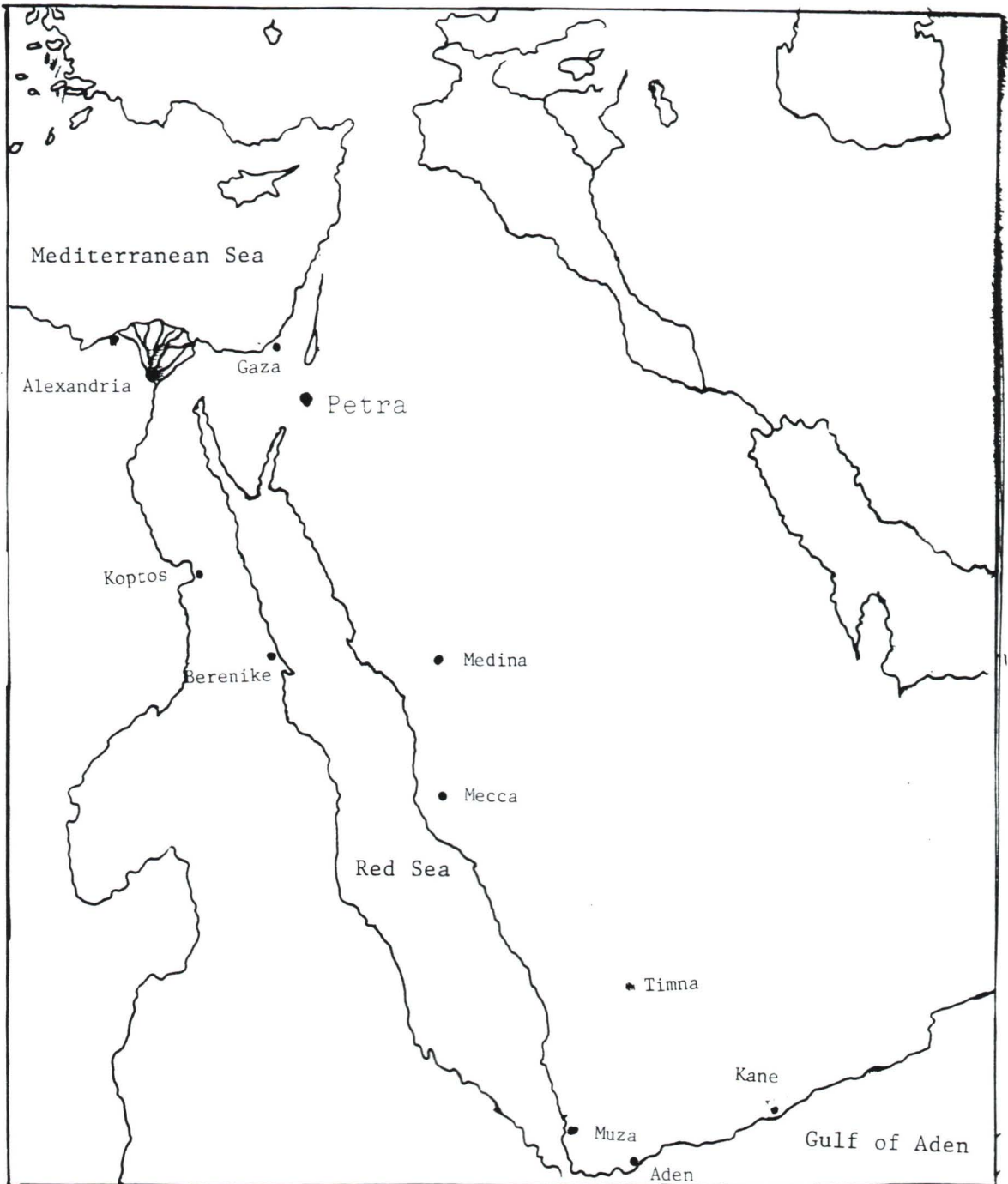
These Nabataean harbours were not large installations, so the Nabataeans probably did not have an extensive fleet or very large ships. Presumably, if their fleet was sizeable, they would have constructed noteworthy harbours. The *Periplus* (19) notes that only small ships used the harbour at Leuke Kome. The extent of actual harbour services provided in the Nabataean ports is unknown. Even the *Periplus* does not describe services and constructions in the harbours it discusses; the only such features it mentions (44) are the pilot boats which guide ships into the tidal rivers in India. Thus, it is not necessarily significant that harbour services are missing in discussions of Nabataean ports. There was probably no breakwater construction at all, but there may have been some port facilities (warehouses, stevedores). The mention of a customs officer at Leuke Kome suggests that goods were transferred from ship to shore there, so warehouses may have been provided at that the site. The assignation of a series of warehouses at Puteoli to the Nabataeans (Ripa 1989) may suggest some type of structural services at the ports within their territory.

The Nabataeans were involved in the maritime trade to some extent, but whether they were more than just receivers remains to be seen. Archaeological excavation of their harbours may provide some answers. Based upon the information in the ancient sources, the availability of resources and the presence of harbours, the potential for Nabataean sea trade certainly existed.

V.A.3. Comparison of Land and Sea Transport.

In his travel accounts, Charles Doughty gives elapsed times for distances along the pilgrims' path to Mecca which follows the ancient trade route (v. Map 3).

Map 3: The Aromatics Trade



Doughty's estimates are useful to the ancient historian, because they refer to the distance as covered by camel caravan. Doughty (1888 I: 43) relates that Ma'an (about the same distance as Petra) was "ten or twelve days" distant from Damascus. If we subtract the twelve days allowed for the pilgrimage to reach the Petra region, the estimates given by Doughty are as follows: from Petra to Medina about fourteen marches; from Petra to Mecca about twenty-eight marches (1888 I: 43). Mecca is situated about half-way down the Arabian peninsula so the projected time for a caravan travelling to Aden would be about sixty days. Pliny (12.54) reports that the Timna to Gaza journey required about 65 days divided into stages of 23 Roman miles each. These distances work out well for camels, which can travel longer distances in a day but on extended marches make about 25 miles per day (Forbes 1964: 194). Groom feels that the trip must have taken at least 70 days, but the extra "days of rest" he factors in are unnecessary since Pliny's numbers are conservative, given a camel's abilities.

Casson (1989) gives information on wind patterns in the *Erythra Thalassa*, estimates of sailing times from the *Periplus*, and actual distances in nautical miles. Although the distances given in the *Periplus* are often incorrect (Casson 1989: 281), the information provided is actually more useful for our purposes because the author measured distances by how long it took to sail (which automatically takes other factors into account, e.g. prevailing winds, local conditions). Ships probably picked up frankincense at Kane since it was stored there; myrrh could be obtained at several closer, Arabian ports, as could "far-side" frankincense. Therefore, nautical distances from Berenike (the main Egyptian port) to Kane will be examined.

The author of the *Periplus* gives the distance from Berenike to Kane as 15,500 stades (Casson 1989: 281). A ship which travelled day and night

averaged about 1,000 stades per "day" and could have made the trip in about 15.5 days. The actual journey probably took a little longer, since ships only sailed direct while on the Red Sea. (There is no evidence that ships destined for south Arabia sailed direct; only the India traders seem to have done so.) The units the distances are given in suggest that that the ships sailed directly to Muza (12 days) and coasted from there (approximately a further 5 days). Coasting vessels moving at half that distance per day would have required close to 32 days for the voyage.⁴

Casson assumes that the return voyage would have required the same amount of sailing time as the outward journey (1989: 287), but he also mentions that the prevailing winds above 20° latitude could greatly hinder northward movement. The northern section of the voyage from south Arabia to Berenike was probably very slow; sailing from Berenike to Suez could take several months (Casson 1989: 97). These northerly winds may have considerably lengthened the return trip from south Arabia. The distance from the Red Sea to the Mediterranean must also be considered for an accurate comparison. It required about 12 days to cover the distance between Berenike and Koptos (Pliny 6.103, discussion in Casson 1989: 96), and the trip down the Nile to Alexandria was a further 10 days at least. In all, the sea voyage required 38 days for a one way trip sailing direct and possibly 60 days for the average coasting vessel. These times are calculated for the sailing season with favourable winds for most of the journey.

Camel trade was more useful than maritime shipping to the aromatics trade, because it was not limited to certain seasons of the year. Ships sailed south from Egypt between July and September. To reach Aden in south Arabia

⁴ Sailing in and out of ports would have added to the length of the journey; only sailing times are taken into account here, i.e. not market time.

required about one month. The incisions of the frankincense trees were begun in April, and the gum was collected every fortnight over the next couple of months, ending possibly in August. Ships could reach the Arabian ports at this time, but could not return to Egypt until at least October; variable winds in the Gulf of Aden may have delayed movement until the NE monsoon had settled in, in November. The winter harvest of frankincense corresponded better with the shipping season, but as this resin was of lesser quality no major competition between the maritime and caravan trades resulted.

These facts may explain why aromatics continued to be moved north by caravan. Ships would have had to wait in Arabian ports for several months until the crop was ready. Alternatively, the goods would have been stockpiled. Either option would have involved expense or delay in profits. Ships had to sail when the winds were good or the voyage would be very slow and potentially dangerous. Caravans, however, could arrive in order to pick up goods at any time. Also, the low bulk, high value characteristics of the aromatics made them ideal for the caravan trade, as opposed to sea trade which was more economical for bulky items such as wine and oil.

V.B.Support System.

V.B.1.Caravan Servicing/Supervision.

Very little information remains concerning the methods by which the Nabataeans regulated or organized their commercial activity. Most of what is known has had to be pieced together from elusive literary scraps or deduced from comparison with other ancient practices.

The Nabataean government provided the infrastructure, the security and services that allowed the trade to flourish, but the actual trade does not seem to have been a government concern. The Ptolemaic and Roman governments "sought to enrich the state by levying duties, tolls etc., but left the actual trade to

private entrepreneurs who, themselves, bore the financial risks" (Sidebotham 1986: 2). The situation in Nabataea would have been no different. A tax was collected on the goods at Leuke Kome by a customs officer (*Periplus* 19). This tax was probably imposed by the Nabataean monarch, but the trade itself was in the hands of private individuals. That this was the case is indicated by information in the *Periplus*, which describes the harbour of Leuke Kome as an *emporion* <ἐμπόριον> or port-of-trade, but not as an *emporion nomimon* <ἐμπόριον νόμιμον>. Casson (1989: 274-6) has argued that the term *emporion nomimon* specifies a "legally limited" port, which does not mean that all other ports were illegal, but were not government controlled (i.e., not points of government monopoly). There were examples of such regulation of trade in southern Arabia, India, and had been usual in Pharaonic and Ptolemaic Egypt (v. Sidebotham 1986: 5). The Nabataean government took its "cut" of the trade, but was content to let private individuals manage it.

There is no information about actual trade-pacts in the ancient world, although there are reports of embassies approaching the Roman emperors; Augustus, for example, received embassies from India (*Res Gestae* 31) and South Arabia (*Periplus* 23). Sidebotham (1986: 130) proposes that these were not official missions, but merchants posing as diplomats hoping to secure their trade. It may be that regional trade relations were based upon an informal alliance of some kind. Two of the cities that the Nabataeans traded heavily with, Gaza and Damascus, requested their military support (Josephus *AJ* 13.356ff.; *BJ* I.103). The Nabataeans did enter and govern Damascus as requested, but Gaza fell by betrayal before the Nabataeans could arrive:

The Gazaeans were ready to suffer any fate rather than fall into the hands of the enemy [Alexander Jannaeus, Hasmonaean ruler], and their courage

was heightened by the expectation that Aretas, the king of the Arabs, would come to their assistance <καὶ Ἀρέτας ὁ Ἀράβων βασιλεύς, ἐπίδοξος ὧν ἦξειν αὐτοῖς συμμαχος> (AJ 13.360).

The Nabataeans do not seem to have been obliged to assist these cities; perhaps the risk to their trade was all the incentive needed.

The story of St. Paul's escape from Damascus (*II Cor* 11.32) also raises some questions about the involvement of the Nabataean monarchy in the trade. Paul states that the official he was escaping from was an ethnarch of the king Aretas <ἐθνάρχης Ἀρέτα τοῦ βασιλέως>. Since Nabataea was not in control of Damascus at this time (cf. Bowersock 1983: 68), it has been suggested that the Nabataean was supervising the trade and was not actually a civic official (ethnarch) (Peters 1977: 271); but he may still have had the power of arrest. Nabataean merchants were often present in foreign cities in numbers sufficient to form their own communities, and these may well have required their own administrators. A possible parallel may be found in the trade communities of the Middle Ages. Each English community abroad was ruled by a governor, who was the local representative of the monarch. The powers invested in these merchant units, expressed in a charter granted by Henry IV in 1403 A.D., included "the right of ruling all English merchants, resident or visiting, and of settling disputes among themselves as well as disputes between English merchants and the natives of the land" (Nash 1929: 162).

V.B.1.a. Supervision.

Watchtowers occur on hilltops or commanding sites along the Nabataean trade routes. A number of these sites had been in use since the Iron Age (Finkelstein 1984), and many were reused by the Romans and later groups. It is possible, however, to identify some of the towers as Nabataean by means of artifacts (Cohen 1983).

Cohen (1983: 243) describes the tower at Moje 'Awad which was situated on the Petra-Gaza road: "It has a square groundplan [ca. 17 x 17 m] and consists of eleven casemate rooms around an open courtyard [ca. 8 x 7 m]. The gateway [ca. 4.5 x 3 m] is located in the northwestern corner." A high degree of standardization in the architecture of Nabataean watchtowers in the Negev suggests planning by a central authority (Meshel 1979b: 303, in Finklestein 1984: 194; v. also Negev 1988: 3-4), or at least a very uniform tradition of building.

The earliest levels of the Moje 'Awad tower date to the Hellenistic period (second to third century B.C.). The finds associated with the lower levels include Rhodian amphora handles. The discovery of Aegean pottery in a Nabataean tower of this period implies both far-reaching trade connections and organized supervision of trade at an early date in Nabataean history.

The expense and direction required to construct and maintain the system of watchtowers along the trade routes indicate that the royal house was involved in supervising or protecting the trade. The towers housed soldiers who guarded the trade routes, protecting travelling merchants from bandits and, perhaps, raiding bedouin. The limited number and small size of the towers indicates that their purpose was simply to keep the road safe by enclosing or overseeing the water supply (cf. Isaac 1984: 186).⁵

Thieves could pose a major threat to the caravans; Strabo (16.2.20) records that there were bands of robbers near Damascus that robbed the merchants coming from Arabia Felix. These bandits inhabited the lava lands, which were the habitation of robbers at many periods (Issac 1984). Strabo

⁵ For a similar situation in the nineteenth century, see Doughty (1888: Chapters 4 and 5), who notes that the *kellas* (watchtowers) on the route to Mecca were established to safeguard the pilgrimage. The *kellas* also provided a water supply, since most of them enclosed a cistern or well.

continues his account of the bandits by stating that the brigands were suppressed "through the security established by the Roman soldiers that are kept in Syria" (16.2.20).⁶ There is no equivalent praise for the Nabataean garrisons, but they must have been successful in alleviating the threat otherwise caravans could not have travelled the road to Damascus.

The fact that such towers existed indicates that the Nabataeans had the means to protect their interests, although not necessarily to impose over-all order. Policing systems require a central authority to direct and control them, the men had to be paid and the buildings maintained. Establishment of such a network implies a significant degree of organization and systematic policy in the Nabataean state.

V.B.1.b. Caravan Movement.

Strabo (16.4.19), discussing the Sabaeans, says: "those who live close to one another receive in continuous succession the loads of aromatics and deliver them to their next neighbours, as far as Syria and Mesopotamia." In some cases this description of the trade, which has the goods being passed hand-to-hand, was probably true, but there is evidence to indicate that many traders did leave their own territories to travel, sometimes surprising distances (v. Chapter III). 'Amr (1987: 8) states "most probably the Nabataean caravans, as such, rarely ever went beyond Nabataean controlled areas, but their merchants certainly did." But assuming that merchants did not travel without trade goods, only the camels would have stopped at the borders. The "receiving" and "delivering" may have had more general meanings. Doughty notes (1888 I: 276) that, when travelling in Arabia, it was a good idea to have a guide who belonged to the tribe through whose territory one was passing. The guide, called a *rafik*, was

⁶ Isaac (1984: 189) proposes that the primary concern of the Roman army in the Near East was not to repel attacks from outside the empire, but to suppress the robbers inhabiting the region.

responsible for the safety and well-being of the travellers. If he betrayed them, he lost his honour, and his tribesmen would not receive him (Lawrence 1940: 78). Ancient caravans may have employed similar guides and perhaps the whole caravan was passed "to their next neighbours". Pliny's statement about the expenses of the caravan seems to suggest that one group made the whole journey.

V.B.1.c. Supplies and Shelter.

Although the value of aromatics was reasonably high, merchants in this trade spent a substantial portion of their earnings on food and lodgings, as well as paying local tariffs. Pliny states (12.32.65): "Fixed portions of the frankincense are given to the priests and the king's secretaries, but besides these the guards and their attendants and the gate keepers and servants also have their pickings: indeed all along the route they keep paying, at one place for water at another for fodder, or the charges for lodging at the halts and the various *octrois* <*mansionibus variisque portoriis* >."

Information about how the caravans supplied themselves may be drawn from the ethnographic evidence. Doughty made note of the supplies carried by the nomads he travelled with. These were not extensive and depended on the season and the wealth of the people. The first supplies he mentions are the ubiquitous camel products, curds and buttermilk, staples of the nomad diet (I: 262). Everyone also carried lumps of salt, but the few remaining items are qualified with "if any": corn, rice, butter, and dates (I:267-8). The most likely possibility is that the caravans carried small amounts of certain staples but for the most part lived off camel products and what they could purchase along the way. The extra supplies, or products the caravans did not have time to collect, were probably purchased from local tribes.

Various types of caravanserais were located throughout the Nabataean kingdom. They served as temporary camp-grounds for the nomadic elements of the population. Sometimes these were actual structures, such as the large building at Mampsis, located just outside the town proper to the north-west (Negev 1980: 19). It consisted of three large courts for stabling animals and storing goods. Along two sides of the courts were thirteen small rooms which probably had extra sleeping quarters on the roofs. There were kitchen facilities and water storage areas as well. This caravanserai, situated on a major trade route, was in use at all periods of the town's history, and served as the equivalent of a motel for caravan traders. Other sites, such as Humeima, had different types of facilities. The aqueduct at Humeima fed a reservoir situated away from the main habitation centre. Here, there was an abundant water supply obtained at great expense but set apart from habitation structures (Oleson 1989). The arrangement at Humeima resulted in a more general purpose site and the area was probably used by pastoral nomads as well as caravan traders. As these people arrived, they would simply set up their tents, as they would do at any other place at which they rested. The length of time they stayed most likely varied considerably, but the fact that there was a stable water supply raises the possibility that the site became a summer-station for bedouin groups (v. Doughty 1988 I: 484). The careful control of water sources, as at Humeima, makes it likely that caravans had to pay for this resource.

Facilities at the various caravan halts varied from nonexistent, to the formal structures described above. Further study on temporary campsites may explain how they fit into the system. Within settled regions, caravan stops seem to have been well monitored and probably provided the inhabitants with much needed goods or other income.

V.B.2.Deliberate Sedentarization.

In the late first century B.C. more Nabataeans became established in permanent settlements (Strabo 16.4.26). Scholars attribute this demographic change to various reasons -- the growth of commerce, the increase in population, a shift away from pastoralism -- as the following quotes illustrate: "This shift from nomadic to sedentary may be related to the commercial aspect of the Nabataean economy as urbanization followed the need for depots, shipping centers and other commercial demands" (Hammond 1973: 14); "Nabataean cities were obliged to develop an agricultural base to sustain a growing population" (Matthews 1984: 171); "New livelihood sources may have lessened reliance on pastoralism and enabled desert people to establish permanent settlements and field-crop agriculture gained a larger economic role" (Finklestein 1988: 245). The most popular explanation for Nabataean sedentarization is as follows: "Roman intervention in the Red Sea weakened and finally eliminated independent Nabataean trade. This caused a serious setback and made the kingdom vulnerable to other tribes, driving the Nabataeans to practise desert agriculture in a desperate attempt to prevent the kingdom's collapse" (Finklestein 1988: 251). While there is a certain logic to this statement, it ignores much evidence. Peters (1977: 274) dates the change in activities to the time of Rabel II, but many of the settlements of Nabataea date to the reign of Aretas IV (Hart 1986a: 57), the most successful point in the history of Nabataea. The foundation of Humeima (discussed below) dates, at the latest, to 62 B.C. But if Aretas established the city during the reign of his father (this is not clearly stated) it was before 87 B.C. In any case, the town predates "Roman intervention" in the eastern trade.⁷ Also, if the Nabataeans were under pressure

⁷ Usually dated to the Augustan period following the annexation of Egypt.

from other tribes, they would certainly not have turned to agriculture, which would have rendered them yet more vulnerable. Furthermore, it is unlikely that the relatively poor agricultural returns of the area would have been considered as a feasible alternative to the lucrative trade in exotic goods.

Whatever the case, local variations in the environment would have affected the pace of sedentarization in different regions of the country. "Because of the climate of the region there must have been strong incentives for settlement to occur at all" (Hart 1986a: 54). But an absence of settlement does not necessarily indicate an absence of population. The climate of southern Jordan and northern Arabia does not preclude the existence or presence of human groups, but in many places conditions do encourage nomadicism. The aridity of the climate makes nomadic pastoralism the least difficult method of survival (v. Köhler-Rollefson 1987: 587). There may have been permanent or semi-permanent settlements at the earliest period of Nabataea's existence that have not yet been recognized in the archaeological record, because of the camp-like conditions of a tent-dwelling society (v. Chapter II.A.2.a). While encampments may, perhaps, not be classifiable as urban sites, they must be considered in the overall evaluation of their culture, since they indicate that not all elements of the population were on the move at all times. Doughty observed that nomadic groups would at times spend several months in a camp. Also, camp dwellers may engage in agriculture even though they do not have permanent habitations. Diodorus mentions "those that till the soil and ... dwell in tents" (19.93.3).

While scholars debate the ultimate reasons for the sedentarization of the Nabataeans, the impetus behind the change is usually perceived as deliberate policy on the part of the monarchs. It is difficult to tell whether sedentarization was deliberately fostered or not. At the site of Humeima the design, expense

and chronology of the water supply system indicate that there was royal backing for this project (Oleson 1989). The archaeological evidence is supported by the information supplied by Ouranios⁸ (*FGrH* 675 A.1.b):

Auara: town in Arabia, so named by Aretas (III), son of Obodas, as a result of an oracle given to his father. For Aretas set out to investigate the oracle which was "to seek a place *auara* " -- that is "white" in Arabic or Syrian. When Aretas had arrived and was keeping watch, there appeared to him an apparition, a man clothed in white riding a white camel, and when the apparition disappeared, there appeared spontaneously a craggy hill, firmly rooted in the earth. There he founded a town.

Establishment of the site was begun with the hydraulic system; water brought into the area would have encouraged people to settle there. Agricultural activity consisting of large grain fields and small fruit and vegetable gardens can be postulated based upon the design of the water supply and modern parallels (Oleson 1988: 167). But the system was also designed to assist nomadic groups (both pastoral and trading). That settlement was in any way forced by the government is not indicated. While there may have been some encouragement of sedentarization, the purpose was probably to supply a stable base for the population and their commercial activities, not to impose a replacement lifestyle.

Negev (1988: 3-4) has postulated a two-tiered system of settlement organization in Nabataea. He feels that there was a royal/public and a tribal/private level for sedentarization. He cites differences in the development

⁸ Traditionally, this historian, whose work survives only in fragments, has been assigned to the first century A.C., but West (1974) argues from the historian's name and information in the fragments for c. A.D. 330. Bowersock (1988) discusses Ouranios' explicitness when dealing with the Nabataeans, which may indicate the historian had access to good sources since he is more vague on Palmyrene history which was closer to his own time.

of Negev towns to support his theory. Settlements such as Oboda and Elusa are typical of the royal/public scheme of organization. Here the initiative involved entire regions with the foundation of roads, hydraulic systems, caravanserai, military establishments, and temples. The site of Mampsis, developing on a less grandiose scale, he believes is typical of settlement on the tribal/private level. In this case, small groups attached themselves to the major system, exploiting needs or gaps in the network, and settlements grew up around them. Negev's theory embraces both spontaneous and deliberate, sponsored, sedenterization, and probably reflects the true state of Nabataean settlement patterns.

V.B.3. Water Supply.

The arid climate of Nabataea (discussed in Chapter I) raised some special problems for the Nabataeans, which they dealt with in a highly successful fashion. Nabataean methods of water reception deserve further discussion here because of the importance that water supply had for their trade activities.

The Nabataean technique of constructing cisterns was famous in antiquity. Diodorus gives the following account (19.94.6-8):

[The Nabataeans] take refuge in the desert, using this as a fortress; for it lacks water and cannot be crossed by others, but to them alone, since they have prepared subterranean reservoirs lined with stucco, it furnishes safety. As the earth in some places is clayey and in others is of soft stone, they make great excavations in it, the mouths of which they make very small, but by constantly increasing them of such size that each side has a length of one plethrum (c. one hundred feet). After filling these reservoirs with rain water, they close the openings, making them even with the rest of the ground, and they leave signs that are known to themselves but are unrecognizable by others.

Nabataean skill in constructing cisterns is substantiated by the archaeological evidence (Oleson 1987: 266-67). Many Nabataean cisterns and

even a few reservoirs are in use at the present. The Nabataeans had other hydraulic skills besides the construction of cisterns; their water control techniques ranged from stone piles to elaborate aqueducts. "Clearing and terracing slopes was a method used by the Nabataeans to improve and protect arable land on such terrain. Terraces hold back run-off water and increase absorption. Some fields were cleaned and the rock heaped in rows of piles, mainly in the Negev, to increase run-off to the fields below" (Oleson 1987: 269). These last mentioned techniques, used for agricultural purposes, allowed the water collected in cisterns and reservoirs to be reserved for human and animal consumption. The aqueducts are the most spectacular of Nabataean hydraulic constructions. The Humeima aqueduct gives the best idea of what the Nabataean engineers were capable of: the main line is nearly 19 km long and a branch line nearly 8 km in length connected two more springs; the slope varied to as much as 45% along the escarpment, a feat which required considerable engineering skill (Oleson 1987: 263).

The design concept of the water system at Humeima and the large scale upon which it was built indicates that there was a backer involved who had a great deal of money with which to finance the project. This may also be the case at Wadi Rumm, where there is also an elaborate aqueduct system. Oleson (forthcoming) postulates that there were two levels of water supply: private (cisterns) and public (aqueduct, reservoirs, larger cisterns, drainage system).

Hammond (1982: 236) sees Nabataean advances in hydraulic technology as dictated by a division of labour between the sexes:

The adoption of a caravan oriented economic base would, as Diodorus states, necessitate the periodic absence of a varyingly large proportion of the male population. Hence, agricultural technology would have had to advance sufficiently assisting or assisted

by hydraulic technology, to the point where the absence of able-bodied males did not affect the subsistence base of the residual population and was broad enough also to support the periodic enlargement of the population resulting from the return of the varying number of males from commercial expeditions.

There is no evidence, however, that supports such a scenario. Ethnographic evidence suggests that women did indeed accompany the travelling merchants (Doughty *passim*). If the ancient nomadic women did all the work (setting up and folding the camp, preparing and cooking the food, etc), as was the case in more recent times (Doughty 1888 I: 257-8), it is unlikely that they would have been left behind. The separating of old men and women in Diodorus' account (19.95.1-2) is not supportive of Hammond's theory; being left on the "rock", the women were certainly not tilling the fields. "In addition, agriculture simply is impossible in most of this region without the Nabataean improvements, so the gender of the field workers is irrelevant" (Oleson, private communication).

We have no way of estimating exactly what proportion of the Nabataeans was involved in the caravan trade, but it seems unlikely it was large enough to warrant referring to the remainder of the population as "residual". Although commercial and agricultural work was not necessarily divided between the sexes, the rest of Hammond's statement probably holds true: the success of the hydraulic technology would free time and energy for other pursuits.

V.C.Ancient Sources on Taxation.

V.C.1.*Periplus Maris Erythrae.*

Information on Nabataean taxation comes from the *Periplus* (19) which states that there was a customs house at Leuke Kome on the Red Sea collecting a 25% tax on goods from southern Arabia. Customs officials were situated there because the harbour was a border point for Nabataea. In addition, navigation was difficult in the Gulf of Aqaba, which deterred most boats from making the trip

right up to Aila (Casson 1989: 144). There is no evidence for the suggestion that the garrison was here to collect the tax. There were also customs offices located inland at other important entry points, for example at Mada'in Selah. Numerous inscriptions in the region indicate that the Nabataeans established the customs office which existed there during Roman rule (Bowsher 1986: 24).

V.C.2.The Palmyra Tax-Law.

This text (*IGRR* III.1056) records the fiscal law of Palmyra of the first centuries A.C. "The great fiscal law does not concern the customs duties of the Roman Empire but rather the city toll of Palmyra for goods to be consumed locally" (Seyrig 1950: 4); the law mentions goods such as olive oil, animal fats, and pine cones. The Roman tax was probably not collected here, but at the Mediterranean ports, as suggested by Pliny (*NH* 6.32). It seems significant that this tax on local goods also runs to 25%. "Aussi le fermier d'une taxe sur la vente aurait-il eu affaire à chaque marchand en particulier, non à la caravane" (Seyrig 1941: 265). This is an interesting point, as it indicates that caravans were not regarded as a whole, but rather as a collection of individual merchants. A caravan was a temporary association of merchants that banded together to share the difficulties of the journey.

The inscription also lists a tax for those who bring in animals from outside the region to graze them, which amounts to a tax on the pastoral nomads (Matthews 1984: 173). Perhaps the Nabataeans imposed a similar tax, collected when the nomads used the hydraulic facilities such as at Humeima and Wadi Rumm.

V.C.3.Miscellaneous Evidence.

It seems that 25% was a standard level of taxation on all types of goods, for both local and international trade (v. Casson 1989: 145). Ptolemy Philadelphus imposed a 25% duty on goods ranging from *garum* to cheese (Seyrig 1941:

265). Pliny (*NH* 12.68) records that the king of the Gebbanites imposed a 25% tariff on myrrh. Taxes levied on Arab caravans in the Ptolemaic period may have been as much as 50% (Sidebotham 1986: 6; *P. Cairo Zenon* 59012).

Pliny (*NH* 6.32) notes that the (Roman) tax on goods coming from the East was collected when the goods reached the Mediterranean. This statement is supported by the Vienna papyrus,⁹ one part of which notes that goods coming through the Red Sea would be taxed at Alexandria: "I will convey [the goods] downstream to the warehouse that receives the duty of one-fourth at Alexandria" (Thür 1987; trans., Casson 1989: 14). Scholars often assert that the Romans forced Nabataea to impose the 25% tax at Leuke Kome in order to drive commerce to their own ports (Peters 1977: 272), but such an arrangement makes no sense. If the Romans had had that much power, they would have been in control of the Nabataean revenues and not have needed to divert the trade. The Vienna Papyrus, as stated above, states that the tax collected at Alexandria on goods of the Red Sea trade also amounted to 25%, so there was no tax break for merchants using the Egyptian ports. If the Romans had been so concerned with shifting all the trade to the Red Sea ports in order to enjoy the commodities at less expense and also to keep the trade in "Roman" hands, then how does one account for the flourishing of Palmyra in the second century A.C.? It has also been stated that, because taxes often amount to 25%, one power (i.e. the Romans) was responsible for imposing them (Eadie 1986: 249). The examples given above of non-Roman taxes which equalled that amount disprove this theory.

V.D.Methods of Exchange.

⁹ This document is a contract between two merchants which binds one to act as the agent for the cargo of the other. It dates to the mid second century A.C.

This section will include brief discussions on the various methods of "buying" goods and how they were used, or may have been used, by the Nabataeans. It should also be noted that raiding, as discussed in Chapter II, also constituted an informal vehicle for exchange of goods and was probably employed by the Nabataeans.

V.D.1.Purchase With Coinage.

The useful characteristics of a well developed coinage are that it is easily portable, can be stored and counted easily, and is made in units small enough for purchasing reasonable quantities of goods. The benefits of coinage had been recognized in the Near East since the seventh century B.C.; "money, especially silver coins, was the most important method of financing long-distance trade in the ancient world" (Hopkins 1980: 106).

Nabataean coinage started with Aretas II (ca. 100 B.C.), who simply struck imitations of Hellenistic issues. Such imitation was standard practice in the ancient Near East, where early coins of new mints copied established coinages until they also became accepted (Meshorer (1975: 11). Although the early Nabataean coins resemble Seleucid issues, they are useful to the study of both Nabataean history and economics. For example, the coins of Aretas III carry inscriptions which support events mentioned in literary sources; city coins struck in Damascus between 84 and 71 B.C. bear the name of Aretas III (Meshorer 1975: 14).

Coins specifically Nabataean in character first occur under Obodas II (62-60 B.C.). Meshorer postulates that these coins had only a political significance; he states that the coins were "probably meant to raise the prestige of the king and also that of the Nabataean royal house as a whole among its subjects, in view of the fact that the country had only recently been subjugated by the Romans" (1975: 18). These new coins, however, differed from previous

Nabataean coins and were similar to the Tyrian half-shekel, which was the basic commercial denomination of the contemporary Near East (Meshorer 1975: 17-18). If the coins had only political implications, there would have been no need to change the coins to match the commercial issues. Furthermore, if the Romans had really "subjugated" Nabataea at this time, the change would probably have been to some equivalent of the denarius.

The Nabataeans used both bronze and silver coinage, allowing for a flexible series of denominations. The frequency of bronze coins in the finds shows a high circulation of coins with a value small enough for everyday purposes (cf. Crawford 1970: 41). No study of the purchasing power of the Nabataean coinage yet exists, but a comparison of the silver coins with other ancient issues reveals some interesting points. At first, the Nabataean silver coins were similar to Syrian issues in weight as well as appearance. The units roughly corresponded to the shekel and the half-shekel. A change took place, however, under Obodas III. In 23 B.C. the weight of the standard silver issues dropped from 6.63 g to 4.4 g, and, at the same time, the silver content also changed from 93.5% to (at most) 70% (Meshorer 1975: 28-9). The weight of the new coins was incompatible with all the contemporary monetary systems, but as a result of the change in silver content the value of the silver coins became equivalent to the Roman denarius, which by this time was the standard unit in Syria and Egypt (Meshorer 1975: 29). This change in the value may indicate that the Nabataeans used their coinage mainly in their dealings with the Mediterranean world, since a coinage system must be attractive to partners in transactions.

Negev (1980: 11) believes that Nabataean temples served as treasuries for the funds which financed the trade system. Temples are found on sites all along the Nabataean trade-routes, as at Oboda, Khirbet Tannur, Rabbat

Ammon, etc. Of course, this was not the only function of temples, but temple-"banks" have a long history in the ancient Mediterranean world. The monies which funded the Delian league were first stored at the sanctuary on Delos and later were moved to the Athenian Acropolis.

The Nabataeans continued to mint coins throughout the history of their kingdom. About 80% of the coins found belong to the reign of Aretas IV, indicating the stability and wealth of the period (Meshorer 1975: 14). There were often periods during which no coins were minted, but the last coins date to the final days of Rabel II. When Nabataea was annexed to the Roman empire, coins from the royal treasuries were overstruck as Roman issues, but coins already circulating continued to be accepted (Meshorer 1975: 22).

V.D.2.Barter.

The oldest form of commercial transaction is barter. This method of trade relies upon direct and simultaneous exchange of commodities of equal value without the use of currency (Fisher & Harte 1985: 1). At least, the goods are accepted as of equal value by the partners. While often considered as typical of less sophisticated countries, barter is used all over the world, and even today barter accounts for as much as 10% of the United States' domestic commerce (Fisher & Harte 1985: 1).

Barter was more frequently used in antiquity than today due to the less flexible monetary systems employed then. In modern times, barter is most heavily relied upon when currency systems break down, as during the Great Depression (Outters-Jaeger 1979: 11). In the ancient world, however, barter would even be used in transactions between merchants of countries which employed coinage systems. For example, even though Egyptian traders supplied the bronze that the southern Arabians used to produce coins (*Periplus* 6), the trade between the two regions seems to have been carried out strictly by

the barter system. As has been noted, Nabataean coinage was matched in value to other Near Eastern systems, so in their dealings with south Arabia, the Nabataeans would have used barter. Possible barter goods are Nabataean pottery (Zayadine 1985: 159), bitumen,¹⁰ and camels. Barter was probably common within Nabataea on the local level of trade. Exchange of services, especially on a personal level, would also have been a common occurrence, as it is today (Fisher and Harte 1985: 158).

V.D.3. Gift Giving.

In western society a gift connotes the opposite of a commercial exchange. In many other cultures contracts are fulfilled and exchanges of goods are made with gifts as a vehicle (Mauss 1967: 1).¹¹ Gifts are given voluntarily, but usually they impose some type of obligation. It is expected that the receiver will respond with the appropriate behavior. Gifts are often connected with honour and prestige, usually that of the donor. Giving a gift suggests a certain amount of wealth and power; accepting the gift implies recognition of the giver's status.

The sources record several examples of Nabataean gift-giving. One example is the payment the Nabataeans made to the Macedonians following an attack ordered by Antigonus Seleucid in 312 B.C.:

[The Nabataeans speak] 'We therefore beg both you and your father to do us no injury but, after receiving gifts from us, to withdraw your army and henceforth regard the Nabataeans as your friends.' They sent their oldest men, who, repeating arguments similar to those previously uttered, persuaded him to receive as gifts the most precious of their products and to make terms with them. Demetrius received hostages

¹⁰ Strabo mentions the Sabaeans using bitumen in an incense combined with goats' beard (16.4.19). The goats' beard <τράγου πώγωνος> may actually refer to ladanum (see the method of collection mentioned in Pliny 12.37.73, section IV.A.1.d.) which was also a Nabataean product.

¹¹ While in Jordan, the author encountered this situation: after a purchase had been completed, the merchant would add in an extra item as a gift.

and the gifts that had been agreed upon and departed from the rock (Diodorus 19.97.4).

In this situation, the gift was used to bind a contract between the Nabataeans and Seleucids. By receiving it, the Seleucids were accepting the Nabataean terms. The payment to M. Aemilius Scaurus¹² was probably viewed in the same manner by the Nabataeans, regardless of what Scaurus thought (Josephus *BJ* 1.159; cf. Hadidi 1982: 19, who terms it "formal submission").

Upon assuming the Nabataean throne, Aretas IV sent a gift to Augustus (Josephus *AJ* 16.351-55):

(But) Caesar was not well disposed to Aretas because he had seized the throne by himself and with no reference to him. He had also decided to give Arabia to Herod ... instead he received the envoys of Aretas and reproached him only with having been rash in not waiting to receive his kingdom from Caesar, but he accepted his gifts and confirmed him as ruler <δεξάμενος δὲ τοὺς παρὰ Ἀρέτα καὶ τοῦτο μόνον ἐπιτιμήσας, ὡς προπετεία χρήσαιτο τῷ μὴ παρ' αὐτοῦ τὴν βασιλείαν ἀναμεῖναι λαβεῖν, τὰ τε δῶρα προσήκατο καὶ τὴν ἀρχὴν ἐβεβαίωσεν>.

To modern eyes this gesture has the appearance of a bribe. Many scholars believe that Aretas was attempting to placate Augustus, worried that he might be removed from power (Bowersock 1983: 52 says Aretas was "anxious"). But the gift may actually have been a statement of status, a present from one ruler to another. Gift interactions between the Nabataeans and other Arab groups are unrecorded but were probably numerous.

V.E. Summary.

Considered from a technical point of view, it is easy to see why Nabataean commerce was so successful. While the potential for Nabataean sea trade

¹² Marcus Aemilius Scaurus, stepson of Sulla, was a quaestor under Pompey. He marched against the Nabataeans (*BJ* 1.159) in pursuit of personal glory and profit. Later in his career he was accused and convicted of *ambitus* and went into exile (OCD).

certainly existed, the advantages of camel transport suggest that the latter was used for most commercial activity. Movement by camel provided one of the most economical methods of transport in the ancient world and was adaptable to the seasonal nature of the Nabataeans' main commodities, aromatics. Camel caravans were not in direct competition with the sea trade for other reasons as well; maritime trade is described in the ancient sources as dealing in a multitude of commodities and Nabataean cameleers carried a limited number of goods. Movement by camel was not, as has frequently been proposed, particularly slow. Nabataean travel times were relatively fast for a pre-industrial society. Petra was ten days march from Damascus, five days from Cairo, about ten days from the Persian Gulf, and at most two months from the south end of the peninsula. By comparison, the sea trip to Rhapta, regularly travelled, took well over a year. The image of camel caravans plodding slowly over the desert is only justified in comparison to travel by motor vehicle; speed is a very modern concern.

The Nabataeans developed expertise in supervision and support systems which helped them to maintain the trade through their country. Although trade was not strictly a government concern, the monarchy realized that it was in the best interest to protect the trade system and created and maintained a successful network of support facilities, perhaps even establishing administrative centres in cities outside their own territory. Their effective hydraulic technology allowed them to expand their territory into regions considered marginal, and by its convenience permitted more time for other pursuits such as trade activity.

"Casual reports, and a certain stereotyping of Near Eastern life have presented the Nabataeans as a nation of caravaneers, plodding through the desolate wastes of antiquity, their camels laden with exotic riches and their

destination vague" (Hammond 1973: 65). But the Nabataeans were not just simple traders. They employed a complex system of exchange that involved the use of both an independent currency and barter, an adaptability which contributed to their success in the marketplace. They imposed and collected taxes and tariffs. Their economic structure was as sophisticated as that of any other ancient people.

CHAPTER VI

The Mediterranean World and Nabataean Commerce

The character of ancient trade and the role it played in the economy have already been discussed in Chapter V. There, it was noted that commerce was more important to Nabataea than to many other regions because of Nabataea's relatively poor agricultural potential and low population. The general consensus of scholars seems to be that it was only with the involvement of the Romans that the eastern trade flourished (Casson 1989: 12). In this chapter the focus will be on exploring Roman control in the Near East and examining the contributions (real and perceived) that the Romans made to Nabataean commercial activity.

VI.A. History of Roman Contact with the Nabataeans.

VI.A.1. Political History.

Roman involvement in the Near East dates from the mid-second century B.C.¹ The first historical mention of contact between the Nabataeans and the Romans, however, relates to events of nearly a century later. This meeting came during Pompey's unofficial campaign in Judaea, where the Nabataeans had taken sides in a succession dispute (Josephus *BJ* I.131-154). The Nabataeans were sent home, and the Romans became involved in the politics of the region. Pompey's intentions concerning Nabataea vary from source to source. Plutarch states that he wanted to take over Nabataea to add to his conquests and increase his own glory (*Pompey* 38.2-3). Josephus' account of the events, however, indicates that Pompey returned to Syria without taking any action against the Nabataeans, or even being interested in doing so. Sherwin-White (1984: 215-217) believes that Pompey did engage in conflict with the

¹ For treatment of this subject v. Sherwin-White 1984.

Nabataeans which related to his desire to free Damascus from outside influence. Arrian describes a tablet displayed during Pompey's triumph of 60 B.C.; the inscription reads in part: "Kings conquered: Tigranes the Armenian, Artoces the Iberian, Oroezes the Albanian, Darius the Mede, Aretas the Nabataean, Antiochus of Commagene" (*Mithridatic Wars* 17.117). The inclusion of Aretas was probably poetic license on Pompey's part, because Pompey never fought the Nabataeans and certainly never conquered them.

Before Pompey left Judaea to return to Rome, he created the Decapolis, a league of cities, and annexed the province of Syria. These regions and Judaea he placed under the administration of M. Aemilius Scaurus, who marched on the Nabataeans in an attempt to take some noteworthy action of his own. Scaurus' troops were unable to confront the Nabataeans due to rough terrain and lack of supplies. Scaurus tried a more diplomatic method. Josephus (*BJ* 1.159) tells us that Scaurus sent the Jewish nobleman, Antipater, to "persuade the Arabs to buy peace." The Nabataeans did this at a price of 300 talents. Scaurus attempted to turn this event into a triumph; he issued coins depicting King Aretas kneeling in submission to him. "So grotesque a misrepresentation of Scaurus' exploits has long been recognized for the pomposity that it was" (Bowersock 1983: 34-35). Scaurus' coinage and Pompey's displays in his triumph were status symbols of a new and exotic type.

Sidebotham (1986: 129) asserts that by 60 B.C. Nabataea was a client state of Rome. The use of this phrase implies that the Nabataeans now served Rome; "The kingdom of Nabataea was a vassal kingdom" (Charlesworth 1921: 64). It has been stated (Sullivan 1990: 13), however, that the term client-king is

misleading and incorrect.² The term the Romans applied to the eastern kings was *socius et amicus* "friend and ally" (Sherwin-White 1984: 41). Sullivan describes the relationship between the Roman government and foreign kings thus:

The alliances remained what they purported to be, expressions of intended co-operation among sovereign states. These kings allied to Rome controlled realms explicitly outside Roman territorial claims, into which no Roman rights extended. The kings raised and spent revenues on their own authority, coined as they wished, and retained the ancient right of kings to supremacy in judicial, religious, and military matters. Their armed forces were organized along traditional local lines. Except for unusual circumstances, as in Judaea after Pompey and elsewhere during the career of Antony, they paid no regular tribute or levies to Rome. The main restriction imposed by the alliance was what it usually is between sovereign allies: consultation on foreign policy if military conflict was involved, and mutual obligation in defence.

The extent and depth of royal control during the first century before Christ can be underestimated through hindsight. Scholars mindful of the great power exercised by the Roman and Parthian empires after the late first century [A.C.] risk imputing to both a greater measure of control earlier in the century than in fact they had (1990: 5, 13).

Sullivan applies his general statements to the Nabataeans in particular and stresses the fact that the Romans did not control Nabataea until they annexed the region. "The Nabataeans grew, if anything, stronger with well over a century remaining after Actium before a portion of their territory entered the Roman provincial system" (Sullivan 1990: 11-12). Part of the problem lies in the fact that only Roman records survived, and also that most scholars bring to the

² Rarely did the Romans use the term *clientia* in this situation (Sullivan 1990:13), one example is by Cicero (*Fam* 15.4.15) who is probably being literary; if the term was correct one would expect to find it occurring after Antony and Augustus' settlements in the east.

study their classical biases. These kings did not wield the power over such extensive territories as Rome, but some of them were (legally) more powerful within their regions than the emperors were.

Marc Antony had some involvement with the Nabataeans during his sojourn in the East. Sources relate that Antony appropriated territory from the Jews and Nabataeans and put it under Cleopatra's control: "He also gave her the region of Judaea which produces balsam and the coastal strip of Arabia Nabataea, which stretches down to the Red Sea" (Plutarch *Antony* 36.3.3). These regions controlled lucrative natural resources (the balsam groves and bitumen deposits). The arrangement was that the land was then leased back to the original owners, at a substantial profit for Egypt. Conflict arose when the Nabataeans refused to pay the rent, but Herod could not enforce the payments and Antony and Cleopatra had other problems to occupy them (v. Chapter II).

Contact between the Romans and Nabataeans seems to have increased during the reign of Augustus. The anger of Augustus when Aretas IV neglected to ask his permission to assume the throne (*AJ* 16.294-6) has been offered as proof that Nabataea was entirely dependent upon Rome. In fact, it indicates the contrary, that it was not considered necessary to seek approval from Rome on such matters. Syllaeus, a Nabataean nobleman, was in Rome at that time, trying to involve Augustus in his succession intrigues. It seems unlikely that Augustus would have been at all concerned about the events in Nabataea if Syllaeus had not been attempting to evoke his support. Syllaeus also requested the emperor's backing in disputes with the Jews (*BJ* 1.572), but this was not a standard action with Nabataean nobility. These diplomatic games of Syllaeus' were intended to further his own interests, but his plans backfired when it became apparent that he had been guilty of provoking war with the Jews.

Bowersock has postulated that Augustus actually annexed Nabataea for a period of three years (3-1 B.C.) citing gaps in the coinage sequence, a passage in Strabo which states the the Nabataeans were subject to Rome and the campaign of Gaius Caesar. The evidence Bowersock cites is inconclusive. Gaps in the sequence of coinage occur throughout the history of Nabataean minting and several breaks in the issue of silver and bronze coins are documented during the reign of Aretas IV (Meshorer 1975: 42, 50, 55). Meshorer himself suggests that the "spasmodic" nature of Aretas IV's coinage is due to economic constraints (1975: 42). Bowersock also uses a passage in Strabo (16.4.21) to show that the Nabataeans were subject to Rome.

The first people above Syria who dwell in Arabia Felix are the Nabataeans and the Sabaeans. They often overran Syria before they became subject to the Romans; but at present both they and the Syrians are subject to the Romans. <Πρῶτοι δ' ὑπὲρ τῆς Συρίας Ναβαταῖοι καὶ Σαβαῖοι τὴν εὐδαίμονα Ἀραβίαν νέμονται καὶ πολλάκις κατέτρεχον αὐτῆς, πρὶν ἢ Ῥωμαίων γενέσθαι· νῦν δὲ κάκεινοι Ῥωμαίοις εἰσὶν ὑπήκοοι καὶ Σύροι>

This passage discusses the Nabataeans and Sabaeans together. The Greek does not support singling out the Nabataeans as the subject people (G. Shrimpton, private communication), and the Sabaeans were not ruled by Rome; the rest of Strabo's account describes a Roman attempt (unsuccessful) to take over Sabaea. Further, Augustus is unlikely to have carried out the annexation and subsequent liberation of a country without publicity; the Nabataeans are not mentioned in the *Res Gestae* among the people he "subdued", while Augustus does mention Greater Armenia, which he could have annexed and chose not to (*Res Gestae* 26-27). Bowersock uses the comparison of Commagene to show such an occurrence would not have been unique, but events at Commagene are supported by the accounts of several historians, including Josephus (*BJ*

VII.230). Bowersock also tries to connect the eastern campaign of Gaius Caesar with this annexation (discussed later in the chapter).

The Nabataeans assisted the Romans during a Jewish insurrection in 4 B.C. Josephus, however, notes that, although the Nabataeans sent troops to assist Rome, they were not true allies but campaigned according to their own ideas: "the Arabs were not properly conducting themselves as allies, but were rather making war to gratify their private resentment, and, from hatred of Herod" (*BJ* II.76).

Josephus' *Jewish Antiquities* (18.109-116) contains the information that Tiberius considered annexing Nabataea. Clashes between the Jews and Nabataeans apparently triggered this response, as Tiberius feared that the balance of power in the region would be upset. Tiberius' death put an end to any action by the Romans, since the commander of the legion in Syria refused to act on his own.

The Nabataeans also supplied troops to the Romans during the Jewish Revolt of A.D. 66. Malchus sent 5,000 infantry and 1,000 horsemen to Titus as part of a contingent supplied by kings allied to Rome (Josephus *BJ* III.60). Josephus (*BJ* V.550-561) notes the brutality of the Arabs and Syrians and again stresses that the Arab soldiers were totally unconcerned with the actual dispute. The allies considered themselves to be fighting in a foreign war <ἐν ἄλλοτρίῳ πολέμῳ> (Josephus *BJ* V.556).

Nabataea remained independent until A.D. 106, when Trajan made it part of the Roman Empire under the name of *Arabia Provincia*. Eadie (1986: 243) has proposed that the annexation was triggered by Rabel II's expansionist plans in the Hauran, when Rabel's transfer of the capital from Petra to Bostra was seen by the Romans as a threatening gesture. It has also been postulated that annexation was facilitated by problems with the succession upon Rabel's

death (Graf 1988: 177). The main purpose behind the annexation was to assist Trajan's campaign in Mesopotamia. Trajan was interested in expanding the eastern frontier of the empire and needed to secure the regions behind him as he marched against the Parthians. He may have recalled that the Nabataeans had supported Parthia against Rome in 40 B.C., and thus they were annexed.

At this time the Romans took over the administration of Nabataea, but commercial activity continued as it had in the past. Initially I thought to divide this account of Roman influences on Nabataean trade at the annexation of A.D.106. Although used by many scholars, a "before and after" look at Nabataean commerce would be artificial. The annexation in A.D. 106 had little or no impact upon commercial activity. Only the personnel of the administration had changed. Furthermore, the government had never been actively involved in the trade.

VI.A.2.Romans as Consumers of Eastern Goods.

Goods from the Near East had been finding their way to Italy since the Late Bronze Age (Thorley 1969: 209). But after Pompey the Great's campaigns and conquests in the Near East during the 60's B.C., oriental commodities came into vogue in Rome. The end of the civil wars and the expansion of the empire under Augustus brought peace and prosperity to the Roman upper class, who were only too eager to spend their wealth on the status goods supplied from the East. The fact that the Romans became a major market for eastern goods has caused scholars to postulate that this required that the trade was re-routed and (or) completely monopolized by the Romans, but there is evidence that the trade grew and did not simply shift (v. Chapters III, IV). Many scholars are convinced that once the Romans became involved in the eastern trade, no one else could be competitive. In reality the presence of the Romans simply added another market. "The idea of trade as a fixed quantity tends to persist in popular

economic thinking. One answer to it, in our particular case, is that the (eastern) trade ... expanded enormously in the period with which we are concerned" (Hourani 1952: 294). It is important to note that there were already well-established markets in the Near East which demanded the commodities in which the Nabataeans dealt. The Nabataeans had established their trade by supplying the Near East, and Roman involvement simply increased the market, not necessarily shifted it; the Near East would still have required goods for its own use. These eastern markets could have been supplied as cheaply by land routes as by sea (Kennedy 1982: 142). In addition, the wealthy Roman market could probably have absorbed as great an amount of specialty goods as could be supplied, regardless of the channels they came through (and at whatever the cost). Even after cultivation of certain of the spices and aromatics began in Italy, supplies continued to be imported in large quantities (Sidebotham 1986: 46).

Scholars who accept that the Romans drove the Nabataeans out of the trade usually focus on the increase in Nabataean agricultural activity as a proof of loss of trade revenue. Agriculture did expand in the first century B.C. as the Nabataeans settled more areas, but trade increased as well and continued to be the dominant factor in the economy. The two activities were not in competition, the entire Nabataean economy was booming. If Finley (1973: 21) is right in asserting that the ancients did not view their economies as a whole, the Nabataeans would not have turned to agriculture to "replace" trade, because they would have seen them as unrelated activities. While Nabataean prosperity may have peaked in the first century A.C., there was no perceptible decline until the third century, when the Roman empire became less stable.

Some Roman sources bemoan the fact that so much money was spent on Eastern goods (Pliny *NH* 6.101; Tacitus *Ann* 2.52-3). But Raschke (1978: 636) notes that the fashion in which records were kept in ancient times indicate

that Pliny could have had no way of calculating the "drainage of coins" which he said went to India every year. Archaeological finds in India prove that coins were shipped to this place, but there is no evidence to show that their loss was detrimental to the Roman Empire. Raschke (1979:) believes that there was an informal balance of payment which occurred naturally when merchants and visitors came to the capital, although balance of payment was not an ancient concept. Rome had no shortage of income generated/stolen/levied in the provinces and elsewhere, so it was not a problem to have a considerable output of wealth to the East. The concerns of Tiberius and Pliny seem to have been based upon moral judgements.

VI.A.3. Romans in the Eastern Trade.

Certain scholars have thought that Nabataean trade became productive only after the Romans annexed the territory (v. Meredith in Littmann 1953-4). Inscriptional evidence (Jones et al 1988) indicates that the Nabataeans administered a vast network themselves, but the question of Roman involvement in the eastern trade is an interesting and complex one. Although land and agriculture formed the basis of Roman wealth, Cunliffe states that by the first century B.C. senators dealt in trade through middlemen (1988: 62). Raschke (1978: 646) adds: "[commerce] was intimately connected with the landed upper class which provided much of the investment capital for trade and industry." Pliny (*NH* 14.5.52) states that wine production could be more profitable than trade with the far east. This tells us two things -- that eastern trade was believed to be profitable and that few Italian Romans would have become involved if there was as much or more money to be had in the less risky occupation of viniculture.

Eastern traders referred to as "Romans" <Ρωμαῖοι> were mainly Egyptians and Greeks, the same people who had been involved in the trade

before the arrival of actual Romans. It is even more unlikely that Romans concerned themselves with the caravan trade, even after the annexation of Nabataea. Even in Palmyra, which the Romans controlled well before the city became a premier trade centre, the desert trade was carried out by locals experienced in caravans and desert crossings. The theory that there was cut-throat competition for the eastern trade must also be discounted. The Romans were not trying to drive the Nabataeans out of business, and indeed could not. The Roman government does not seem to have distinguished among suppliers of eastern goods. The harbour of Caesarea may have been built to provide a large enough harbour to service the trade that was coming across the land routes of Arabia (Sidebotham 1986: 72). The harbour of Caesarea was built by Herod, but the scale and the engineering indicate that there was Roman involvement and support for the project (Oleson, private communication). Finley (1977: 158) asserts that there was no discrimination in trade between Roman and non-Roman markets.

Strabo states (2.5.12) that in his time 120 ships sailed annually for India, whereas previously fewer than twenty ships made the journey each year. His statement has been used to suggest development in eastern sea trade from practically nothing to a thriving practice in the early Roman period. What has not been properly understood, or has been ignored, is that although few ships actually passed the straits of Bab el Mandeb, there was considerable trade being carried there. Egyptian ships were met by Arabian and Indian ships in the south Red Sea. Sidebotham notes (1986: 3) that the Ptolemies who ruled between 283 and 205 B.C. founded as many as sixteen Red Sea ports. The Ptolemies did not need sixteen harbours for twenty ships! A further consideration is noted by Sidebotham, who postulates that the increase in

Strabo's numbers may reflect the change in conditions between the wars of the later Ptolemaic period and peace under the new empire (1986: 52).

VI.A.4. Roman Expeditions in Arabia.

While the military expeditions carried out by the Romans in eastern territories did not have particular commercial motives (although they have often been assumed to have such), these events have bearing upon understanding the relationship between the Romans and Nabataeans. Two of these forays have special significance for the period of Nabataean independence -- those led by Aelius Gallus and by Gaius Caesar.

VI.A.4.a. The Campaign of Aelius Gallus.

The only major campaign initiated by the Romans in the regions of Arabia proper was at the instigation of Augustus in 26/5 B.C. The campaign was led by Aelius Gallus³. Strabo, who was acquainted with Gallus, left a detailed -- if somewhat biased -- account of the Roman attempt to conquer the peninsula:

Many of the special characteristics of Arabia have been disclosed by the recent expedition of the Romans against the Arabians, which was made in my own time under Aelius Gallus as commander. He was sent by Augustus Caesar to explore the tribes and the places... Accordingly he [Augustus] conceived the purpose of winning the Arabians over to himself or of subjugating them. Another consideration was the report, which had prevailed from all time, that they were very wealthy, and that they sold aromatics and the most valuable stones for gold and silver (Strabo 16.4.22).

Augustus' objectives for the campaign have been questioned, although Strabo states clearly what he believed them to be. Raschke (1978: 647-8) states that there was no commercial incentive behind the Roman expeditions in Arabia, but Sidebotham (1986: 121) does not believe that there is any reason to

³ Second prefect of Egypt (OCD).

discount Strabo's statement about the commercial motives for the expedition. It should be noted, however, that Strabo, listing them last, indicates that they were of secondary concern.

Augustus himself links this Arabian campaign with one sent to Ethiopia:

On my order and under my auspices two armies were led, at almost the same time <*exercitus eodem fere tempore*>, into Ethiopia and into Arabia which is called the Happy, and very large forces of the enemy of both races were cut to pieces in battle and many towns were captured (*Res Gestae* 26).

Miriam Griffin (oral communication) is of the opinion that the campaigns were reconnaissance missions intended to ensure the security of the newly-annexed Egypt. Troops were sent to Arabia because the narrowness of the Red Sea left Egypt vulnerable to attack from across the water. The Arabs were not a particularly warlike people (Strabo 16.4.24), but the Romans had no way of knowing this before the expedition. The successes in battle which Strabo records allowed the Romans to accomplish the main goal of the excursion; they displayed superior military prowess, which would have discouraged the Arabs from waging war against Egypt (had they ever been inclined to do so). Indeed, following the campaign, the South Arabian monarch began sending "placatory" gifts to the Roman Emperors (Pliny *NH* 12.31.57). This practice does not indicate that the Romans subjugated Arabia (v. Chapter V.C.2).

The Nabataeans were involved in the campaign and supplied the Romans with troops and a guide. Many scholars insist that the expedition was undertaken at the express wish of the Nabataeans (v. Hammond 1973: 22). Alternatively, the aid given by the Nabataeans has been offered as proof of their dependent state (v. Sidebotham 1986: 121), but this is not necessarily the case. Allies often lend military aid, especially when they see that it may be to their

own advantage. Hammond (1973: 22) believes the Nabataeans were responsible for encouraging the expedition, as well as for its failure. Strabo states that Gallus failed due to the treachery of his guide Syllaeus and scholars have used this account to back up claims that the Nabataeans were protecting their role as middlemen in the aromatics trade (v. Warmington 1974: 15).

[Augustus] was encouraged also by the expectation of assistance from the Nabataeans, since they were friendly and promised to co-operate with him in every way. Upon these considerations, therefore, Gallus set out on the expedition; but he was deceived by the Nabataean Administrator, Syllaeus, who, although he had promised to be guide on the march and to supply all needs and to co-operate with him, acted treacherously in all things, and pointed out neither a safe voyage along the coast nor a safe journey by land misguiding him through places that had no roads and by circuitous routes and through regions destitute of everything, or along rocky shores that had no harbours, or through waters that were shallow or full of submarine rocks; and particularly in places of that kind the flood-tides, as also the ebb-tides, caused very great distress (Strabo 16.4.23).

The Nabataeans were, in fact, probably quite anxious to see the campaign carried out. If the expedition had been successful, the Nabataeans would have gained a greater part in the Arabian trade. Their geographical position was such that they would have been the chief beneficiaries. The number of actual Romans involved in the trade at any given time was very small. The Nabataeans, as exclusive middlemen, would have had the most to gain from the success of the campaign. In treachery they would have risked reprisals and war.

Sidebotham (1986: 124) states that the length of the trip down the peninsula (recorded as six months) indicates that Syllaeus was misguiding the Roman troops. Although misleading the enemy through waterless regions is not

unknown to Arab groups (Lawrence 1935: 302), such does not seem to have been the case here. Zayadine (1985: 159) points out that the description of the route given by Strabo coincides with the established passage down the peninsula. Regardless of Strabo's opinion, Syllaeus does not seem to have misled the Romans; they were simply unprepared for the harsh environmental conditions. The Roman authorities do not seem to have blamed Syllaeus for the failure of the expedition; the order for his execution took place twenty-five years later and stemmed from quite different charges. Strabo's description of the terrain is accurate; he did not understand that there was no easier route. The time spent on Gallus' outward trip may be a factor of Augustus' orders; he may have been exploring "the tribes and places" or establishing outposts, not to mention engaging in battle:

In the midst of this trouble the barbarians also fell upon them. For hitherto they had been defeated whenever they joined battle, and had even been losing some places; but now, with the disease as their ally, they not only won back their own possessions, but also drove the survivors of the expedition out of the country (Dio 53.29.7).

Incidentally, Dio makes no mention of treachery, but attributes the failure of the expedition to "the desert, the sun, and the water" which "all caused the men great distress". Apparently the water contained bacteria which made them very sick.

Following this campaign, the southern Arabs sent embassies of goodwill to the Roman emperors bearing gifts, but there is no evidence that they considered themselves clients or otherwise under the rule of Rome.

VI.A.4.b. The Campaign of Gaius Caesar.

The eastern expedition led by Gaius Caesar is included here to clarify the confusion in the ancient sources and to discuss Bowersock's attempt to link this campaign with a temporary annexation of Nabataea.

Gaius Caesar, grand-son of Augustus, was known to have started or carried out a campaign in Arabian territory just before his death in A.D. 4, but the ancient sources are not in agreement concerning location and purpose. Pliny tells us that Gallus was the first and only Roman to lead troops into Arabia (6.32.141) but he also says that Gaius "won great renown" from military exploits in the aromatic producing regions (presumably Arabia Felix, 12.30.54). Pliny does not provide precise geographical information in his accounts; he also states that Gaius only glimpsed Arabia *<nam prospexit tantum Arabiam >* (6.32.141). Another passage in Pliny states:

[Dionysius] was sent in advance to the east by his late majesty Augustus to write a full account of it when the emperor's elder son was about to proceed to Armenia to take command against the Parthians and Arabians *<quem ad commentanda omnia in orientem praemiserit divus Augustus ituro in Armeniam ad Parthicas Arabicasque res maiore filio.>* (6.32.160).

It has been suggested that Gaius saw Arabia from the mountains in Armenia (Wellesley 1954: 404). This location is supported by Tacitus (*Annals* 2.4) who states: "then came the appointment of Gaius Caesar to compose the affairs of Armenia". In ancient sources Armenia is identified very securely, and the desert between Syria and Mesopotamia was also referred to as part of Arabia. In view of Gaius' concern with the Parthians it seems likely that his "Arabian campaign" occurred in this region and not further south. The "great renown" Pliny refers to may have been earned if Gaius' actions prevented the

Parthians and Arabians he was campaigning against from disrupting the trade between Arabia Felix and Syria.

Bowersock (1979: 227) states that Gaius' campaign was planned against desert nomads who were threatening to cause trouble. It has also been suggested that Gaius was intending to fight troublesome Arabian bedouin and bandits in Coele-Syria and Syria. Bowersock believes part of Gaius' campaign was related to the temporary annexation of Nabataea which he postulates. Bowersock dates this excursion from an inscription from Pisa (*ILS* 140.II.9-10, *<consulatum quem ultra fines extremas populi Romani bellum gerens feliciter peregerat >*) to A.D. 1. He cites Pliny (2.67.168) to support this theory:

Indeed the greater part of [the Arabian peninsula] Alexander the Great's eastern conquests also explored, as far as the Arabian Gulf; in which, when Augustus' son Gaius Caesar was operating there, it is said that figureheads of ships from Spanish wrecks were identified.

This passage in Pliny does not make much sense; there is no evidence for Spanish ships in the Red Sea and Alexander's explorations are not known to have reached this far. Also, there is no justification for locating this region in the Gulf of Aqaba. Bowersock also claims that Juba prepared a manual to teach Gaius about the Nabataeans. But Pliny mentions Juba's manual specifically in connection with Arabia Felix, the incense bearing regions (i.e. very South Arabia). The term "expeditio Arabica" could refer to any region from Armenia to Oman. Details about this expedition are only definite when it is described as an Armenian campaign; it is extremely doubtful that Gaius was active in Nabataea at this time.

VI.B.The Later Commercial History of Nabataea.

VI.B.1.Eastern Trade after the Annexation of Nabataea.

It is often believed that the presence of the Romans in the East caused abrupt and drastic changes in the Nabataean economy. Hammond thinks that by A.D. 44 the Nabataean economy began a continuous decline (1973: 28). There is, however, no proof that even Roman rule had any major impact on the state of Nabataean trade. Sidebotham (1986: 75) points to the flourishing of Bostra and the Decapolis cities in the second century A.C. to support the theory that the eastern trade shifted to the route through Palmyra. He notes that Bostra is connected to Palmyra and thus must have come in for "reflected glory". This theory makes no sense since not enough trade travelled south from Palmyra to make Bostra flourish; it also ignores evidence that there was no decline at Petra until after the fourth century A.C. Graf (1987: 4) states that there is no evidence for believing that Petra declined due to Roman influence or rule; the city was maintained well into the Byzantine period. Further, the only trade travelling to Palmyra would have been the eastern trade, since Sidebotham notes that the Wadi Sirhan does not seem to have been used as a commercial route from South Arabia (1986: 100), and it has been shown the caravan trade could hold its own against the Red Sea trade. As long as there was a market for the goods, the Nabataeans were there supplying it. The sea trade was not, as Sidebotham states, "faster and cheaper" (1986: 76) in all cases (cf. Chapter V).

Sidebotham also postulates that raiding tribes caused the trade to shift to Palmyra and the Red Sea (1986: 169). But there is no evidence for extensive or serious tribal disturbances before the fourth century; "not a single literary source mentions difficulties by nomadic tribes before the Byzantine period" (Isaac 1984: 173).

The actual involvement of the Roman administration is also overstated occasionally. Eadie (1986: 248) thinks it is "curious that the emperors are supposed to have been disinterested in trade" and mentions the work on routes and canals funded by Trajan and Hadrian in the East. Finley states unequivocally that the Romans should not be congratulated for simply maintaining roads and harbours, and their achievements should not be overemphasized; "with all their resources and power the emperors did nothing innovative or unique" (Finley 1973: 160). Eadie does overemphasize the contributions of the Romans. He calls the Via Nova the "paved version of the Frankincense Road" (1986: 248). This attributes the whole to a small part; the Frankincense Road extended down the entire peninsula and the Nabataeans controlled it at least as far as Mada'in Selah; the Via Nova terminated at Aqaba.

The government did not get directly involved in trade activities, but they were not blind to the opportunities to monopolize the most productive goods or to impose taxes and tariffs. The Roman administration surely did have profit in mind when Egypt was reserved for the emperor's source of income; the balsam groves of Jericho were also appropriated by the Roman government and provided a great deal of profit. But there is no evidence that the Romans were concerned with taking over trade routes to eliminate the middle man and keep prices down. The government would, in fact, probably have been more interested in higher prices, since that would have increased the amount of tax that was collected on the goods. Eadie (1986: 248) says that the Roman government must have welcomed the "easy and assured profits from a tax on caravan traffic"; but this was nothing new, it was already being collected (Pliny 12.32.64).

VI.B.2. Roman Involvement in the Eastern Trade.

The Romans would have been as concerned with maintaining peace along the caravan routes as they were in their provinces generally. There is no evidence, however, to indicate that they constructed watchtowers and forts along the routes as soon as they annexed the country. In fact, the epigraphic evidence indicates that most constructions date much later, from the reigns of Severus (Lander 1986: 448) and Diocletian. Parker (1986: 6) states that the system of forts along the *Via Nova* was not upgraded until Diocletian's time. The presence of a few men in existing Nabataean towers seems to have been all that was necessary to maintain peace and security. Lander (1986: 449, 451) thinks that Hadrian pulled his military forces out of 'Nabataea' in favour of letting Arabian forces patrol the *Via Nova*. Isaac (1984) postulates that the troops were centered in Bostra because the bandits of the lava-lands were a bigger threat than the nomadic tribes of the south.

Eadie (1986: 246) states that the Romans did not occupy Nabataean sites south of the Wadi Mujib, but the presence of a *beneficarius* at Mada'in Selah suggests that the Romans established (or took over) a customs depot at this site (Bowsher 1986: 25). The walls around the town indicate that it was a genuine military establishment. Sidebotham (1986: 152) uses a Palmyrene inscription to postulate that the Roman army sometimes accompanied caravans to the Euphrates River. But this seems to have been a unique situation, and there is no way of knowing if the soldier in question was acting in an official capacity. The caravans were usually responsible for their own safety. Graf (1988: 188 n.57) notes: "E. Will stressed the unofficial and indigenous nature of the armed escort that accompanied Palmyrene merchants on the trip across the desert."

VI.C.Summary.

The perceived decline in Nabataean commerce after the coming of Rome to the East has been shown to be false, just as the attribution of Nabataean success to Roman ingenuity has been discounted. The theory that the Romans tried to drive the Nabataeans out of the eastern trade has also been shown to be false. Whatever the purposes behind the campaigns the Romans sent into Arabian territory, they had little or no effect upon Nabataean commerce. The imposition of *pax Romana* in the East and the huge size of the insatiable Roman market created new opportunities for Nabataean traders, but the expertise which made them successful belonged to the Nabataeans themselves.

CONCLUSIONS

The Nabataeans were people of Arab descent who spoke and wrote Aramaic and embraced a Hellenized culture. Cosmopolitan in character, they placed themselves at the hub of movement in the Near East. Although little is known of their political activities, it is evident from the information in Josephus and others that the Nabataean kingdom was strong, capable, and stood as an equal in its interactions with its Near Eastern neighbours. The dates for the existence of this culture are vague; it survived definitely from 312 B.C. to A.D. 106, possibly from the seventh century B.C. to the eighth century A.C.

Although scholars are still uncertain how to define Nabataean, this people formed a coherent social group from the time of their earliest historical mention. In Diodorus' fourth century B.C. reference, they are also noted as possessing the strength and organization to protect themselves from a formidable enemy and the political certainty to handle the same with respected diplomacy. Their commercial activity was flourishing at this time also.

The location of their kingdom was very important to the Nabataeans' commercial interests. In antiquity there was much movement between Egypt and Asia Minor, as well as the Mediterranean lands and Arabia, the Middle East and India; Nabataea straddled most of these routes of passage. The various types of topography found within the populated regions of Nabataea highlight the characteristic adaptability of the Nabataeans. Not only did they develop agricultural settlements, very unusual for nomads, but they did so in regions considered uninhabitable by many other peoples. Their establishment of harbour sites, also unexpected for nomadic people, shows to what degree they were committed to the success of the trade.

Nabataean emphasis upon commercial enterprise rather than political control left them on good terms with their neighbours. Strabo states that Nabataean kings had little interest in politics, particularly military affairs (16.4.24) <βασιλέως τοῦ Ὀβόδα μὴ πολὺ φροντίζοντος τῶν κοινῶν, καὶ μάλιστα τῶν κατὰ πόλεμον (κοινὸν δὲ τοῦτο πᾶσι τοῖς Ἀράβων βασιλεῦσιν)>. While Strabo intended this as an insult (very un-Roman !) it is not actually true. Josephus relates several accounts of strife between the Judaeans and Nabataeans; but it seems that the Nabataeans were, for the most part, more concerned with the security of the trade and only responded to aggressive overtures by the Judaeans.

Climatic factors also had some (negative) impact upon the Nabataean trade, since the arid conditions of much of their region make even basic subsistence very difficult. There is some evidence of slightly increased rainfall at several times during Nabataean history, and during these periods conditions would have been slightly more favourable. The expansion of arable land and the increased settlement occurring during the Nabataean period were, however, due mainly to human effort and characterize the level of motivation that was Nabataean.

The framework and character of Nabataean society facilitated commercial activity. The lifestyle of the people varied along a spectrum from sedentarized to purely nomadic; caravan trade was made possible by nomadic movement and the developed agriculture of the settlements provided a base which supplied the trade. The flexibility which was a characteristic trait of the Nabataeans allowed them to exploit all the opportunities open to them.

Nabataea stood at the hub of a network of trade routes which interconnected Arabia, Egypt, Syria, Asia Minor, the Persian Gulf, and the Mediterranean coast. Within the Nabataean sphere was included the sea route

from south Arabia up the Red Sea and into the Gulf of Aqaba. Nabataean presence on these trade routes started with the aromatics trade from Arabia to Syria. Once the Nabataeans were well established in Edom they began shipping their own resources to the markets that demanded them, including Judaea and Egypt. Use of other routes would have begun as their trade grew stronger. Nabataean presence can be detected at a significant number of sites outside their own territory, and occasionally the Nabataeans formed their own settlements at these sites. These settlements may be considered in terms of a support system for resident and visiting Nabataean merchants.

The markets which the Nabataeans exploited demanded an unlimited amount of numerous goods which were high in value. As noted, the goods were high in price but were not strictly luxuries, since they were often crucial to medicinal or religious preparations. Nabataean territory supplied several resources (the most important of which were bitumen and balsam), but most of the goods that the Nabataeans dealt in were commodities from south Arabia and India. The Nabataeans' commercial success was largely based upon their expertise in providing a variety of commodities to numerous markets.

Technological aspects of Nabataean trade also contributed to the overall success of their commerce. Long-distance trade in the Near East was dependent upon the use of camels for transportation of goods. Because of the constraints of this method of shipment, the Nabataeans were limited to trade in low-bulk commodities. The high value of these low-bulk goods was fortuitous given the restrictions imposed by camel transport. Transport by camel did have its advantages over maritime shipping in that it was better suited to the seasonal availability of the aromatics; thus the Nabataeans established themselves as the major suppliers of these goods to the Near Eastern and Mediterranean

markets. The large demand for the high-value aromatics made this trade a profitable one.

Trade requires a certain degree of security within which to operate. The Nabataeans developed and sustained an extensive network of watchtowers, staffed by soldiers who maintained peace along the caravan routes. Along the trade routes small settlements grew up, which, by providing supplies and shelter to the caravans, would have facilitated travel and, by increasing the number of people actively supported by the trade, furthered security for the merchants. Whether the increased number of settlements was the result of deliberate policy by the Nabataean monarchy is unclear, but the growth in agricultural communities was not at the expense of the caravan trade; rather the two types of lifestyle supported one another.

The plan of the hydraulic system at Humeima, only one example of Nabataean skill in water collection, indicates that both agriculture and nomadicism (which includes caravan trade) were considered when the design was conceived. The Nabataeans' advances in hydraulic technology had great impact upon their commercial enterprise because the increase in available water allowed them to expand their territory and activities.

The Nabataeans also displayed their adaptability in the methods of exchange they employed. They used coins in the Near East, where coinage had long been used in commercial transactions, and they adapted their own currency to correspond with the denomination in standard use. In south Arabia, they employed the barter system for exchange of goods. The Nabataean government reaped the benefits of the commerce through the imposition of taxes and tariffs, but the actual trade was left to the individual merchants.

The prosperity of Nabataean trade has often been attributed to Roman administration, but as has been shown, Nabataean commerce was flourishing

before the Romans became active in the Near East. Nabataea is referred to by classical scholars as a "client-kingdom" of Rome, a term which carries false connotations of subservience. Nabataea showed many instances of independence right up to the annexation of the country in A.D. 106. The mechanics of the transfer of power are vague, but difficulties in the succession may have facilitated the takeover. Commercial activity is, however, unlikely to have been affected by changes at the top of the governing structure.

The greatest impact the Romans had upon Nabataean trade was in creating a new market for their goods. The Near Eastern cities still provided the main market for Nabataean merchants, but the new harbour at Caesarea suggests that a substantial amount of goods found their way to the Mediterranean after passing through Nabataean territory. The almost unlimited need for the aromatics contradicts the notion that competition created hardships for Nabataean traders; there was virtually no ceiling on the demand.

The Nabataeans created a successful trade-network by exploiting or transcending all of the factors which affected their economic activities. The flexible approach and high degree of skill which the Nabataeans brought to the commercial and technological aspects of trade greatly contributed to their success as merchants. Overcoming all obstacles with a unique determination, the tenacious Nabataeans were the great traders of their day. The general absence of the Nabataeans from the political records may be due to bias in the sources or reflect the true state of affairs, but their power should not be underestimated. Theirs was a commercial empire.

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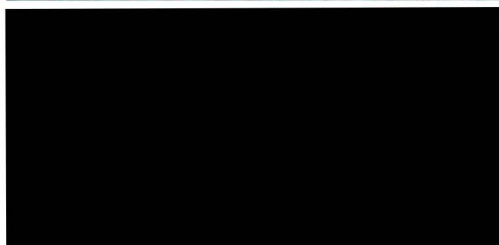
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