

Edward F. Prados. THE DEVELOPMENT OF ARABIAN SHIPPING AND COMMERCE IN CLASSICAL ANTIQUITY. (Under the direction of Dr. Anthony Papalás) Department of History, March 1993.

The purpose of this thesis is to analyze the development of Arabian shipping and commerce in classical antiquity, and its subsequent decline in the early Byzantine era. This paper will focus primarily upon the history of Arabia Felix's caravan and maritime commerce, the effects that this commerce had upon the region's history and political geography, and the internal and external influences that continually shaped and altered that trade. Extensive consideration will also be given to Roman contacts, and their attempts to control and profit from the spice trade. Many scholars of the region, as exemplified by Philip Hitti, argue that direct Roman commerce with India resulted in the decline of South Arabia. Another school of thought claims that Roman shipping had little or no effect upon the kingdoms and economic life of South Arabia. A leading exponent of this theory is George Hourani, the foremost authority on Arabian seafaring and a student of Philip Hitti.

This study argues that neither Hitti nor Hourani are fully correct in their assertions. Direct Roman shipping did have an impact on South Arabia, but the impact did not result in the economic decline of the region. Rather, the rise of the maritime route at the expense of the caravan

route caused a political transformation in South Arabia, changing it from a land split by numerous, warring, political entities (Saba, Ma'in, Ausan, Qataban, and Hadhramawt), into a land governed by one ruling tribe--the Himyarites. The economic eclipse of South Arabia came considerably later and was brought on by several factors: unfavorable climatic trends, decreasing demand in the West for Eastern products, and the emergence of the Fertile Crescent rather than the Arabian Peninsula as the epicenter of Arabian civilization.

This thesis also seeks to deal with the larger question of commerce in the ancient Arabian kingdoms. Scholars have not fully assessed the trade routes utilized in antiquity, the commodities involved in this trade, and the nautical technology that enabled the South Arabians to exploit fully their unique geographical and historical setting. Some of their findings to date will be included in this study.

THE DEVELOPMENT OF  
ARABIAN SHIPPING AND COMMERCE IN CLASSICAL ANTIQUITY

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THE DEVELOPMENT OF  
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"Airs wondrous sweet blow from this land."

*Herodotus* 3.113<sup>1</sup>

Know, O my brothers, that I was enjoying a most comfortable life, and the most pure happiness, as ye were told yesterday, until it occurred to my mind, one day, to travel again to the lands of other people, and I felt a longing for the occupation of traffick, and the pleasure of seeing the countries and islands of the world, and gaining my subsistence. I resolved upon that affair, and, having taken forth from my money a large sum, I purchased with it goods and merchandise suitable for travel, and packed them up. Then I went to the bank of the river, and found a handsome new vessel, with sails of comely canvas, and it had a numerous crew, and was superfluously equipped. So I embarked my bales in it, as did also a party of merchants besides, and we set sail that day. The voyage was pleasant to us, and we ceased not to pass from sea to sea, and from island to island; and at every place where we cast anchor we met the merchants and the grandees, and the sellers and buyers, and we sold and bought, and exchanged goods.<sup>2</sup>

*The Second Voyage of Sindbad the Sailor*

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<sup>1</sup>Unless otherwise specified in the notes, this work relies upon the Loeb editions for the text and translations of the classical Greek and Roman sources. See the bibliography for specific references to the translators and volume numbers.

<sup>2</sup>*The Thousand and One Nights; or, The Arabian Nights' Entertainments*, trans. Edward William Lane (Boston: DeWolfe, Fiske, and Company, [1927]), 443.

The Western world often views the ancient Arabians as a poor, dusty, nomadic race, perennially roaming the vast deserts of Arabia in search of water and sustenance. The Arabian tales of Sindbad the Sailor, perhaps the world's most famous mariner, have done little to belie the occidental belief that Arabia consisted solely of slovenly shepherds and flea-bitten camel-herders.

In reality, however, the people of Arabia, especially those in the region of South Arabia, produced several technologically advanced and culturally sophisticated civilizations. The Romans named South Arabia "Arabia Felix" (Prosperous Arabia) because of the land's relative fertility and wealth amidst the sandy barrenness of the Arabian Peninsula. The wealth and power of the kingdoms in South Arabia derived not only from their control of vital segments of overland and maritime trade routes to East Africa, India, and China, but also from two exotic, Arabian products: frankincense and myrrh. Certainly, the fortunes of the South Arabians fluctuated through time; notably their zenith of wealth and power occurred before the coming of Islam in the seventh century. Nevertheless, it was not until after Vasco da Gama's clamorous arrival in the Indian Ocean in A. D. 1498 that Arabia Felix finally and irretrievably lost its vaunted position as commercial middleman between Europe and the Orient.



It is largely due to the strategic geographic position of Arabia Felix that this region became so wealthy and renowned, for it was able to feed the insatiable Mediterranean spice market.<sup>3</sup> By contrast, the factors responsible for the economic decline of Arabia Felix are more complex and less well-known. Through a careful examination of the history and trade of Arabia Felix, this study will analyze the development and impact of these factors upon Arabia Felix's economic and political fortunes.

This paper will focus primarily upon the history of Arabia Felix's caravan and maritime commerce, the effects that this commerce had upon the region's history and political geography, and the internal and external influences that continually shaped and altered that trade. Extensive consideration will also be given to Roman contacts, and their attempts to control and profit from the spice trade. Many scholars of the region, as exemplified by Philip Hitti, argue that direct Roman commerce with India resulted in the decline of South Arabia. Another school of thought claims that Roman shipping had little or no effect upon the kingdoms and economic life of South Arabia. The

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<sup>3</sup>Spices in the classical world constituted an extremely broad category of goods, from food additives to ingredients in drugs, perfumes, and cosmetics; in short, spices were not only luxuries, but were used regularly in everyday life. J. Innes Miller, *The Spice Trade of the Roman Empire, 29 B. C. to A. D. 641* (Oxford: At the Clarendon Press, 1969), 2.

leading exponent of this theory is George Hourani, the foremost authority on Arabian seafaring and a student of Philip Hitti.

This study argues that neither Hitti nor Hourani are fully correct in their assertions. Direct Roman shipping did have an impact on South Arabia, but the impact did not result in the economic decline of the region. Rather, the rise of the maritime route at the expense of the caravan route caused a political transformation in South Arabia, changing it from a land split by numerous, warring political entities (Saba, Ma'in, Ausan, Qataban, and Hadhramawt), into a land governed by one ruling tribe--the Himyarites. The economic eclipse of South Arabia came considerably later and was brought on by several factors: unfavorable climatic trends, decreasing demand in the West for Eastern products, and the emergence of the Fertile Crescent rather than the Arabian Peninsula as the epicenter of Arabian civilization.

This thesis also seeks to deal with the larger question of commerce in the ancient Arabian kingdoms. Scholars have not fully assessed the trade routes utilized in antiquity, the commodities involved in this trade, and the nautical technology that enabled the South Arabians to exploit fully their unique geographical and historical setting. Some of their findings to date will be included in this study.

**CHAPTER I**  
**HISTORICAL SETTING**

To understand the role that Arabia Felix played in the classical world, it is necessary to review the historical sources that discuss the region. Furthermore, an overview of the kingdoms of Arabia Felix facilitates the reading of these sources.

**Sources**

There are three classes of written, primary sources for ancient South Arabian history: medieval Islamic texts, South Arabian inscriptions, and the classical Greek and Roman authors. The first group of sources, the medieval Islamic texts, must be read with caution, for generally accuracy was subordinated to literary achievement. Included in this grouping are texts such as the *Quran*, the written word of God, according to the tenets of Islam.

In addition, there are a number of stone and metal South Arabian inscriptions available. They have been collected by a variety of scholars, from European travelers to Arabia such as Carsten Niebuhr, J. R. Wellstead, Louis Arnaud, Joseph Halevy, and Eduard Glaser; to formal, archaeological expeditions, such as those directed by American biblical archaeologist W. F. Albright and sponsored

by the American Foundation for the Study of Man.<sup>1</sup>

The South Arabian language was deciphered by Emil R. Rodiger and H. R. Wilhelm Gesenius in 1837 and 1841 respectively.<sup>2</sup> The inscriptions of this language generally focus on the names of rulers and important military victories. According to French archaeologist Jean-François Breton, this martial bias is due to the fact that all of the South Arabian states except Ma'in were dominated by a militaristic aristocracy.<sup>3</sup> Although students of Arabian history consequently have little information about that

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<sup>1</sup>This expedition (1950-51) represented the first archaeological study of Yemeni sites such as Marib and Timna. This thesis utilizes the findings from several of the resultant publications of this expedition. For more details on the expedition, see Wendell Phillips, *Qataban and Sheba* (London: Victor Gollancz, 1955). For a scholarly report concerning inscriptions, their translations, and their significance, see Albert Jamme, *Sabaeen Inscriptions from Mahram Bilqis (Marib)*, Publication of the American Foundation for the Study of Man, ed. W. F. Albright, vol. 3 (Baltimore: The Johns Hopkins Press, 1962). For a vivid account of earlier expeditions, and an illustration of the difficulties inherent in conducting research in Yemen, see Thörkild Hansen, *Arabia Felix: The Danish Expedition of 1761-1767*, trans. James and Kathleen McFarlane (New York: Harper and Row, Publishers, 1964); and J. R. Wellstead, *Travels in Arabia* (Graz: Akademische Druck, 1978), 2: 381-456.

<sup>2</sup>*Western Arabia and the Red Sea*, Geographical Handbook Series (Oxford: Naval Intelligence Division, 1946), 218; and Brian Doe, *Southern Arabia, New Aspects of Antiquity*, ed. Sir Mortimer Wheeler (Switzerland: Thames and Hudson, 1971), 22.

<sup>3</sup>Rémy Audouin, Jean-François Breton, and Christian Robin, "Towns and Temples--the Emergence of South Arabian Civilization," in *Yemen: 3000 Years of Art and Civilisation in Arabia Felix*, ed. Werner Daum (Innsbruck: Pinguin-Verlag, 1988), 63.

era's non-martial events, its literature, or its ways of life, the inscriptions do provide a wealth of names of significant personages and events. The following text is a representative translation from a South Arabian inscription:

1. Qasan Aswa and [hi]s son Ab-
2. Karib, descendants of Sa'iqan, have [ded]i-  
cated to
3. Ilumquh Tahwan, master of Awwam, this statue
4. from their booty which they have plundered from
5. Qaryatum, when they fought in order to assi[st]
6. their lord Sa'irum 'Awtar,
7. king of Saba and Raydan, as they
8. have promised to 'Ilumquh for the safety of his  
son
9. 'Abkarrib; and that may continue 'Ilumquh,
10. master of Awwam, to make them happy with  
prosperity and safe-
11. ty and [with] the esteem and grace of their two  
lords,
12. Sa'irum 'Awtar and his brother Hayu-
13. 'attar Yadi; the two kings of Saba and Raydan,
14. the two sons of 'Athar Nahfan, king of Saba;
15. and that he may preserve them from the hostility  
and wickedness of [any]
16. enemy, who is remote and near. By 'Ilumquh<sup>4</sup>

These inscriptions, which have helped greatly in piecing-together South Arabian history, will become even more useful once a definitive chronology is established and when experts translate more texts.<sup>5</sup>

Perhaps the greatest amount of information may be

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<sup>4</sup>Jamme, *Sabaeen Inscriptions*, 14.

<sup>5</sup>Maria Hofner and A. F. L. Beeston have made extensive progress in the study of the South Arabian language. A. F. L. Beeston, *A Descriptive Grammar of Epigraphic South Arabia* (London, 1962); A. F. L. Beeston, "The Philby Collection of Old-South Arabian Inscriptions," *Le Museon*, 51, 1938; and Doe, *Southern Arabia*, 22.

gleaned from the classical authors. From Herodotus to Claudius Ptolemy, the following authors have described Arabia, its peoples, and its legendary wealth. Their descriptions span over one thousand years of Arabia Felix's history.<sup>6</sup>

Herodotus (fl. 446 B. C.), provides the initial portrait of Arabia Felix, and mentions the earliest known voyage by a Greek, Scylax, in the Indian Ocean. Herodotus takes this account from the lost works of the historian and traveller Hecataeus (ca. 520 B. C.). A century later, Anaxicrates (ca. 324 B. C.), a Greek who led a reconnaissance expedition for Alexander the Great to explore the coasts and political climate of Arabia, wrote about the area. Fragments of his work were preserved most completely by Theophrastus (ca. 295 B. C.), the student and intellectual successor of Aristotle. In his *Enquiry into Plants*, Theophrastus discusses Arabia and its important commodities of frankincense and myrrh. This description was based on Anaxicrates' account. Eratosthenes (ca. 225 B.

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<sup>6</sup>For a more detailed account of these classical authors, see Nigel Groom, *Frankincense and Myrrh: A Study of the Arabian Incense Trade* (London: Longman, 1981), 55-95; J. O. Thomson, *History of Ancient Geography*, vols. 1-2 (New York: Biblio and Canner, 1965), passim; E. H. Bunbury, *A History of Ancient Geography: Among the Ancient Greeks and Romans, from the Earlier Ages Till the Fall of the Roman Empire* (n.p., 1883; reprint, New York: Dover Publications, 1959), passim; and N. G. L. Hammond and H. H. Scullard, *The Oxford Classical Dictionary* (Oxford: Oxford University Press, 1970), passim.

C.), the director of the Ptolemaic library at Alexandria also compiled information about Arabia. He wrote a three-volume geography, but his most famous accomplishment was an attempt to measure the circumference of the earth using an ingenious system of distances, shadows, and angles.<sup>7</sup> In the succeeding century (ca. 145 B. C.), Agatharchides, a Greek grammarian from Cnidus and the tutor of Ptolemy X (Soter), wrote a five-volume treatise entitled *On the Erythraean Sea*<sup>8</sup> that relied heavily upon eyewitness and archival accounts of officers and merchants from the second and third Ptolemaic dynasties based in Egypt.<sup>9</sup> His well-known ethnographic account of the Sabaeans will be discussed shortly. Neither Eratosthenes' nor Agatharchides' geographies are extant. Fragments survive in the work of

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<sup>7</sup>For a detailed explanation of Eratosthenes' method, see Bunbury, *Ancient Geography*, 1: 619-630.

<sup>8</sup>Although "Erythraean Sea" literally means "Red Sea," the ancients used the term to refer to the Indian Ocean, the Red Sea, and the Persian Gulf. A recently published work has collected Agatharchides' extant fragments (Books 1 and 5), representing about one-fifth of his original work, into one volume. Agatharchides of Cnidus, *On the Erythraean Sea*, trans. and ed. Stanley M. Burstein (London: Hakluyt Society, 1989).

<sup>9</sup>Felix Jacoby, *Die Fragmente der Griechischen Historiker*, no. 86 (Leiden: E. J. Brill, 1961), 150-152; M. Rostovtzeff, *The Social and Economic History of the Hellenistic World* (Oxford: The Clarendon Press, 1941), 2: 924-928; Bunbury, *Ancient Geography*, 2: 51-61; and Paul Pédech, *La Géographie des Grecs* (Rennes: Presses Universitaires de France, 1976), 128; and P. M. Fraser, *Ptolemaic Alexandria* (Oxford: Oxford University Press, 1972), 173-174.

the Ephesian Greek geographer Artemidorus (fl. 104-101 B. C.), who owes much of his account to Agatharchides, and subsequently in the history of Diodorus Siculus, the geography of Strabo, and the writings of the Byzantine scholar Photius.

Diodorus Siculus (ca. 80-20 B. C.), a Greek who wrote a multi-volume chronicle entitled *The Library of History*, contributed little new material to Arabian history. Rather, he cites Agatharchides as his main reference for this section. Strabo (ca. 64 B. C.-A. D. 25), a Greek from Amaseia, Pontus, presents a more credible version and the first Roman view of Arabia Felix in his *Geography*. Although he utilized the accounts of Eratosthenes, Agatharchides, and Artemidorus in compiling his work, he also recorded an eye-witness account of Arabia Felix, gleaned from a member of a Roman military expedition to that land. Because the expedition took place from 25-24 B. C., we know that Strabo's account postdates this period. Strabo also describes India and an early voyage to India by a Greek named Eudoxus. Strabo's source for information about India is Megasthenes, a Seleucid envoy to the Maurya Empire. Strabo's source for Eudoxus' voyage is Posidonius (b. 135 B. C.), a Greek stoic and polymath, whose writings are preserved only in fragments.

Another important classical work is the *Periplus of*



the Erythraean Sea. This anonymous account, written in Greek around A. D. 50 (although some scholars date it quite later), is essentially a record of a trading journey from Egypt to India.<sup>10</sup> More than a simple navigational log, the volume contains information about the goods traded at particular seaports, as well as descriptions of the inhabitants of those ports and the political situations in the hinterlands. There is no consensus among scholars on the date of the *Periplus*. The problem is complicated by a reference in the *Periplus* to "Malichus, King of the Nabataeans." Jacqueline Pirenne argues that Malichus lived in the third century A. C. G. W. Bowersock, however, established the first definitive chronology of Nabataean kings. By using historical and archaeological evidence (such as contemporary references to the trade situation during that king's rule) he ties the *Periplus* in with the reign of Malichus II (ca. A. D. 40-70).<sup>11</sup> Therefore, a date of ca. A. D. 50 is logical.

Pliny the Elder, a Roman statesman in the first century A. C., was a prolific reader and writer. Today,

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<sup>10</sup>*Periplus Maris Erythraei*, trans. Lionel Casson (Princeton: Princeton University Press, 1989).

<sup>11</sup>G. W. Bowersock, "A Report on Arabia Provincia," *The Journal of Roman Studies* 61 (1971): 223-225; and Albrecht Dihle, *Umstrittene Daten: Untersuchungen zum Auftreten der Griechen am Roten Meer* (Köln: Westdeutscher Verlag, 1965), 9-35.

only one of his works survives, his *Natural History* (A. D. 77), a comprehensive, 37-book encyclopedia of nature and all that ancient man knew about earth and the universe. Books six and twelve of his work deal specifically with Arabia Felix, its tribes and cities, and its spice trade. Arrian (fl. A. D. 120), was a Greek historian and philosopher. His *Anabasis of Alexander* provides the standard account of Alexander's life. His *Indica*, which draws heavily from Megasthenes' account, describes India as well as Nearchus' voyage (Nearchus commanded Alexander's fleet) to explore the maritime route to that land.

In ca. A. D. 150 Claudius Ptolemy, a geographer, astronomer, and mathematician, wrote a geographical treatise. His goal was to provide a written, rather than illustrative, map of the known world--somewhat along the lines of a modern gazetteer. His book lists place-names, along with their respective latitudes and longitudes. This allows modern scholars to reconstruct his view of the world. His work supplies primarily geographical information about the towns and cities of South Arabia. Dio Cassius (fl. A. D. 230) was a Roman statesman who wrote a history of Rome from its beginnings until A. D. 229. Today, much of his work has been preserved. His account of the Roman military expedition to Arabia in 25-24 B. C., though less reliable than Strabo's or Pliny's, is still valuable.

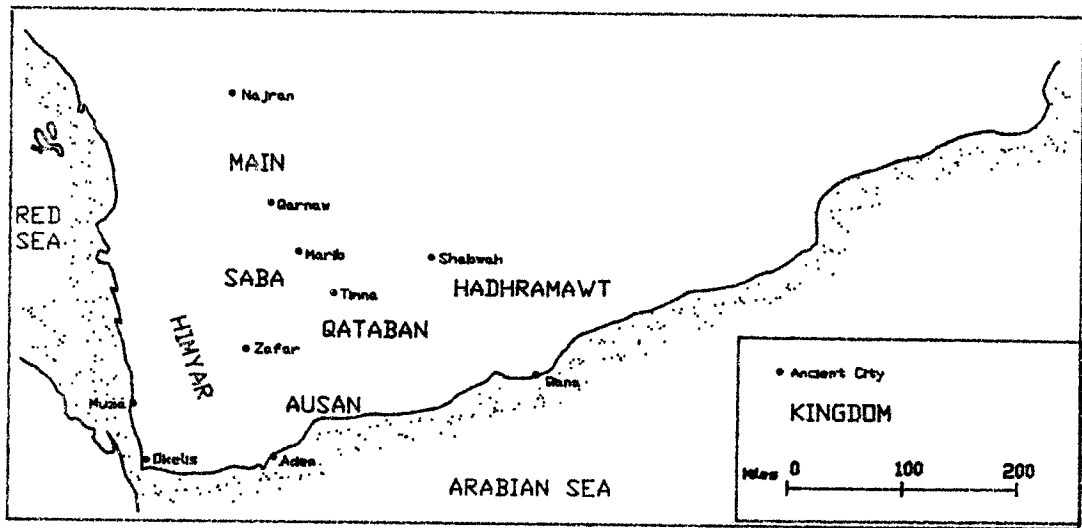
The last authors relevant to this work date from the early Byzantine era. Cosmas Indicopleustes, an Egyptian monk from Alexandria who wrote his *Christian Topography* around A. D. 547, mentions Arabia Felix in passing, but says nothing about its trade. Procopius, a sixth-century historian, provides us with an interesting anecdote for the reasons behind sewn-ship construction in the Indian Ocean.

### **The South Arabian Kingdoms**

As early as 1000 B. C., following the domestication of the camel and the development of the northern caravan routes linking Arabia with the Mediterranean world, kingdoms appeared in Arabia Felix. These South Arabian kingdoms were Hadhramawt, Qataban, Ausan, Ma'in, Saba, and Himyar (**Figure 1**). The historical sources discuss these kingdoms in an inexplicit manner, so it would be instructive to understand these political entities and their role in the ancient spice trade.

Although archaeologists and historians have not been able to construct a complete history of the primary South Arabian kingdoms, there is one fact that has clearly emerged about South Arabian history: the kingdoms did not follow one another in a form of serial progression. Rather, they co-existed for centuries, each enjoying its own period of prosperity and hegemony. Scholars are still divided over

Figure 1: Ancient South Arabia



Source: Groom, *Frankincense and Myrrh*, 56.

the chronology of these kingdoms. The "long chronology," developed by Eduard Glaser in the nineteenth century, asserts that the South Arabian kingdoms were formed as early as 1000 B. C.<sup>12</sup> The "short chronology," championed by Pirenne, counters with the argument that these kingdoms did not develop until the sixth century B. C.<sup>13</sup> On the one hand, the Queen of Sheba's visit to Solomon (ca. 950 B. C.), lends credence to the long chronology.<sup>14</sup> On the other hand, Nigel Groom and other scholars have argued that Sheba may not have even been from Saba.<sup>15</sup> If Groom and the

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<sup>12</sup>Pirenne claims that there is also an "intermediary chronology," developed by Albright. In reality, this chronology is another name for the long chronology; the former is a more refined version resulting from archaeological investigation. Both the long and the intermediary chronologies claim that the Sabaeans developed around the turn of the first millennium B. C. Jacqueline Pirenne, "The Chronology of Ancient South Arabia--Diversity of Opinion," in *Yemen: 3000 Years*, 118.

<sup>13</sup>Pirenne's argument is based on the fact that the South Arabian script is alphabetical. The alphabet originated in Phoenicia around the tenth century B. C., and it subsequently led to the development of the Aramaic, Hebrew, and Greek alphabets in the eighth century B. C. Pirenne considers the South Arabian alphabet to be a later offshoot of the Greek alphabet, sometime after the seventh to fifth centuries B. C., when the latter adopted a geometrical style and moved away from the older, Phoenician influences. *Ibid.*, 116-118.

<sup>14</sup>Sheba is Hebrew for "Saba." The Queen of Sheba allegedly ruled the Kingdom of Saba in South Arabia. 1 Kings 10.2.

<sup>15</sup>Sheba may have hailed from Ethiopia, northern Arabia, or may be an entirely fictitious character. Scholars have found no supporting evidence for her existence in South Arabian inscriptions or in archeological investigations.

others are correct, then Sheba's existence does not confirm Saba's development in the eleventh century B. C. Nevertheless, evidence remains stronger for the long chronology. German archaeologist Jürgen Schmidt's dating of the remains of the irrigation system at Marib, the capital of Saba, to the second millennium B. C. lends credence to the long chronology.<sup>16</sup> Additionally, Albert Jamme lists two "foreign synchronisms," or dates to which Sabaeen rulers may be chronologically pegged.<sup>17</sup> One of these foreign synchronisms is the *Periplus*, which Jamme dates to ca. A. D. 70. Pirenne, on the other hand, by dating the *Periplus* to the third century A. C., effectively moves South Arabian history up by two centuries. Most scholars think this is an inaccurate date. Thus, the first-century dating of the *Periplus* also supports the long chronology. Although the exact chronology of ancient South Arabia has not been definitively established, this paper will use the long chronology for the sake of consistency. Let us now turn to the historical background of South Arabia's six, major,

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Groom, *Frankincense and Myrrh*, 46-54; and Werner Daum, "From the Queen of Saba to a Modern State: 3,000 Years of Art and Civilization in Arabia Felix," in *Yemen: 3000 Years*, 9.

<sup>16</sup>Jürgen Schmidt, "The Sabaeen Irrigation Economy of Marib," in *Yemen: 3000 Years*, 55-62.

<sup>17</sup>The other synchronism is Aelius Gallus' 25-24 B. C. expedition to Arabia Felix. Jamme, *Sabaeen Inscriptions*, 390-391.

political entities.

**Hadhramawt.** Unlike the other kingdoms of South Arabia, which relied primarily upon the revenues derived from the incense routes, Hadhramawt had its own natural bounty in the form of the myrrh shrub and the frankincense tree.<sup>18</sup> Although myrrh did grow in other regions of South Arabia, frankincense was found only in the eastern regions of Hadhramawt, which probably included present-day Dhofar (in Oman), an excellent region for the cultivation of frankincense.<sup>19</sup>

Prior to the fourth century B. C., Hadhramawt was a vassal state of Saba. Then, gaining its independence, Hadhramawt rose to a preeminent position in South Arabia, a position fueled by Hadhramawt's wealthy bounty of frankincense.<sup>20</sup> Hadhramawt's capital, Shabwa, was located in a barren region, situated at the western mouth of Wadi Hadhramawt.<sup>21</sup> Shabwa's geographical position was crucial, for the city controlled not only the traffic from Wadi

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<sup>18</sup>Groom, *Frankincense and Myrrh*, 10.

<sup>19</sup>The western extent of the plant's growth in ancient times remains a topic of debate among scholars. *Ibid.*, 96-120.

<sup>20</sup>Walter W. Müller, "Outline of the History of Ancient South Arabia," in *Yemen: 3000 Years*, 50.

<sup>21</sup>"Wadi" is the Arabic equivalent of a valley.

Hadhramawt itself, but, according to the *Periplus* (27), it also controlled the caravan trade leading from Hadhramawt's busy port of Qana on the Arabian Sea. Pliny indicates (*HN* 6.32.154-156) that Shabwa was fortified, prosperous, and large; furthermore, he claims that the town contained "sixty temples."<sup>22</sup> Hadhramawt enjoyed a long period of hegemony, which ended only in the late third century A. C., with the Himyari conquest of that kingdom.<sup>23</sup>

**Qataban.** Qataban, situated west of Hadhramawt, was located in Wadi Beihan and Wadi Harib; its capital was Timna.<sup>24</sup> The kingdom was noted for its advanced "sayl" irrigation, a means of concentrating rainwater run-off in the largest wadis, resulting in significant deposits of fertile silt. Archaeological investigations of the area reveal that the silt built up to a height of fifteen to eighteen meters over the course of one thousand years. Such

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<sup>22</sup>Interestingly, archaeological excavations of Shabwa have revealed no indications that the town was an important frankincense entrepôt. Neither inscriptions depicting the trade nor incense stores have been found. Jean-François Breton, "Ancient Shabwa, the Capital of Hadhramawt," in *Yemen: 3000 Years*, 114.

<sup>23</sup>Müller, "Outline," in *Yemen: 3000 Years*, 51-52.

<sup>24</sup>Strabo's claim that "[Qataban's] . . . territory extends down to the straits and the passage across the Arabian Gulf" and borders on the Sabaeans, places the kingdom in the aforementioned geographical locale. Strab. 16.4.2.



an efficient system of irrigation is all the more notable because Qataban was located on the periphery of the "Rub al-Khali" or "Empty Quarter"--a vast, barren reach of the Arabian desert.<sup>25</sup>

Scholars have formed only a hazy picture, at best, of Qataban's history. The kingdom, which lay along the incense route, derived its revenues from the through-trade. Originally under Sabaean rule, Qataban freed itself from Saba around 400 B. C.<sup>26</sup> It appears that the zenith of Qataban's rule came at the beginning of the second century B. C., when the kingdom, allied with neighboring Ausan, conquered much of South Arabia and controlled the incense trade. Yet its fortunes waned quickly; archaeological evidence indicates that the Sabaean reabsorbed most of Qataban by the end of the second century.<sup>27</sup> Hadhramawt destroyed Timna around A. D. 10, and absorbed still more of the tattered remnants of the Qatabanian kingdom.<sup>28</sup> Hadhramawt finally annexed all of Qataban in the second

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<sup>25</sup>Robert Stookey, *South Yemen: A Marxist Republic in Arabia* (Boulder: Westview Press, 1982), 15-17.

<sup>26</sup>Müller, "Outline," in *Yemen: 3000 Years*, 50.

<sup>27</sup>Ibid.

<sup>28</sup>Ray L. Cleveland, *An Ancient South Arabian Necropolis: Objects from the Second Campaign (1951) in the Timna' Cemetery*, Publication of the American Foundation for the Study of Man, ed. W. F. Albright, vol. 4 (Baltimore: The Johns Hopkins Press, 1965), 1.

century A. C.<sup>29</sup>

**Ausan.** Located south and west of Qataban, this kingdom was once a great maritime trader. Its capital, Miswar, was complemented by Aden, a profitable and active port. The *Periplus'* designation (15), some five centuries later, of the East African coast as the "Azanic" or "Ausanic" Coast indicates Ausan's previous political influence and commercial ties with East Africa. The Sabaeen Mukarrib Karib il-Watar conquered Ausan in the fifth century B. C., and allocated the kingdom to Qataban, which was also under Sabaeen hegemony.<sup>30</sup> According to Pirenne, another kingdom by the same name sprung up around the first century A. C. The Himyarites incorporated this reincarnation of Ausan into their empire in the second century A. C.<sup>31</sup>

**Ma'in.** Ma'in was located in northwest Yemen in what is called the Jawf District; its capital was Qarnaw, known also as "Ma'in." Originally a dependent territory of Saba, the Minaeans attained independence and established their own

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<sup>29</sup>Müller, "Outline," in *Yemen: 3000 Years*, 51.

<sup>30</sup>Doe, *Southern Arabia*, 73-74.

<sup>31</sup>David Warburton, "In the Wadi Markha with Jean-François Breton," *Yemen Update* 30/31 (Winter/Summer 1992): 26, 35.

dynasty around 400 B. C.<sup>32</sup> Ma'in was not a pure monarchy; rather, it seems to have been governed by a Grand Council.<sup>33</sup> Pliny records (*HN* 6.32.157) that the Minaeans claimed descent from the legendary King Minos of Crete. It is likely that the Minaeans never made this claim, but rather the Greeks or Romans, searching for some connection between the two, similarly-named kingdoms, posited this bond. Furthermore, there is no substantive data to confirm any connection whatsoever between the Minaeans and the Minoans. It is apparent from inscriptions that two early kings of Hadhramawt also ruled Ma'in, which not only demonstrates an obvious alliance between the two states, but also proves that the two were united against Saba.<sup>34</sup>

Ma'in reached the height of its power early in the third century B. C., controlling not only the northern segment of the incense route, but also portions of the southern coast.<sup>35</sup> Pliny notes (*HN* 12.32.63) Ma'in's preoccupation with controlling the incense routes that passed through its district and beyond. To accomplish this,

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<sup>32</sup>W. F. Albright, "The Chronology of the Minaean Kings of Arabia," *Bulletin of the American Schools of Oriental Research* 129 (February 1953): 22.

<sup>33</sup>*Western Arabia*, 219.

<sup>34</sup>Doe, *Southern Arabia*, 69.

<sup>35</sup>*Ibid.*

the Minaeans planted a number of colonies along the incense route.<sup>36</sup> According to Agatharchides (5.89b), Minaean merchants maintained a settlement as far north as Petra, in modern Jordan.

The Sabaeans conquered Ma'in in 115 B. C. This effort may have temporarily exhausted the Sabaeans, financially and militarily, thus paving the way for the rise of the Himyarites. Interestingly, Pliny, (HN 6.32.159-162) in narrating Aelius Gallus' expedition to Arabia Felix (25-24 B. C.), mentions the Minaeans. In all probability, however, this information on the Minaeans was taken from earlier, out-of-date sources.

**Saba.** Saba was the most successful and renowned of all of the South Arabian kingdoms. Its rule spanned from the latter part of the second millennium B. C. until the third century A. C., although the names of Sabaean leaders are known only as far back as the eighth century B. C.<sup>37</sup> Saba was centered around its capital, Marib, through which flowed the trade routes from Aden and Qana. The wealth that Saba accumulated from this strategic positioning was

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<sup>36</sup>Doe, *Southern Arabia*, 219; and Groom, *Frankincense and Myrrh*, 187.

<sup>37</sup>The reign of Saba's most famous ruler, the Queen of Sheba, is not supported by any South Arabian inscriptions. Jamme, *Sabaean Inscriptions*, 389.

legendary. Agatharchides described (5.104) Saba's wealth in detail:

No nation seems to be more prosperous than they are the ones who distribute everything from Asia and Europe that is considered valuable. They have made the Ptolemaic portion of Syria rich in gold. They have also created a profitable commerce for the industry of the Phoenicians and a myriad of other things. Their riches can be seen not only in wondrous embossed objects and manifold kinds of drinking vessels but also in the size of their couches and tripods and in the abundance they possess of other items found in our own homes since many of them, as it seems, have a regal style of furnishing. The author also says they have made for their buildings gilded and silver columns and that, in addition, their ceilings and doors are adorned with numerous ornaments inlaid with gems and that likewise also the intercolumniations have a fine appearance. In general, there is a great difference between their wealth and that of others. These are the facts concerning their way of life that have been reported until our time. If, however, they did not occupy a home that is situated far from those people who direct their armies everywhere, those who are masters of the fruits of their own wars would become the stewards of other people's property since slackness is unable to preserve freedom for a long time.<sup>38</sup>

One must, however, view Agatharchides' writings with caution. According to French scholar Maxime Rodinson,

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<sup>38</sup>In this passage, Agatharchides was also reacting to Rome's recent sack of Carthage (146 B. C.). According to R. L. Fox, Agatharchides' remark ("If, however, they did not occupy a home that is situated far from those people who direct their armies everywhere") indicates that the author was aware of the growing Roman menace, the "cloud in the West." Robin Lane Fox, "Hellenistic Culture and Literature," in *The Oxford History of Greece and the Hellenistic World*, ed. John Boardman, et. al (Oxford: Oxford University Press, 1991), 300.

"without a doubt, Agatharchides is the author who contributed most to creating an image [of South Arabia] that would last through the centuries."<sup>39</sup> Agatharchides was a "synthesizer and popularizer of information collected by others," and he assembled "marvelous stories of sailors and of hunters and some mythological fables" with apparently little regard for their veracity.<sup>40</sup> Agatharchides' well-known and rich description of Arabia Felix may have been ultimately responsible for the deployment of a Roman force to South Arabia one hundred years later, which, although it was a military disaster, dispelled the notion that South Arabia was an El Dorado. Although there certainly was an element of hyperbole in Agatharchides' account, P. M. Fraser claims that the Greek writer studied his sources carefully, was accurate in his geographical information, and offered, on the whole, "a good deal of express information about the Ptolemaic period, which is most valuable."<sup>41</sup>

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<sup>39</sup>Maxime Rodinson, "L'Arabie du Sud chez les Auteurs Classiques," in Joseph Chelhod, *L'Arabie du Sud: Histoire et Civilisation*, vol. 1, *Le Peuple Yéménite et ses Racines* (Paris: G. P. Maisonneuve et Larousse, 1984), 59.

<sup>40</sup>Burstein, "Introduction," in Agatharchides, *Erythraean Sea*, 17-18; and André Berthelot, *L'Afrique Saharienne et Soudanaise* (Paris: Les Arts et Le Livre, 1927), 215. Agatharchides probably exaggerated his account of Saba's wealth in order to please the reader, see Thomson, *Ancient Geography*, 175.

<sup>41</sup>Fraser, *Ptolemaic Alexandria*, 174.

The early Sabaeen rulers were called "Mukarribs," denoting their status as head of the Sabaeen tribal federation.<sup>42</sup> Some inscriptions, however, refer to later Sabaeen rulers as both Mukarrib and "Malik." The famous Sabaeen ruler Karib il-Watar (450-410 B. C.) was one such leader.<sup>43</sup> Malik, in this case, referred to the ruler's position as leader of the tribal federation's principal clan.<sup>44</sup>

Sabaeen power waxed and waned throughout the kingdom's long existence. During Karib il-Watar's rule, much of South Arabia was subject to the Sabaeans. Later, Anaxicrates (Theophr. *Caus. Pl.* 9.4.4-5) describes South Arabia in 324 B. C. as "belong[ing] to . . . the Sabaeans," which clearly indicates the continued hegemony of the kingdom. Then, Eratosthenes, writing in 225 B. C. (cf. Strab. 16.4.2), describes four kingdoms, the Minaeans, the Sabaeans, the Qatabanis, and the "Chatramotitae" (Hadhramawti), as being of equal footing. This balance of power was rather

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<sup>42</sup>A. F. L. Beeston, "Kingship in Ancient South Arabia," *Journal of the Economic and Social History of the Orient* 15 (1972): 264-265.

<sup>43</sup>W. F. Albright, "The Chronology of Ancient South Arabia in the Light of the First Campaign of Excavation in Qataban," *Bulletin of the American Schools of Oriental Research* 119 (October, 1950): 10.

<sup>44</sup>Beeston rejects Doe's interpretation that the term Mukarrib referred to a king's temporal duties. Doe, *Southern Arabia*, 26; and Beeston, "Kingship," 264-265.

ephemeral, and Agatharchides, writing around 145 B. C., claims (5.99) that the Sabaeans were once again the "greatest of the peoples in Arabia and the possessors of every sort of good fortune." Then, for several centuries (ca. first century B. C.-third century A. C.), Saba was engaged in a power struggle with the Himyarites, a struggle that the Himyarites finally won in their successful bid to control all of South Arabia.<sup>45</sup>

**Himyar.** The Himyarites began their ascent to power around the first century B. C. By this time maritime trade was rising in importance, and the Himyarites, who already controlled large sections of the South Arabian coast, as well as the Ausanic coast of Africa (*Periplus* 16), benefitted greatly from the expanding Red Sea trade. The Himyarite capital, Zafar, was soon a major rival of Marib, and both the Himyari and the Sabaeon dynasties assumed the title "King of Saba and Dhu Raydan" to legitimize their respective rules in Arabia Felix.<sup>46</sup> This title, found throughout the South Arabian inscriptions and in the *Periplus*, has created much discussion.<sup>47</sup> The earlier

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<sup>45</sup>Müller, "Outline," in *Yemen: 3000 Years*, 51.

<sup>46</sup>Jamme, *Sabaeon Inscriptions*, 376-387.

<sup>47</sup>The *Periplus* (24) calls Himyar's ruler, Charibaêl, the "legitimate king" of Saba and the Homerites.



maintained control of Arabia Felix until the sixth century A. C.<sup>52</sup> The last Himyarite prince, a Jewish leader named Dhu Nuwas, was killed in 525 A. D., when he proudly spurred his horse into the sea, defying a host of invading Aksumites.<sup>53</sup> Aksumite rule in South Arabia was once again short-lived, and later in the sixth century, the Persians also managed to establish a brief dynasty in Arabia.

The chaos in Arabia was reflected in the decline of its maritime fortunes, for none of the important sources of the period, including Procopius (*Aed.*) and Cosmas (*Christian Topography*), mention Arabian trade or seafaring. Finally, the disorganized rule of Arabia Felix came under the dominion of the new Islamic empire during the seventh century A. C. By this time, Arabia Felix was no longer a great commercial power; rather, it had become a stagnant backwater.

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<sup>52</sup>Cosmas, writing in the early sixth century A.D., mentions the Homerites as the rulers of Arabia Felix. Cosmas Indicopleustes, *The Christian Topography*, trans. J. W. McCrindle (London: Hakluyt Society, n. d.; reprint, New York: Burt Franklin, n. d.), 2.132.

<sup>53</sup>The Aksumites were avenging Dhu Nuwas' massacre of the Christians of Najran. It is claimed that at this Arabian town, 20,000 martyrs were thrown into pits filled with flaming oil. *Western Arabia*, 222.

CHAPTER II  
THE COMMODITIES AND ROUTES OF TRADE

In many respects, ancient Arabia was an unlikely place for a thriving trade to develop. Flanked by waterless deserts, devoid of navigable rivers, and generally lacking in good harbors,<sup>1</sup> commerce nonetheless flourished there. How could it? First, South Arabia is geographically situated at the southern terminus of the Red Sea, a natural channel for commercial traffic between Europe and the Orient.<sup>2</sup> In addition, Arabia's overland isolation required its merchants to seek maritime contacts, for in the ancient and medieval world, communication by sea was both quicker and simpler than by land. Arabia Felix was thus in a unique position to supply itself and the West with goods from three geographical regions: Hadhramawt, Africa, and the Orient (**Figure 2**).<sup>3</sup> The position of Arabia Felix as a commercial

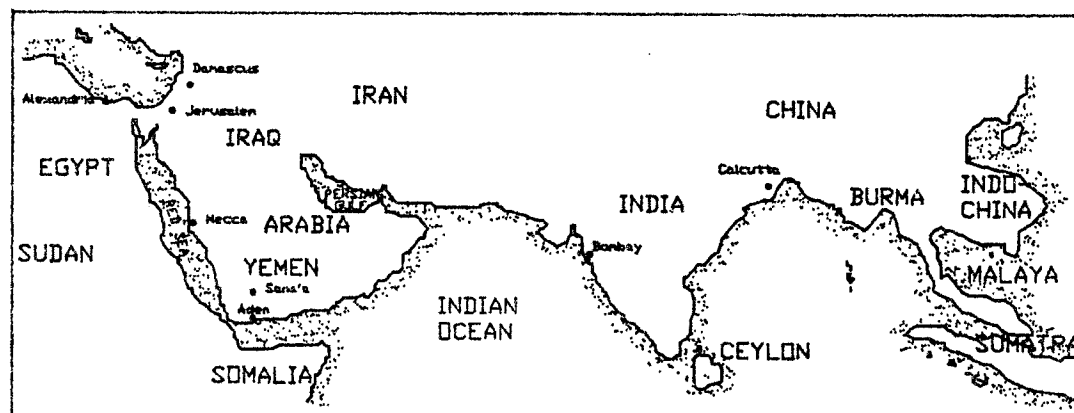
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<sup>1</sup>Aden is the one notable exception.

<sup>2</sup>George Fadlo Hourani, *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times* (Princeton: Princeton University Press, 1951), 4-5. Herodotus, commenting on the relative narrowness of the Red Sea, notes (2.11) that "for length it is a forty days' voyage for a ship rowed by oars from its inner end out to the wide sea; and for breadth it is half a day's voyage at the widest."

<sup>3</sup>The term "Orient," as used in this paper, is defined as including India and the lands that stretched eastward to the Pacific, including the East Indies, Southeast Asia, Japan, and China.

Figure 2: The Indian Ocean Littoral



**Source:** S. D. Goiten, *Letters of Medieval Jewish Traders* (Princeton: Princeton University Press, 1973), 176.

crossroads was fueled by a growing demand on the part of the Mediterranean states, and ultimately the Roman Empire, for goods from South Arabia, India, and other Eastern lands. This section will examine the commodities that South Arabia traded and that the West desired, and the routes taken by Arabia's mariners and camel drivers.

### **Frankincense and Myrrh**

Two of the most important "spices" that the Arabians provided to the Mediterranean came from Arabia itself: frankincense and myrrh. Both Eratosthenes and Artemidorus noted (Strab. 16.4.4) the abundance of these products in Arabia Felix. Myrrh was found throughout the region, but frankincense came primarily from the kingdom of Hadhramawt.<sup>4</sup> According to the *Periplus* (24, 27, 30), Himyar's Muza was the primary export center for South Arabian myrrh; Hadhramawt's Qana was the only South Arabian port that exported frankincense.

Myrrh, an important base for cosmetics and embalming compounds, is derived from a species of shrub known as *Burseraceae*, genus *Boswellia*.<sup>5</sup> Theophrastus provides us with the earliest accurate description of the myrrh plant.

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<sup>4</sup>Groom, *Frankincense and Myrrh*, 96-120.

<sup>5</sup>Ibid., 11.

This description was obtained from Anaxicrates, who visited South Arabia during the course of an exploratory voyage for Alexander the Great. The following description (Theophr. *Caus. Pl.* 9.4.2-3) may well represent the first recorded, eye-witness account of Arabia by the Greeks; earlier information was most probably based on indirect hearsay and legendary accounts of the wealth and products of Arabia:

The trees of frankincense and myrrh grow partly in the mountains, partly on private estates at the foot of the mountains; wherefore some are under cultivation, others not; the mountains, they say, are lofty, forest-covered and subject to snow, and rivers from them flow down into the plain. . . . The myrrh tree is said to be smaller in stature [than the frankincense tree] and more bushy; it is said to have a tough stem, which is contorted near the ground, and is stouter than a man's legs; and to have a smooth bark like that of the andrachne. Others who say that they have seen it agree pretty closely about the size; neither of these trees, they say, is large, but that which bears myrrh is smaller and of lower growth; however they say that while the frankincense tree has a leaf like that of bay and smooth bark, that which bears myrrh is spinous and not smooth, and has a leaf like that of the elm, except that it is curly and spinous at the tips like that of the kermes oak.<sup>6</sup>

Theophrastus (*Concerning Odours* 34) also explains why the ancients valued this commodity so highly. Myrrh, unlike

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<sup>6</sup>Accounts of Arabia written earlier than Anaxicrates' (such as Herodotus') were taken from very indirect sources, word of Arabia having been passed down from person to person via the long, middleman-laden trade routes of the ancient world. H. G. Rawlinson, *Intercourse between India and the Western World*, 2d ed. (Cambridge: Cambridge University Press, 1926), 2.

most compounds, could last ten years; in fact, it improved with time. Stacte, oil derived from the myrrh plant, had the longest-lasting scent of any known perfume. The Old Testament, the New Testament, and the works of Herodotus and Pliny all contain numerous references to myrrh--further indicating its importance in the ancient world.

Frankincense also belongs to the species *Burseraceae*, although it is of the genus *Commiphora*.<sup>7</sup> Again, Theophrastus (*Caus. Pl.* 9.4.2-3) has provided us with the earliest, most accurate description of the frankincense tree:

The frankincense tree, it is said, is not tall, about five cubits high, and it is much branched; it has a leaf like that of the pear, but much smaller and very grassy in colour, like rue; the bark is altogether smooth like that of a bay.<sup>8</sup>

Herodotus (3.107) gave a fanciful description of the method used in obtaining frankincense:

The spice-bearing trees are guarded by small winged snakes of varied colour, many round each tree. . . . Nothing save the smoke of the storax [a gum that produces an acrid smoke when burnt] will drive them away from the trees.

Theophrastus (*Caus. Pl.* 9.4.4-6), by comparison, has yet again furnished more accurate insights into the harvesting of frankincense and myrrh, as well as the commodities'

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<sup>7</sup>Groom, *Frankincense and Myrrh*, 100.

<sup>8</sup>The cubit, an ancient length of measure, is approximately equal to the length of a forearm.

significance in South Arabian custom:

They [members of Anaxicrates' expedition] reported that with both trees [frankincense and myrrh] incisions had been made both in the stems and in the branches, but that, while the stems looked as if they had been cut with an axe, in the branches the incisions were slighter; also that in some cases the gum was dripping, but that in others it remained sticking to the tree; and that in some places mats woven of palm leaves were put underneath, while in some the ground underneath was merely made level and clean; and that the frankincense on the mats was clear and transparent, that collected on the ground was less so; and that which remained sticking to the trees they scrapped off with iron tools, wherefore sometimes pieces of bark remained in it. . . . They also reported another thing which they said they had been told, that the myrrh and frankincense are collected from all parts into the temple of the sun; and that this temple is the most sacred thing which the Sabaeans of that region possess, and it is guarded by certain Arabians in arms. And that when they have brought it, each man piles up his own contributions of frankincense and the myrrh in like manner, and leaves it with those on guard; and on the pile he puts a tablet on which is stated the number of measures which it contains, and the price for which each measure should be sold; and that, when the merchants come, they look at the tablets, and whichever pile pleases them, they measure and put down the price on the spot whence they have taken the wares, and then the priest comes and, having taken the third part of the price for the god, leaves the rest of it where it was, and this remains sage for the owners until they come and claim it.

Pliny felt (*HN* 12.30.54) that the use of such religious "scruples" to harvest the frankincense was a convenient method to charge even more for the commodity.

Both frankincense and myrrh were essential pillars of

the South Arabian economy. Yet there is some debate concerning just how important these products were, especially in relation to Arabia Felix's role as middleman in the East-West spice trade. Concerning Arabia's indigenous products, Pliny (*HN* 12.32.65) complained that, due to the middleman-laden caravan route, "expenses mount up to 688 denarii per camel before the Mediterranean coast is reached."<sup>9</sup> Pliny also noted (*HN* 12.32.65, 35.70) that the price of the best frankincense was 6 denarii per pound, and that the best myrrh cost 16 denarii per pound.<sup>10</sup> These figures, unfortunately, reflect only the final price of these products. The portion of their value that accrued to the South Arabians is not known. South Arabian historian Nigel Groom feels that, while frankincense and myrrh were vital components of the South Arabian economy, their cumulative value has been overestimated. Again, he stresses

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<sup>9</sup>In the Roman Empire, one denarius equalled four sesterces. Chester Starr estimates that 480 sesterces was the minimum annual salary in the Roman Empire in the second century A. C. If one chooses \$10,000 as a minimum salary in the United States for 1992, then 688 denarii (2752 sesterces) equals \$57,333. This is meant as an illustration only and is probably a significant understatement, as a minimum salary in the United States probably provides far more than a subsistence income did in the Roman Empire. Few Americans, no matter how poor, are without a radio, cable television, video cassette recorder, or automobile. Chester G. Starr, *The Roman Empire, 27 B. C. - A. D. 476: A Study in Survival* (New York: Oxford University Press, 1982), 76, 86.

<sup>10</sup>Using the previous note's figures, one pound of frankincense cost \$500 and one pound of myrrh cost \$1333.



that the final Roman price reflected money paid to numerous middlemen along the spice route--not just to the South Arabians.<sup>11</sup>

Regarding Arabia Felix's role both as spice exporter and commercial middleman, Pliny (*HN* 12.41.82-83) lamented that Rome gave 100 million sesterces annually to India, China, and Arabia.<sup>12</sup> On certain points, however, we must treat Pliny's statements with caution. Pliny frequently engaged in "tirades against luxury . . . and whimsical moralizing."<sup>13</sup> In the view of Wallace-Hadrill, Pliny's moral rhetoric was an essential component of his *Natural History*, which was as much designed to disseminate facts as to teach values.<sup>14</sup> Thus, while the sum of "100 million sesterces" may well be an exaggeration, this figure nevertheless indicates that Romans spent unusually large sums of money on luxury items from the East.<sup>15</sup>

Rome supposedly spent half of this sum, 50 million

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<sup>11</sup>Groom, *Frankincense and Myrrh*, 10.

<sup>12</sup>Pliny (*HN* 12.41.82-83) calls this figure "the lowest reckoning." Again, based on previous estimations, 100 million sesterces equals \$2,083,330,000.

<sup>13</sup>Thomson, *Ancient Geography*, 227.

<sup>14</sup>Andrew Wallace-Hadrill, "Pliny the Elder and Man's Unnatural History," *Greece and Rome* 37 (April 1990): 80-96.

<sup>15</sup>E. H. Warmington, *The Commerce between the Roman Empire and India*, rev. ed. (London: Curzon Press, 1974), 272-318.

sesterces according to Pliny (*HN* 6.16.101-102), on products obtained from India alone. Although it is not known how Arabia and China shared the other half, Arabia probably received a much larger allotment than China (because of its distance); again, however, Arabia's relative portion is not known.<sup>16</sup> Additionally, how much of this figure the Romans spent on indigenous Arabian products versus how much they spent purely on middlemen's fees in South Arabia cannot be estimated.<sup>17</sup>

Groom feels that South Arabia's high cultural level was due more in fact to organized irrigation schemes, such as the Marib dam, that allowed South Arabian agriculture to

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<sup>16</sup>The *Periplus* dedicates one-half of its descriptions to India, one-quarter to Arabia and Africa, respectively, and none to China. This space allocation indicates the relative importance of the latter regions; perhaps Rome spent 25 million sesterces on Arabian products. Another interesting observation is that the *Periplus* dedicates no space to China. Although Rome obtained products from this region, it was probably done indirectly, through barter. The *Periplus*, at least, indicates that there was not a direct commerce between Rome and China. Groom, relying upon this assertion, claims that this meant that 50 million sesterces were spent on Arabian goods and middleman's fees. This figure is open to debate, for it signifies that Rome's trade with India was as important as the former's trade with Arabia--this is not what the *Periplus* indicates. Groom, *Frankincense and Myrrh*, 156-157.

<sup>17</sup>Doe notes the surprising lack of Greek or Roman coins in South Arabia. He claims plausibly that because such money was not accepted as currency in Arabia Felix, it was melted down for bullion. Doe, *Southern Arabia*, 120-121. Also, most goods were probably traded by barter as Roman currency was not recognized in South Arabia.

flourish.<sup>18</sup> He claims that of the five thousand South Arabian inscriptions found to date, none makes any significant mention of the incense trade.<sup>19</sup> If this were the case, where then did South Arabia obtain the revenues necessary to fund the irrigation projects that promoted agriculture? Furthermore, it is well known that Mediterranean contacts heavily influenced South Arabian art, language, and culture.<sup>20</sup> The American Foundation's archaeological expeditions to Arabia Felix have unearthed relatively large quantities of fabrics from Italy and other distant regions; the Foundation has also discovered Hellenistic bronze statues and Indian statuettes.<sup>21</sup> These numerous finds are the result of direct and frequent contacts between East and West, contacts that would surely occur with a regular and thriving trade.<sup>22</sup>

South Arabia's economic history remains enigmatic. While historians may never be able to assign concrete

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<sup>18</sup>The Marib dam was built around 500 B. C. and was supposedly capable of irrigating enough land to support 300,000 people, cf. Robin Bidwell, *The Two Yemens* (Singapore: Westview Press, 1983), 3.

<sup>19</sup>Groom, *Frankincense and Myrrh*, 10.

<sup>20</sup>Doe, *Southern Arabia*, 22, 110-111, Plates 39, 40-44.

<sup>21</sup>Gus W. Van Beek, "Frankincense and Myrrh in Ancient South Arabia," *Journal of the American Oriental Society* 78 (1958): 149.

<sup>22</sup>*Ibid.*

figures to South Arabian economics, at the very least, this section has identified three important pillars of Arabia Felix's economy--frankincense and myrrh, middlemen's profits, and agriculture. These factors can be discussed as part of broad trends, if not quantitatively.<sup>23</sup>

### **East African and Indian Trade**

Africa was also a source of exotic products; the *Periplus* contains numerous references to ivory (3-4, 6-7, 10, 17), rhinoceros horns (6, 17), and tortoise shells (3-4, 6, 10, 13, 17)--all products indigenous to Africa. South Arabian mariners most likely obtained these products by coasting down the African shore during the winter, driven by the mild winds of the northeast monsoon, and bartering from one port town to another.

Perhaps, though, the most exotic goods came from India and the Far East. The Greeks and Romans knew about the wonders of India and the Orient well before they began regular shipping to these regions. They had a relatively accurate account, preserved in Strabo (15.1.1-68) and Arrian (*Anab.* 4.28.1-4, 4, 28.7-30.4, 5.8.4-19, 5.25-29.3), of Alexander the Great's fourth-century B. C. expedition to

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<sup>23</sup>This thesis will not treat the topic of South Arabian agriculture in depth, for farming, except the cultivation of frankincense and myrrh, was only peripherally connected with Arabian seafaring and commerce.

India. Alexander's exploration and subsequent conquest opened the door to Western knowledge of India and its products.<sup>24</sup> Alexander also had an interest in Arabia Felix; according to Strabo (16.4.27), the conqueror intended to "make it his royal abode" once he had completed his exploits in India and the East. These plans were, however, destroyed by Alexander's youthful demise.

The Greek world also had detailed information about India from the Syrian envoy Megasthenes. Megasthenes' description of India, preserved in fragments by Strabo (15.1.35-59) and Arrian (*Ind.* 3-15, 17), was, for centuries, the "foundation and principal authority for all that the Greeks knew in regard to that country."<sup>25</sup> Still, there were deficiencies and inaccuracies in Megasthenes' work.<sup>26</sup> For example, Megasthenes described (Strab. 15.1.39-41) in relatively factual detail India's caste system, yet in the same sections, he speaks fantastically (Strab. 15.1.38) of a "River Silas on which nothing floats" and "atmospheres so thin that no winged creature can fly in them." The result of Alexander's and Megasthenes' information was, initially,

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<sup>24</sup>Miller, *Spice Trade*, 1; and W. W. Tarn, *Hellenistic Civilization*, 3rd ed. (London: Edward Arnold and Company, 1952), 244.

<sup>25</sup>Bunbury, *Ancient Geography*, 555-556.

<sup>26</sup>Fox, "Hellenistic Culture," in *Oxford History*, 399.

a trickle of luxury goods that made its way from India to the Hellenistic world, carried both up the Persian Gulf to the Seleucids, and up the Red Sea to Ptolemaic Alexandria.<sup>27</sup> Significantly, during this period, the Greeks began to import pepper from India; this commodity would continue to play a major role in the spice trade until well into the early modern era.<sup>28</sup>

Nevertheless, these early observers provided as much inaccurate information as they did accurate information. The Greek geographers and historians--Herodotus, Theophrastus, Agatharchides, Eratosthenes, and Artemidorus--all assumed that Indian and Oriental goods, such as cinnamon and cassia,<sup>29</sup> came from South Arabia; thus the name "Arabia Felix." Later, Roman writers, such as Pliny (*HN* 12.42.86), mistakenly corrected them, claiming that cinnamon and cassia actually came from Ethiopia. The anonymous author of the *Periplus* (8, 10, 13) concurred with this view. Strabo (16.4.25) came closest to the truth, by claiming that cassia

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<sup>27</sup>Tarn, *Hellenistic Civilization*, 243-248.

<sup>28</sup>W. W. Tarn, *The Greeks in Bactria and India* (Cambridge: Cambridge University Press, 1951), 370-371.

<sup>29</sup>To the ancients, cassia was a coarser-grained version of cinnamon. Lionel Casson, "General Commentary," in *Periplus*, 123.

was grown in India.<sup>30</sup> The confusion of the Greeks and Romans concerning the products of the Orient demonstrates that they received these goods indirectly, through the hands of numerous middlemen.<sup>31</sup> Evidently, they had little or no direct contact with the East until the dawn of the Augustan era.

In spite of these misguided Western beliefs, Arabian, Phoenician, and Indian seafarers knew where and how to obtain the products of the Orient.<sup>32</sup> Agatharchides (5.105) notes the diverse groups of seafarers that traded throughout the Indian Ocean:

In these islands [Socotra] one can see riding at anchor merchant vessels from neighboring countries. Most of those encountered there are from the port Alexander built by the Indus River [Patala, near modern Hyderabad in India]. Not a few, however, come from Persia and Carmania and the whole nearby region [South Arabia and East Africa].

Sailing the steady, monsoon winds to and from India, merchants traded for these Eastern goods, bringing them back to ports such as Aden and Muza, which were the bustling

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<sup>30</sup>Cinnamon and cassia are grown primarily in Sri Lanka. J. H. Parry, *The Age of Reconnaissance* (Berkeley: University of California Press, 1963), 41.

<sup>31</sup>Miller, *Spice Trade*, vii.

<sup>32</sup>Arabs, Phoenicians, and Indians carried on the Indian Ocean trade centuries before the Greeks and Romans became involved in it. Casson, "Introduction," in *Periplus*, 11; and Miller, *Spice Trade*, 216.

entrepôts of the day.<sup>33</sup> The pages of the *Periplus* and Pliny (*HN* 12.11-28) are filled with rich descriptions of the bountiful yields from the Orient. In addition to cassia and cinnamon, the Orient produced numerous other spices such as pepper, ginger, and bdellium; precious stones including turquoise and lapis lazuli; cloths and textiles including silk, cotton, and yarn; and food products such as rice, figs, cane sugar, ghee (clarified butter), and grain.

The Romans, like their Hellenistic predecessors, imported Indian pepper, in addition to the many spices listed above. According to Pliny (*HN* 12.14.28-29), pepper was as expensive a commodity as myrrh--15 denarii (\$1250) per pound--and extremely popular among the Romans:

To think that its only pleasing quality is pungency and that we go all the way to India to get this! Who was the first person who was willing to try it on his viands, or in his greed for an appetite was not content merely to be hungry?

### **Sea and Land Routes**

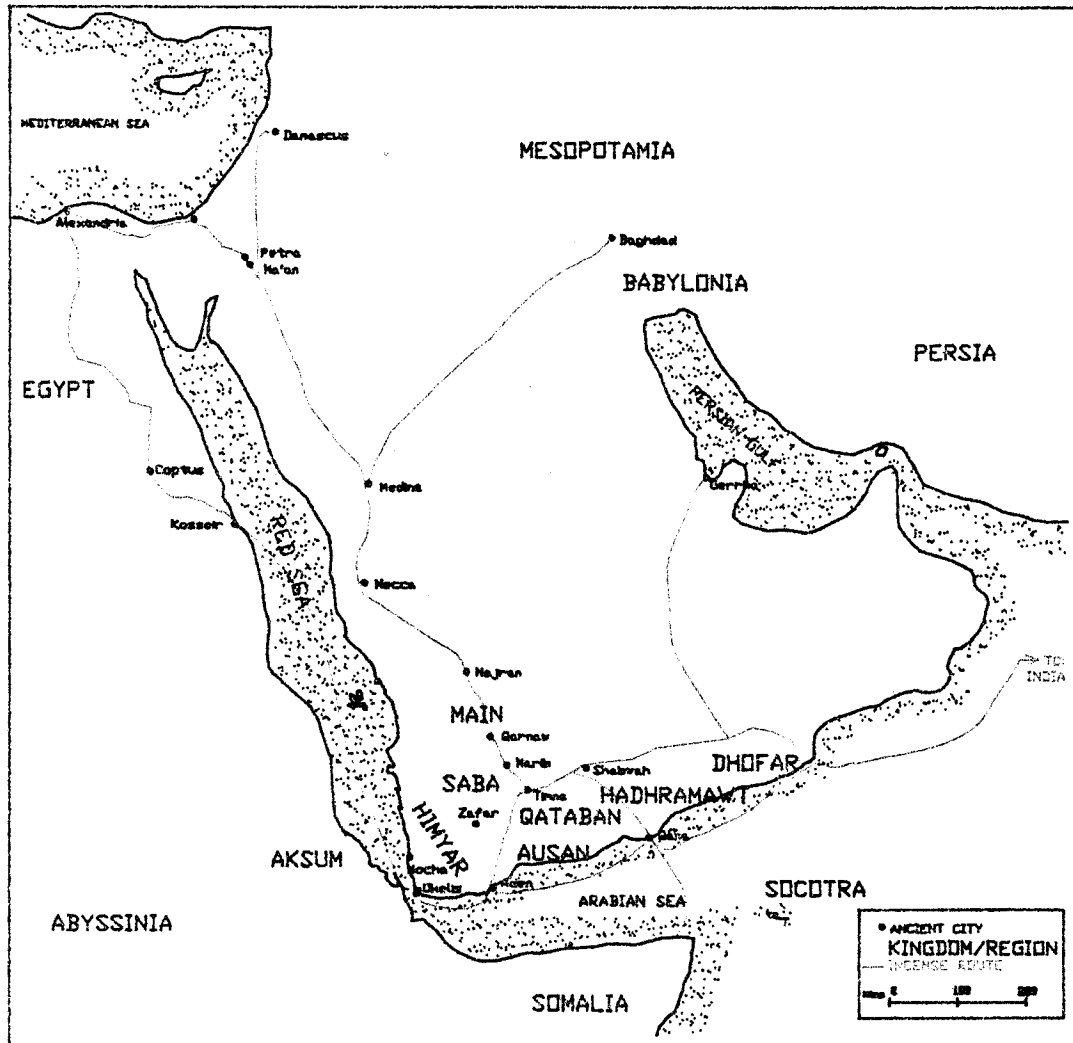
From Arabia Felix, goods bound for the Mediterranean were transported either by camel or by ship (**Figure 3**). Initially, it appears that the overland caravan routes were the preferred method of transportation. Notably, the Queen

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<sup>33</sup>Muza is situated near present-day Mocha, which is located on the Red Sea coast of Arabia Felix. (**See Figure 3**)



Figure 3: Red Sea and Arabian Trade Routes



Source: Richard F. Nyrop, et al., eds., *The Yemens: Country Studies* (Washington, D. C.: GPO, 1986), 6.

of Sheba traveled by camel, not ship, on her visit to King Solomon (1 Kings 10.2). The treacherous shoals, marauding pirates, and contrary winds of the Red Sea made navigation difficult, especially in its northern reaches. and Agatharchides' work (5.90, 5.93-5) is full of allusions to and stories of these dangers. Thus, the maritime route remained unpopular for a long period of time. Even today, contemporary mariners find the Red Sea route one of the more difficult, dangerous, and torturous of sail passages:

Whenever my anxieties and frustrations reached a climax, I would unleash all my pent-up venom onto the Red Sea. My gratification was almost indescribable after I had spit a hysterically vulgar screaming fit at the bastard. It brooded and growled back while I stomped around in the cockpit, ranting and cursing at everything I hated about the trip.<sup>34</sup>

The domestication of the camel in the late second millennium B. C. made possible the land spice routes, stretching from South Arabia to Egypt, Syria, and Mesopotamia.<sup>35</sup> The main route had two primary starting-

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<sup>34</sup>Tania Aebi, the youngest woman to singlehandedly circumnavigate the globe, spent weeks fighting the heat, contrary winds, reefs, and dangerous shipping traffic of the Red Sea. Tania Aebi, *Maiden Voyage* (New York: Ballantine Books, 1989), 239.

<sup>35</sup>This theory of domestication is based upon the frequency of the camel's appearance in cuneiform inscriptions and monumental representations beginning in the eleventh century B. C. W. F. Albright, *From the Stone Age to Christianity*, 2d ed. (Baltimore, The Johns Hopkins Press, 1957), 164-165. Bulliet argues that, although the use of the camel as a

points, Qana or Aden, depending upon the origin of the goods being transported (**Figure 3**).

The *Periplus* (27) notes that Arabian frankincense from Hadhramawt's Dhofar region was generally brought to Qana by boat instead of camel, due to the waterless, arduous terrain between Dhofar and Shabwa.<sup>36</sup> Additionally, according to the *Periplus* (7-12, 32, 36, 39), Qana received some frankincense and myrrh from Africa and India, which were also exporters of these commodities. Aden primarily received goods from Africa, India, and, indirectly, China, for trading (*Periplus* 26).<sup>37</sup>

From Qana, the caravan route meandered northward to Shabwa (incense harvested in Wadi Hadhramawt and Wadi Hajr was transported directly to Shabwa by camel). Entering Shabwa, the frankincense-laden beasts were required to use a certain gate, thus ensuring that the "priests" could collect their tithes (Pliny *HN* 12.32.63).

From Shabwa, the caravan route curved westward towards

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domestic pack-animal may well have not occurred until this era, domestication was a long process and it probably began in the second millennium B. C. Richard W. Bulliet, *The Camel and the Wheel* (Cambridge: Harvard University Press, 1975), 35-67.

<sup>36</sup>Even camels need water, especially when transporting heavy loads. In the summer, they cannot go more than two or three days without drinking. Groom, *Frankincense and Myrrh*, 174.

<sup>37</sup>The *Periplus* notes (26) that Aden hosted the India trade "in earlier days."

Timna. At Timna, the routes originating from Aden and Qana joined. From Timna, the route continued northward through Marib, Ma'in, and Najran (a Minaean frontier town located in northern Arabia Felix). From South Arabia's boundaries, caravans coursed northward through the Arabian desert, roughly paralleling the Red Sea. The main route passed through Mecca and then Medina (also known as Yathrib), where it forked.<sup>38</sup> One branch led roughly eastward to Baghdad, the other continued north. Near the Red Sea's northeastern Gulf of Aqaba, the northerly route split once again. Some goods continued north to Damascus. Others were carried northwest, through Ma'an and Petra, to Gaza, a major Mediterranean outlet for the spice trade. A number of goods were transported even farther west to Alexandria.<sup>39</sup>

Pliny's description (HN 12.32.63-65) of the incense

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<sup>38</sup>For more information about proposed caravan routes, see Richard LeBaron Bowen, Jr., "Ancient Trade Routes in South Arabia," in *Archaeological Discoveries in South Arabia*, Publication of the American Foundation for the Study of Man, vol. 2, ed. W. F. Albright (Baltimore: The Johns Hopkins Press, 1958), 42; and Groom, *Frankincense and Myrrh*, 175-187.

<sup>39</sup>*Western Arabia*, 219. This was the main north-south route, however, Arabia was crisscrossed by routes leading from north to south, east to west, and all points in between. Daniel Potts describes eighty possible routes, acknowledging that in actuality, an "infinite number" of routes may have been used, depending upon one's starting and stopping points, the mode and purpose of travel, and the season of the year. Daniel T. Potts, "Trans-Arabian Routes in the Pre-Islamic Period," in *L'Arabie et ses Mers Bordières*, vol. 1, *Itinéraires et Voisinages*, ed. Jean-François Salles (Paris: Maison de l'Orient, 1988), 128.

route indicates that taxes and tolls were collected at all important points through which the caravans passed. Every South Arabian kingdom (as evidenced by the route described above), extracted revenues from the trade. Other political entities collected tolls as the caravans traversed northwards. Even the Nabataeans, who governed Petra, and the Romans, who controlled Gaza, demanded appropriate payment (Pliny *HN* 12.32.64). Pliny's account (*HN* 12.32.64-65) revealed a laborious, duty-laden incense route.

Following religious tithing at Shabwa,

fixed portions of the frankincense are also given to the priests and the king's secretaries, but beside these the guards and their attendants and the gate-keepers and servants also have their pickings: indeed all along the route they keep on paying, at one place for water, at another for fodder, or the charges for lodging at the halts, and the various octrois . . . and then again payment is made to the customs officers of our empire.

The distance that goods travelled from Arabia to Mediterranean markets is astonishing--giving further evidence for a highly-evolved and complex system of trade in the ancient world.<sup>40</sup> Incense from Dhofar travelled 500 miles to Qana. From Qana to Shabwa, camels carried the incense for another 160 miles. Continuing its journey, incense was carried an additional 430 miles to reach Najran

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<sup>40</sup>Goods from India and China, of course, travelled far greater distances. The following distances in the text are taken from Groom, *Frankincense and Myrrh*, 188.

at the edge of South Arabia (the commodity had already travelled over 1000 miles without even having left South Arabia). From Najran, incense could be taken to Gaza (1,200 miles), Alexandria (1,450 miles), or Rome (3,000 miles). In total, incense was transported for approximately 4,000 miles before Romans could burn it in their censers.

The only reference to the time involved in covering these distances is a vague statement made by Pliny (*HN* 12.32.64) that Gaza was "sixty-five camel stations" from Timna. Groom claims that, based on distances travelled of 20 to 25 miles per day, camel caravans could travel from Shabwa to Gaza in around 78 days.<sup>41</sup> This rough estimate does not include rest stops, trading stops, or camel changes--these probably added several weeks to this journey.

Of all of the kingdoms of Arabia Felix, Hadhramawt had the most significant export economy, which was based primarily upon the frankincense crop. According to the *Periplus* (27): "All the frankincense grown in the land is brought into [the Hadhramawti port of] Kanê."<sup>42</sup> The other kingdoms were, to varying degrees, dependent upon the revenues generated by the caravan routes; Agatharchides (5.101c) emphasizes that the role of middleman was a vital

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<sup>41</sup>Ibid., 211-213.

<sup>42</sup>Groom, *Frankincense and Myrrh*, 96-120; and Stookey, *South Yemen*, 16.

component of Arabia Felix's economy:

The peoples who live very near each other receive in continuous succession the cargoes of goods, passing them on one after another as far as Syria and Mesopotamia."

Pliny's description (*HN* 12.32.64-65) of the tax-laden caravan route also demonstrates the importance of the overland trade to South Arabia's kingdoms. Their wealth could be diminished by competition from external forces, or by changes in the patterns of trade.

Changes in the trade routes were not long in coming. Several factors caused the land routes to decline in popularity vis-à-vis the sea route. Political ferment in Syria destroyed the northern terminus of the caravan route. The establishment of the Ptolemaic dynasty created an impetus for an alternative, maritime route leading up the Red Sea to Egypt (Agatharchides 5.90).<sup>43</sup> Also, the growth of the Parthian Empire in the East blocked the overland routes between the Mediterranean and the Orient.<sup>44</sup> The Parthian Empire, based in northeastern Iran, was the only organized, large-scale political entity bordering on the

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<sup>43</sup>Rawlinson, *India*, 88-89; and William C. Brice "Arabian Trade in Late Classical Times," in Pavel Oliva and Alena Frolikova, eds., *Proceedings of the 16th International Eirene Conference*, vol. 2 (Prague, 1983), 76-77. See chapter 4 for the Ptolemies.

<sup>44</sup>Rawlinson, *India*, 89.

Roman Empire.<sup>45</sup> Border wars between the two powers centered around the Euphrates River in the province of Syria, and lasted for centuries, during both the era of the Roman Republic and the era of the Roman Empire.

Another incentive to the sea-trade was economic in nature--shipping large quantities of goods by sea rather than by land was far cheaper. Ships, not camels, were the quickest and least expensive vehicles of travel and communication in the ancient era.<sup>46</sup> The dawn of the third century B. C. witnessed a dramatic increase in maritime activity, probably at the expense of the caravan trade.<sup>47</sup>

Strabo (16.4.25) credits Ptolemy Philadelphus (Ptolemy II: 283-246 B. C.) with establishing a protected trade route that avoided the perilous northern waters of the Red Sea (**Figure 3**). Ships sailed to Kosseir, located on the Egyptian shore of the Red Sea, where their cargoes were unloaded and transported overland to Coptus which was a "major emporium for such cargoes." The products of Africa, Arabia, and India were then transported partially overland, partially by

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<sup>45</sup>See Nielsen C. Debevoise, *A Political History of Parthia* (Chicago: University of Chicago Press, 1938).

<sup>46</sup>Steven E. Sidebotham, "Ports of the Red Sea and the Arabia-India Trade," *Münsterische Beiträge z. antiken Handelsgeschichte* 5 (1986): 18.

<sup>47</sup>S. A. Cook, F. E. Adcock, and M. P. Charlesworth, eds., *The Cambridge Ancient History: The Augustan Empire, 44 B.C.-A.D. 70* (New York: MacMillan and Company, 1934), 253.



riverboat, to Alexandria, which was to become an important trading center by the end of the first century B. C. In addition to this route, Ptolemy II renovated and re-opened an ancient canal that connected the Red Sea to the Nile near the entrance to the Gulf of Suez, thus ensuring an all-sea route from the Indian Ocean to Alexandria (Strab. 17.1.25). Then, according to Agatharchides (5.90), Ptolemy II made the Red Sea and its environs safe for mariners by ridding the Sea of its notorious pirates. The *Periplus* (27, 30) indicates that even the truly-Arabian product of frankincense was being transported by boats as well as by dromedaries, collected at a headland called Syagros, and stored in warehouses before being brought westward to Qana by means of camels, rafts made of "leather bags," and wooden boats, where it could be traded with Roman mariners and shipped to the Mediterranean.

Arabia Felix clearly played an important, dual role in the commerce of the classical world. First, the land had indigenous products, primarily frankincense and myrrh, that were in great demand by the Egyptians, the Greeks, and the Romans. Second, Arabia gained middleman's profits by supplying the Mediterranean world with goods that its traders had bartered for throughout the Indian Ocean littoral. Through a land-based caravan route, and later, Red Sea-based shipping lanes, the Arabians supplied these

products to thriving emporiums such as Alexandria and Gaza. From these entrepôts, the goods were then shipped to be distributed along the Mediterranean littoral, where they were in great demand, especially in Rome.

### CHAPTER III

#### THE TECHNOLOGY OF TRADE

Little attention has been paid to the Arabian vessels that carried the multifarious and valuable cargoes from the coasts, jungles, and islands of the Orient to the teeming ports of Arabia and Egypt. Yet a basic understanding of the design and sailing characteristics of these ships is essential to understand not only the routes of trade, but also the reasons why the Arabians were able to exploit the products of the East, and why the Mediterranean peoples took so long to duplicate this feat.

#### Construction of Dhows

There is little evidence, either archaeological or written, concerning the construction, design, or appearance of the vessels of ancient Arabia. In fact, the earliest picture of an Arab ship, or "dhow,"<sup>1</sup> appears in a thirteenth-century manuscript, several millennia after

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<sup>1</sup>The word "dhow" was coined by nineteenth-century Europeans who were struck by the unique hulls, raked stems, and proportionately tall masts that characterized Arabian ships. Although the word "dhow" is in fact a general term--there is no one ship that is a dhow--for the sake of convenience and convention it will be used to refer to the sea-going vessels of South Arabia, except when a particular type of ship, such as *boom* or a *zaruk* is mentioned.

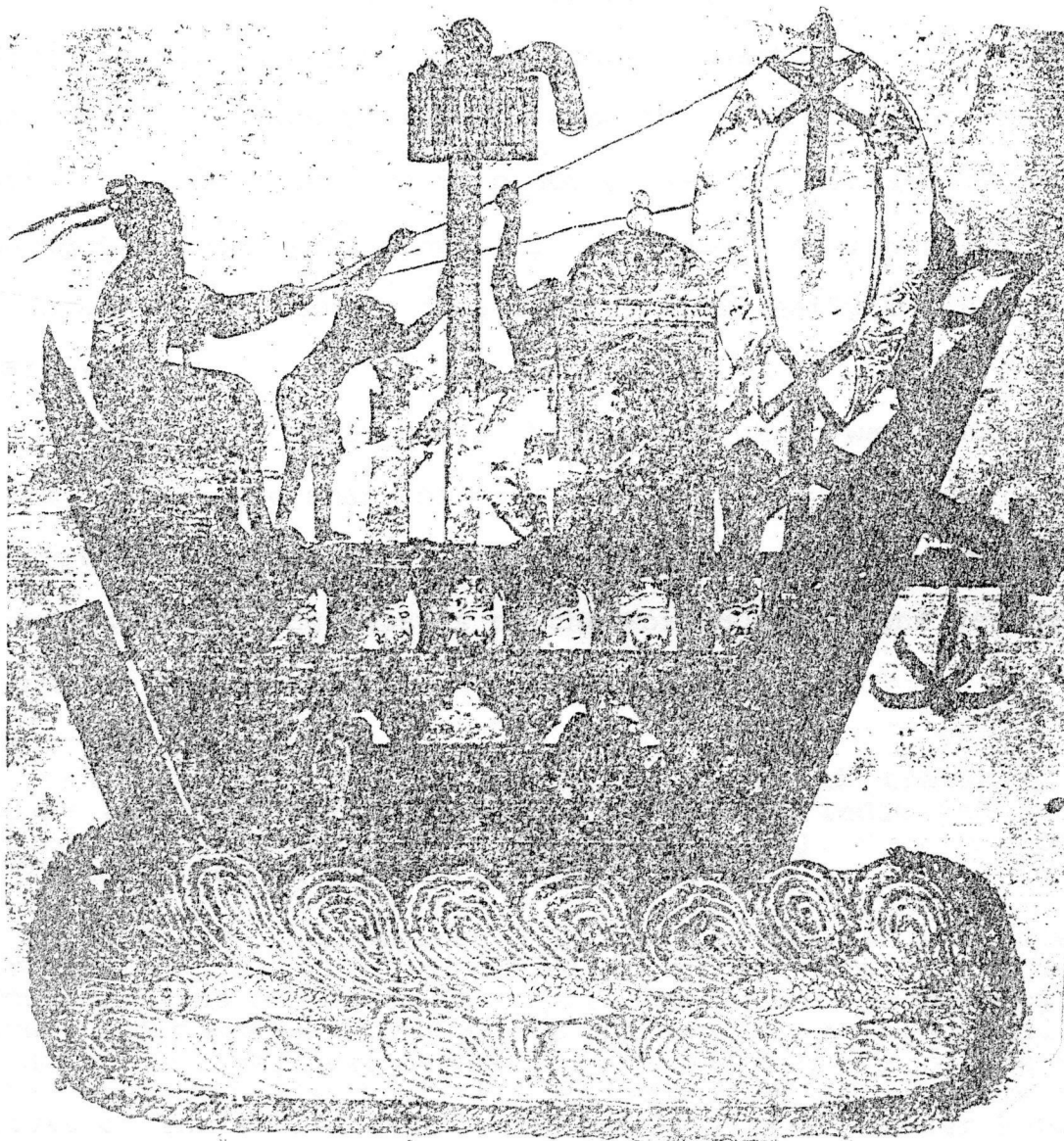
Arabians began venturing out onto the sea (**Figure 4**).<sup>2</sup> Although early travelers and geographers wrote numerous passages concerning their own sea voyages as well as the maritime trade of the Arabians, none of them unfortunately described the physical appearance of the Arabian ships of that era. Agatharchides (5.103) and the *Periplus* (30) briefly noted "large rafts" and "boats made of skins" as types of South Arabian vessels, but unfortunately, provided no detailed analyses of these craft. Marco Polo's description of Arabian ships, while outside the time period of this study, is perhaps the best analysis, Western or Eastern, of any ancient or medieval traveler:

The men of this city have many ships, and their ships are very bad and weak and very dangerous, and many of them are lost because they are not nailed with iron pins like ours, because it is a hard wood of which they are made of a certain kind as brittle as pottery, so that as soon as a nail is driven into it it rebounds on itself and as it were is broken up, but the planks are bored with iron drills as carefully as they can at the ends, and then are fixed with little treenails; afterwards they bind them or they are sewn with coarse thread which is made of the husks of the trees of nuts of Indie, which are large and over them are threads like horsehair. For they have it soaked and when the substance is rotted it remains clean and it becomes like the strands of horse hair and then is spun like silk; then they make this thread of it and so sew the ships with it, and it is not easily rotted by the salt water of the sea but lasts long in it, but it cannot last in a storm. And indeed strengthening with iron is better. . . . And the ships have only

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<sup>2</sup>The vessel depicted closely resembles a boom.

Figure 4: The Earliest Picture of a Dhow



Source: David Howarth, *Dhows* (London: Quartet Books, 1977), 19.

one mast and one sail and one rudder and have no deck. But when they have loaded them they cover the goods with boiled hides of animals. . . .<sup>3</sup>

Nevertheless, in spite of the general dearth of evidence, one need look back no further than the Arab dhows of the early twentieth century in order to see an accurate model of ancient and medieval dhows. In form and function the ships of Arabia have changed little since their early evolution (**Figure 5**).<sup>4</sup>

Dhows were built out of teak wood, which was obtained from India. The shape of their hulls was double-ended; the square sterns that some later dhows displayed were adopted from the sea-going vessels of the Portuguese.<sup>5</sup> One feature (and the only feature) that almost all early foreign

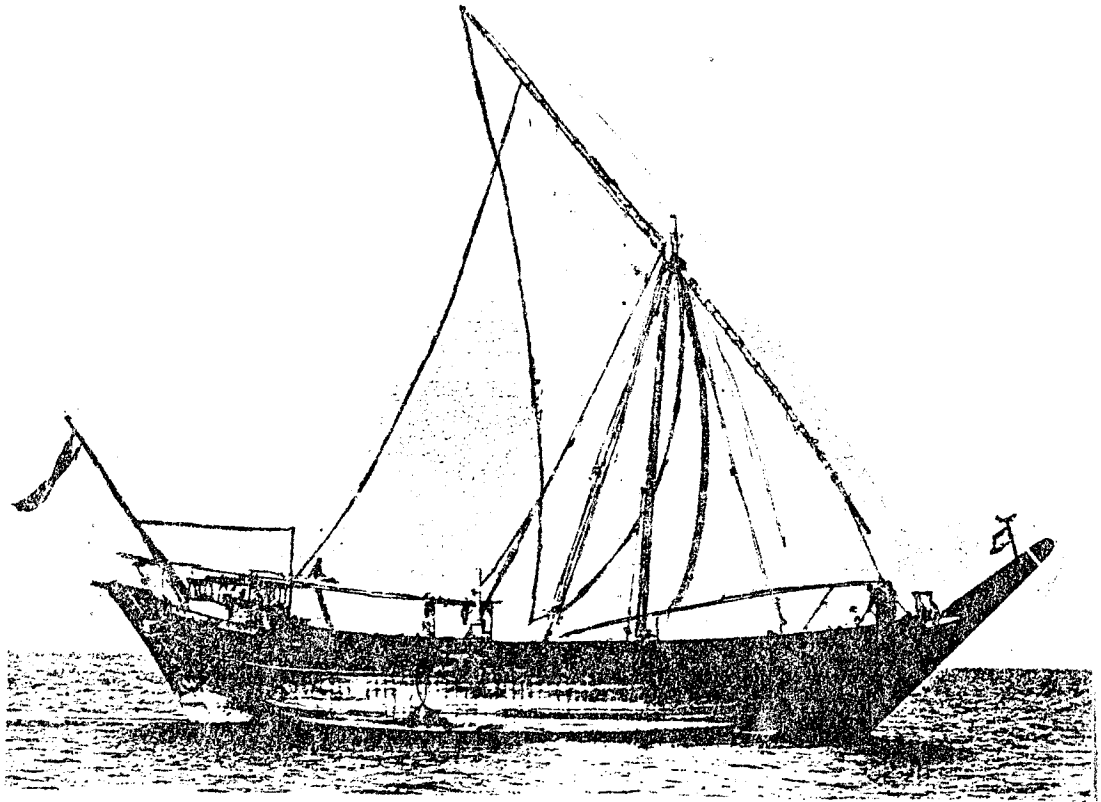
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<sup>3</sup>Marco Polo, *The Description of the World*, trans. A. C. Moule and Paul Pelliot (London: George Routledge and Sons, 1938; reprint, New York: AMS Press, 1976), 1: 124 (page references are to reprint edition).

<sup>4</sup>This is the general claim of scholars, but actual archaeological study is needed to prove this contention. Hourani, *Arab Seafaring*, 87. Although Israeli archaeologist Avner Raban has excavated a late medieval-era ship, as well as finding some medieval anchors at the northern end of the Red Sea, there remains absolutely no archaeological evidence for dhows of the ancient and early medieval eras. Avner Raban, "The Mercury Carrier from the Red Sea," *The International Journal of Nautical Archaeology* 2 (1973): 179-183; and Avner Raban, "Medieval Anchors from the Red Sea," *The International Journal of Nautical Archaeology* 19 (1990): 299-306.

<sup>5</sup>Arabia certainly has no trees suitable for building ships. G. R. Tibbetts, "Introduction," in Ahmad Ibn Majid, *Arab Navigation in the Indian Ocean Before the Coming of the Portuguese*, trans. G. R. Tibbetts (London: Royal Asiatic Society of Great Britain and Ireland, 1971), 49.

Figure 5: A Modern Dhow



Source: Howarth, *Dhows*, 25.

observers noted about the dhows was their unique method of construction--their planks were sewn together, carvel-style,<sup>6</sup> with coir cord (fiber manufactured from the husks of coconuts), rather than being fastened together with mortise-and-tenon joints or iron spikes and nails.<sup>7</sup> The vessels were constructed shell-first, with the planks set into grooves in the keel and stem and sternposts. Only after the shipbuilders had finished the hull, did they add internal frames for strengthening. Once they had completed this process, the builders caulked the planks, and rubbed fish oil or shark oil on the ship's exterior for protection against shipworm.<sup>8</sup>

The other significant features of early dhows may be ascertained by examining the pictures of twentieth-century dhows, before the diesel engine became widely used in Arabian vessels. Many dhows were without decks, and all dhows had a proportionately high mast, were fore- and aft-

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<sup>6</sup>A method of hull construction in which planks are joined edge-to-edge, rather than overlapping one another (clinker construction).

<sup>7</sup>In addition to Marco Polo, Agatharchides (5.103), the *Periplus* (15-16, 30), and Procopius (*Aed.* 1.19.23) record the sewn boats of Arabia.

<sup>8</sup>Ibn Jubayr, a medieval Islamic traveler, briefly describes the construction of dhows. Ibn Jubayr, *The Travels of Ibn Jubayr*, ed. W. Wright, 2d ed. (London: Luzac, 1971), 71.



rigged, and carried a lateen sail.<sup>9</sup> Notably, there was no arrangement for reefing a dhow's sails during strong winds, which indicates that this craft was not intended to sail in stormy weather. The early dhows probably utilized crude anchors of stone<sup>10</sup> and employed side rudders instead of a stern rudder (a medieval invention).<sup>11</sup>

Many travelers and scholars have been fascinated by the persistence of the sewn method of ship construction, a construction technique that was used throughout the Indian Ocean littoral. Why did this type of construction persist, in spite of its frailty? Procopius (*Aed.* 1.19.23-26) mentions an ancient legend that "there are certain rocks which draw the [ship's] iron to themselves", but refutes it, noting that Roman ships, which utilized nails, had no such problem. Marco Polo claims that the wood often split if nails were driven into it,<sup>12</sup> but modern dhows, which use the same wood, are now constructed with nails. A common

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<sup>9</sup>Bowen claims that the lateen rig originated in Persia, and that the South Arabians did not use it in antiquity. He believes that this was the primary reason for the development of the caravan routes. There is, however, no supporting historical or archaeological data to confirm this claim, and far more research into this topic is needed. Richard LeBaron Bowen, Jr., *Arab Dhows of Eastern Arabia* (Rehoboth, MA: Privately printed, 1949), 8-10.

<sup>10</sup>Raban, "Medieval Anchors," 299-306.

<sup>11</sup>Ibn Jubayr, *Travels*, 70.

<sup>12</sup>Marco Polo, *Description of the World*, 1: 124.

suggestion, given by Ibn Jubayr, was that sewing resulted in flexibility--ships were able to survive being grounded on a reef or shoals.<sup>13</sup> While this suggestion might contain somewhat more merit than the earlier suggestions, the real explanation is quite mundane. Coir rope was easily obtainable in the Indian Ocean littoral, and, more importantly, it was inexpensive. Hourani notes that although iron nails did exist in India, the manufacturing process was extremely costly, and the nails did not last much longer than rope.<sup>14</sup> Thus, the availability and the relative cheapness of coir rope were probably the factors that resulted in this method's longevity.

Dhows changed relatively quickly following Portuguese contacts in the sixteenth century A. C.<sup>15</sup> Iron nails quickly replaced coir, as indigenous shipbuilders desperately sought for a way to make their ships more resistant to the powerful guns of the Iberians. In addition, a new class of transom-ended (square-ended) dhows sprang up, undoubtedly in imitation of the transom sterns of the Portuguese, Dutch, and English vessels (**Figure 6**).

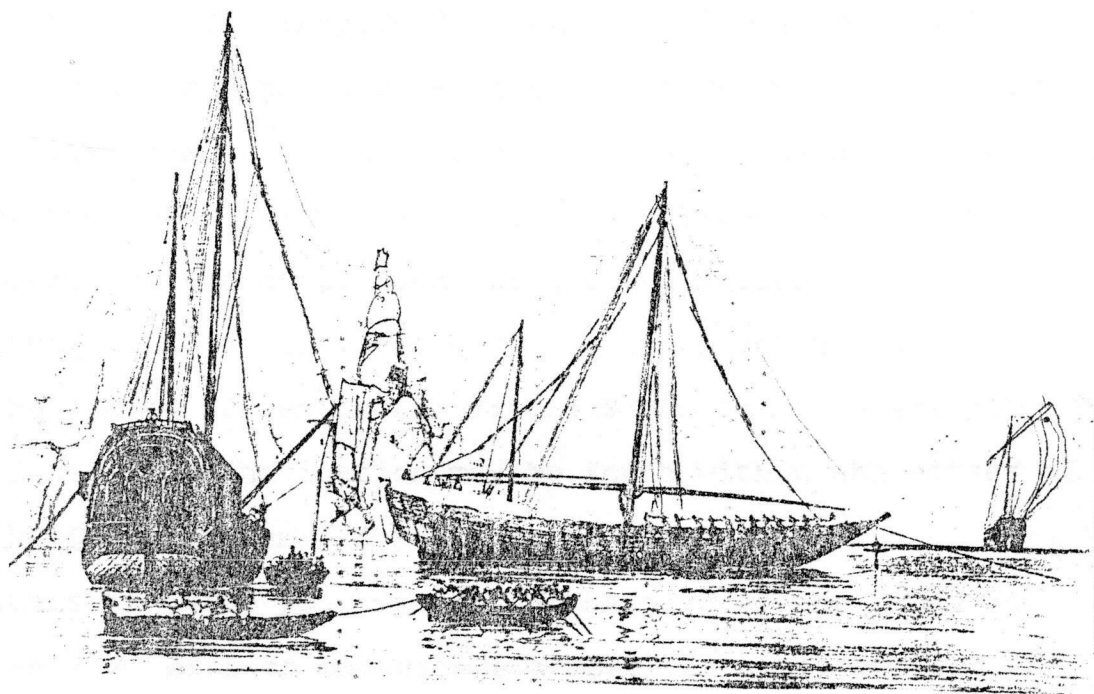
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<sup>13</sup>Ibn Jubayr, *Travels*, 70-71.

<sup>14</sup>Hourani, *Arab Seafaring*, 94.

<sup>15</sup>Bowen, *Arab Dhows*, 19-21.

Figure 6: Dhows following European Contact



Source: Howarth, *Dhows*, 33.

### Navigation Techniques

Information on ancient Arabian navigation is almost nonexistent. In all probability, the art of navigation was practiced at an extremely rudimentary level. For the *zaruks* of the Red Sea (**Figure 7**),<sup>16</sup> which sailed within sight of the coast and anchored at night,<sup>17</sup> there was no need for navigational techniques save pilotage--a detailed knowledge of the coast, winds, and reefs of the Red Sea. Captains of *booms*, on the other hand, probably utilized celestial navigation, as they voyaged from the Arabian Peninsula to the Indian subcontinent (**Figure 8**).<sup>18</sup> The earliest mention of celestial navigation may be found within the verses of the *Quran* (An'am 372.97): "Is it not He who doth provide the stars to guide you, in the darkness, o'er the lands and seas?"<sup>19</sup> Arabian navigators almost certainly applied the

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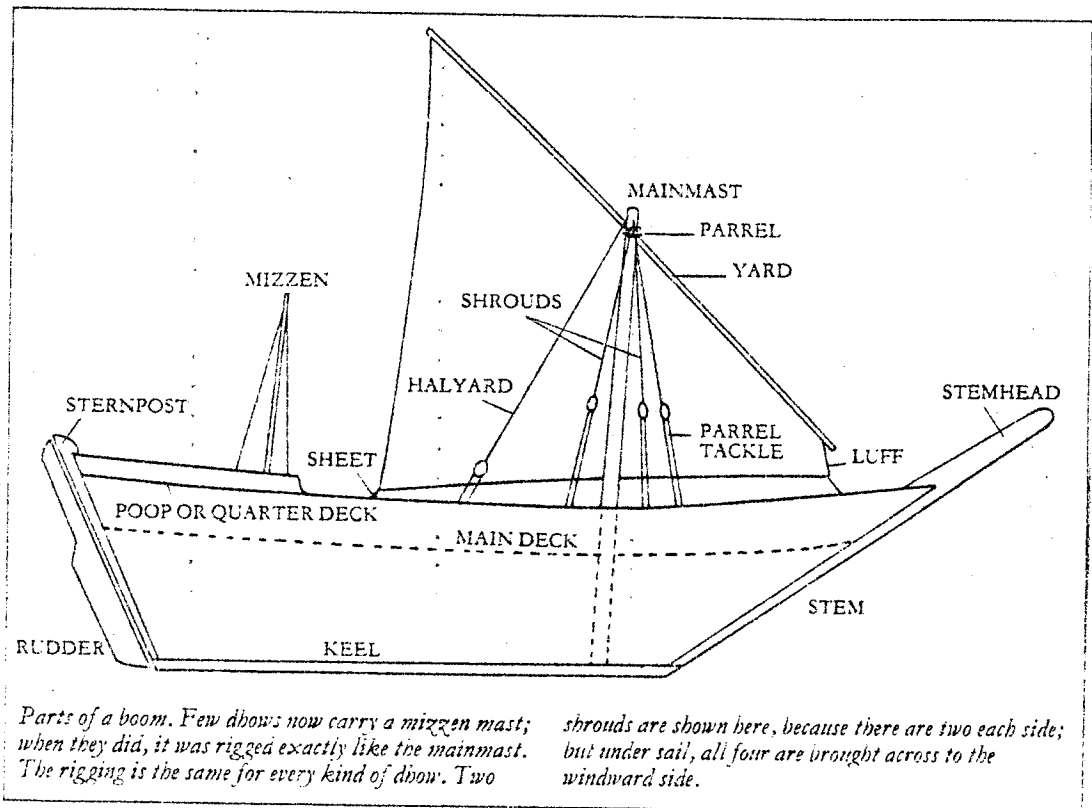
<sup>16</sup>Although the *zaruk* has persisted into modern times, it is quite likely that this double-ended vessel, or a direct ancestor of it, has been plying the coasts of the Red Sea for several thousand years. Howarth, *Dhows*, 45-47.

<sup>17</sup>Ibn Battuta, *Travels in Asia and Africa: 1325-1354*, trans. H. A. R. Gibb (New York: Augustus M. Kelly, 1969), 107.

<sup>18</sup>Although larger than the *zaruk*, the *boom* may be considered its counterpart in many ways, for this ancient, double-ended, ocean-going vessel has also persisted into modern times. Howarth, *Dhows*, 23-29.

<sup>19</sup>Muslims believe that the *Quran* was revealed to the Prophet Muhammad in the early seventh century, A. C.

Figure 8: Boom



Source: Howarth, *Dhows*, 23.

celestial principle of "latitude sailing."<sup>20</sup> Although the techniques of celestial navigation became increasingly complex and advanced during this era and into medieval times, a full description of this method of navigation is outside the scope of this thesis.<sup>21</sup>

### **Life at Sea**

Before returning to the historical narrative, let us briefly examine life at sea aboard the ancient dhow. The most valuable source for this topic is actually the work of a twentieth-century author and mariner, Alan Villiers, who spent two years sailing in dhows before the Arabian Peninsula was racked by the massive changes brought on by its new-found oil wealth. Villiers brings the reader into what appears to be a chaotic, disorganized maritime world-- hundreds of travelers are crammed into relatively small

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<sup>20</sup>The technique of latitude sailing relies upon the altitude of the North Star. When the star is farther from the horizon, one is in a more northerly latitude; when the star is nearer to the horizon, one is closer to the equator. Thus, if an ancient navigator knew the altitude of the North Star at a particular port on the Malabar Coast, he could easily find his way to that port by sailing roughly eastward, and then beating up or down the coast of India. Parry, *Age of Reconnaissance*, 90-91. Latitude sailing actually might have been developed by land-bound caravan traders, for the desert, like the sea, often presents a blank face, confounding those who attempt to determine their position.

<sup>21</sup>For detailed information on celestial navigation, see Ibn Majid, *Arab Navigation*, passim.

ships that sail in spite of themselves--for there are none of the watches or organization that characterize Western ships. The following passage by Villiers describes a timeless voyage in a Red Sea zaruk:

The little ship rolled and pitched abominably in anything of a sea, with a short, sharp, jerky motion. She was infested with cockroaches, and all kinds of insects, and there were rats. By night hungry mosquitos came from the little cays off which we anchored, and dined on my too well-nourished blood. Food became scarce when a shark carried away our only fishing line, and we lived three days on a handful of old dates. We washed in the sea, ate with our hands, slept on the cargo, only a foot or so above the level of the outside water. We were sunburned, hungry, tired  
 . . . . .

Day after day we wandered leisurely to the northwards, inside the reefs on the eastern side of the Red Sea. The wind blew and the ship sailed. The crew prayed and observed the fast [during the holy month of Ramadan all Muslims must fast from sunrise to sunset], and Ahmad the Yemenite knew where he was going.<sup>22</sup>

Although scholars still know relatively little about ancient Arabian dhows, their distinguishing characteristics were their lateen sails and sewn hulls. A sewn hull, although weaker than a nailed or mortise-and-tenon-joined hull, was appropriate for the generally placid waters of the Indian Ocean, except during the regime of the stormy summer monsoon. The lateen sail granted great flexibility to the Arabian mariner in coasting about the Indian Ocean littoral,

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<sup>22</sup>Alan Villiers, *Sons of Sinbad* (New York: Charles Scribner's Sons, 1969), 12.

for a vessel so rigged could sail far closer to the wind than a comparable square-rigged, Mediterranean craft.<sup>23</sup> Such efficiency gave the Arabians an inherent advantage over traders utilizing square-rigged ships.

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<sup>23</sup>"Sailing closer to the wind" simply means that the craft was able to exploit winds from directions other than directly aft.



**CHAPTER IV**  
**CHALLENGES TO THE SOUTH ARABIAN SPICE TRADE**

The rise of the Ptolemaic dynasty, and more importantly, the expansion of the Roman Empire, resulted in a far greater demand for Eastern luxuries than in previous eras. According to Strabo (17.1.6), the pre-Ptolemaic Egyptians and their rulers were "content with what they had and [did not want] imports at all, and [were] prejudiced against all who sailed the seas." Yet over time, Eastern luxuries became necessities as the Mediterranean peoples grew accustomed to these products and integrated them into their daily lives and social customs. Already in 145 B. C., Agatharchides (5.99) mentions this transition: "For their country [Arabia Felix] produces all the necessities for life as lived among us." This section explores attempts by the Egyptians and Romans to establish direct trade routes to the East, and it also analyzes the effects such actions had upon Arabia Felix's commerce and economy.

### The Ptolemies<sup>1</sup>

The third century B. C. witnessed the first prospective challenge to South Arabia's role as spice supplier to the Mediterranean world: the rise of the Ptolemaic dynasty in Egypt. This dynasty, one of three dynasties founded by political heirs of Alexander the Great in the late fourth century, relied heavily upon maritime trade, spurred on in part by Alexander's establishment of Alexandria in 322 B. C. (Arr. Anab. 3.1.1-5). Ptolemy II's creation of a maritime route through the Red Sea to Egypt and its trading centers clearly posed a potential threat to Arabia's caravan trade.

Classical scholar W. W. Tarn and J. J. Saunders, an historian of Islam, feel that the establishment of the Ptolemies in Egypt deeply hurt the Arabian spice trade.<sup>2</sup> Yet contemporary sources indicate that the Ptolemaic dynasty did not greatly affect the Arabian economy. The *Periplus* (26) states that Aden was a bustling entrepôt in "earlier days [the Ptolemaic era] . . . when . . . vessels from India did not go on to Egypt and those from Egypt did not dare

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<sup>1</sup>For more information on the Ptolemies, see Edwyn Bevan, *A History of Egypt under the Ptolemaic Dynasty* (London: Methuen, 1927); and Fraser, *Ptolemaic Alexandria*, 132-188.

<sup>2</sup>W. W. Tarn, "Ptolemy II and Arabia," *Journal of Egyptian Archaeology* 15 (1929): 15-16; and, J.J. Saunders, *A History of Medieval Islam* (New York: Barnes and Noble, 1965), 59.

sail to places further on." This claim indicates that the Ptolemies had little negative impact upon Arabia's thriving maritime commerce. Moreover, Agatharchides, who wrote during the Ptolemaic era, claimed (5.101c) that the South Arabians received "in continuous succession the cargoes of goods" which they transported to Egypt, Syria, and Mesopotamia. He goes on to say (5.104) that "from this commerce they [the Sabaeans] . . . have become the wealthiest of all peoples." Strabo, likewise, hints (17.1.13) that the Ptolemies were not greatly involved in the Indian spice trade when he claims that since the time of the Ptolemaic ruler Auletes, the father of Cleopatra, "the commerce between the Indians . . . has been increased to so great an extent." A contemporary Ptolemaic inscription also indicates that the dynasty relied heavily upon imported Arabian spices for its numerous temples.<sup>3</sup>

Based on these claims, as well as on historic Ptolemaic activities in Africa, Hourani and Robert Stookey (an expert on Yemeni history and politics) believe that the Ptolemies were actually far more concerned with exploiting the resources of the African shore of the Red Sea--gold,

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<sup>3</sup>J. Hell, *The Arab Civilisation*, trans. Tr. S. Khuda Bukhsh (Cambridge, 1926), 4, quoted in Aly Mohamed Fahmy, *Muslim Sea-Power in the Eastern Mediterranean, from the Seventh to the Tenth Century A. D.* (Cairo: National Publication and Printing House, 1966), 42.

ivory, and elephants--than with controlling the maritime trade routes.<sup>4</sup> J. O. Thomson supports this claim by asserting that the Ptolemies "were too concerned with watching each other and keeping the balance of power in the inner sea [the Mediterranean]. So they left the Indian trade to the Arabian middlemen."<sup>5</sup> Furthermore, Stanley Burstein notes that the Ptolemies, who controlled Gaza and the Egyptian ports during this time period, were assured of profits from the trade regardless of whether or not there were Arabian middlemen.<sup>6</sup> The Ptolemies merely needed to increase the consumer's price so that they would be assured of a wide profit margin. The only direct concern of the Ptolemies was with keeping the Red Sea free from piracy; and, according to Agatharchides (5.90), they accomplished this task quite well. On the basis of the primary and secondary evidence thus presented, it is clear that the Ptolemies did not gain a significant share of Arabia's spice trade. The most important effect that Ptolemaic policies

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<sup>4</sup>Hourani, *Arab Seafaring*, 19-20; and Robert Stookey, *Yemen: The Politics of the Yemen Arab Republic* (Boulder: Westview Press, 1978), 15. The Ptolemies highly regarded elephants as battle-animals (a strategy that they acquired from Alexander's foray into India). Burstein, in "Introduction," in Agatharchides, *Erythraean Sea*, 4-11.

<sup>5</sup>Thomson, *Ancient Geography*, 134.

<sup>6</sup>Burstein, "Introduction," in Agatharchides, *Erythraean Sea*, 3-4.

had upon commerce in the region was to make maritime trade more attractive than it had been in previous eras.

Meanwhile, in Arabia, a new power had arisen--the Himyarites. Although the Himyarites had probably established themselves as a South Arabian power around the end of the second century B. C., their existence is not noted in the classical sources until 24 B. C.<sup>7</sup> The Himyarites, over a period of centuries, slowly conquered all of the kingdoms of South Arabia, including Saba. The gradual transition to Himyari hegemony in South Arabia is notable, for this era witnessed the first significant attempts by the newly-formed Roman Empire to control the spice trade. Rome's attempts to control this trade sprang from financial considerations.<sup>8</sup> As the Empire flourished, large sums of hard currency, primarily in the form of gold and silver, flowed out to the South Arabians. Pliny (*HN* 12.32.58), in noting that by his day the Arabians harvested frankincense biannually, implies that overseas demand had substantially increased for this Arabian product. While the Roman desire for Eastern goods skyrocketed, according to

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<sup>7</sup>Pliny (*HN* 6.32.161) mentions the "Homerites" when describing events that occurred during that time period.

<sup>8</sup>Fabulous accounts of riches and exotic products from Anaxicrates and Agatharchides probably spurred the Romans on to discover the sources of this wealth.

Pliny (HN 6.32.162) the Arabians "bought nothing in return."<sup>9</sup> Fifty years previous, the Roman Emperor Tiberius had also complained to the Senate:

How are we to deal with . . . that rage for jewels and precious trinkets, which drains the empire of its wealth, and sends in exchange for baubles, the money of the commonwealth to foreign nations, and even to the enemies of Rome? (Tac. Ann. 3.53)

This cash outflow hurt the Roman Empire's finances and its balance of trade.

#### **Eudoxus, Hippalus, and Monsoon Voyaging**

Around the time of the Himyarites' rise to regional importance, an important event occurred in Egypt during the latter half of the reign of Ptolemy Physcon (146-117 B. C.). Strabo (2.3.3-4) claims that the Egyptians found a half-drowned Indian sailor, who, after learning Greek, promised to guide an expedition to India. Ptolemy promptly dispatched a Greek by the name of Eudoxus, who made two

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<sup>9</sup>Pliny's claim is not entirely accurate, for the *Periplus* (24) indicates a number of items that could be traded in Arabian ports, including purple cloth (indigo-dyed from India), saffron, "Arab sleeved clothing, either with no adornment or with the common adornment or with checks or interwoven with gold thread, girdles with shaded stripes . . . money, considerable amount . . . goldware, [and] embossed silverware." Nevertheless, Pliny was probably correct in stating that the balance of trade favored the Arabians, for many of these trading goods were not of Roman origin, and had to be obtained by merchant seafarers through barter. See also Miller, *Spice Trade*, 203-241.

voyages to India, bringing back "a cargo of perfumes and precious stones."<sup>10</sup>

Following this event, an even more important discovery was made by a Greek ship's captain named Hippalus.

According to the *Periplus* (57) he discovered the usefulness of the southwest monsoon for voyaging to India.<sup>11</sup>

Hippalus' alleged discovery represents a typical Greek attempt either to explain the origin of a practice or to personify abstract qualities such as the monsoon winds.<sup>12</sup>

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<sup>10</sup>Interestingly, Strabo, at some length, refutes this story. Yet Bunbury argues plausibly that a voyage of this kind must have been made around this time, for within a few generations, Greco-Roman mariners were regularly plying the seas between Egypt and India. Bunbury, *Ancient Geography*, 2: 77-78. Eudoxus was not the first Greek to voyage in the Red Sea and the Indian Ocean. Three centuries before Eudoxus' trip, Hecataeus narrates the story of a Greek named Scylax of Caryanda. Scylax manned an expedition sent by the Persian Emperor Darius, to locate the mouth of the Indus. The expedition started from Asia; once the voyagers had located the mouth of the Indus, they set sail westward, to Africa, and then up the Red Sea to Egypt. Hdt. 4.44.

<sup>11</sup>The Indian Ocean is characterized by a regime of two monsoons: the northeast monsoon and the southwest monsoon. The northeast monsoon, which lasts from November until March, is a relatively mild season, with a steady, northeasterly breeze. The southwest monsoon, which lasts from May until August, is a violent season that brings about torrential rainfall, high winds, and extensive flooding in regions such as India. For a technical description of the monsoonal regime of the Indian Ocean, see Donald B. Olson, "Monsoons and the Arabian Sea," *Sea Frontiers* 36 (January-February 1990): 34-41. For an in-depth overview of the monsoons and their effects upon Indian Ocean littoral populations, see Jay S. Fein and Pamela L. Stephens, eds., *Monsoons*, A Wiley-Interscience Publication (New York: John Wiley and Sons, 1987).

<sup>12</sup>Tarn, *Greeks in Bactria*, 369.

This account in the *Periplus* has created confusion and controversy--for if Hippalus discovered the southwest monsoon, how then did ancient Arabian mariners sail to India? Lionel Casson, a translator of the *Periplus* and an authority on ancient seafaring, claims that this was a discovery only for the Egyptians and the Greeks, for Arabs had been riding the winds of the monsoons for centuries, but they had somehow managed to keep the secret of these monsoons from all others for almost one thousand years.<sup>13</sup> Tarn, Islamic historian Aly Mohammed Fahmy, and South Arabian historians Gus Van Beek and Richard LeBaron Bowen, Jr., agree with this assessment.<sup>14</sup>

This opinion, however, fails to acknowledge several important factors. First, it is unlikely that the Arabians would have been able to hide an obvious "secret" such as the progression of the monsoon winds from the entire Mediterranean world. Surely any foreign observer would have noted numerous port departures from Arabia, coinciding with the advent of the observable regime of the southwest monsoon. The simplest explanation is that the remoteness of

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<sup>13</sup>Lionel Casson, "Rome's Maritime Trade with the Far East," *American Neptune* 68 (Summer 1988): 150-151; and Casson, "Introduction," in *Periplus*, 11.

<sup>14</sup>Tarn, *Hellenistic Civilization*, 244; Fahmy, *Muslim Sea-Power*, 43; Beek, "Frankincense and Myrrh," 147; and Richard LeBaron Bowen, Jr., "The Dhow Sailor," *American Neptune* 11 (July 1951): 162.



South Arabia was responsible for the Greeks' lack of knowledge about the land and the sailing routes employed by its mariners. Only as Eastern products became staples of everyday life, did Western mariners need more accurate knowledge of sailing routes to India and the Orient. The existence of the *Periplus* gives evidence to such a demand. Pliny's description (*HN* 6.26.100-102) of the evolution of increasingly direct Roman routes to India indicates that Roman mariners were still in the process of refining their knowledge of the Indian Ocean littoral as late as the Julio-Claudian era. Roman merchants evidently had little knowledge of this region in the preceding generations.

Furthermore, the terms "Arabians" or "South Arabians" are broad, general classifications; in no way do these words describe a unified nation or kingdom in South Arabia.<sup>15</sup> South Arabia was composed of a number of competing and warring kingdoms, whose political structures were based on deeply-set tribal loyalties. This layer served to increase the fragmentation of South Arabia.<sup>16</sup> The divisiveness of South Arabian politics makes it extremely unlikely that the

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<sup>15</sup>E. H. Warmington makes the unfortunate mistake of lumping all of the South Arabians into the Sabaeen kingdom. M. Cary and E. H. Warmington, *The Ancient Explorers*, rev. ed. (Baltimore: Penguin Books, 1963), 89.

<sup>16</sup>The Hashid and the Bakil, two major tribal federations in northwestern Yemen, have played a significant role in the political life of South Arabia for centuries.

Arabians, even if they had so desired, could have hidden the secret of the monsoons from all outsiders.

Even more significant is the violent nature of the southwest monsoon in contrast to its milder northeast counterpart. It is doubtful whether the sewn planks of the dhows would have been able to withstand the fury of the Indian Ocean during the southwest monsoon. Sewn dhows were clearly fair-weather vessels, not meant to stand up to heavy seas or gale-force winds. In fact, neither Villiers nor Hourani believe that the ancient Arabians exploited the winds of the southwest monsoon.<sup>17</sup>

Villiers, noting the lateen rigging of Arab dhows, claims that these ships had no need for strictly favorable winds, "they could, in fact, exploit the northeast monsoon."<sup>18</sup> Hourani supports this statement by claiming that

the practice of modern Arab vessels in sailing from Aden is to set out in winter and, after 'ghosting' along in the lee of the Hadhramawt coast, to fall away before the northeast monsoon from a point sufficiently north and east. In this they find no difficulty."<sup>19</sup>

It is noteworthy that Ibn Majid, the famous medieval Middle

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<sup>17</sup>Hourani, *Arab Seafaring*, 25-26; and Villiers, *Sons of Sinbad*, xiv.

<sup>18</sup>Villiers, *Sons of Sinbad*, xiii.

<sup>19</sup>Hourani, *Arab Seafaring*, 26.

Eastern navigator, claimed that "intelligent men never make this journey during the three months . . . [of the southwest monsoon]." <sup>20</sup>

Thus while the Arabs may not have used the southwest monsoons for sailing, their discovery was important to the Egyptians, and, by the latter part of the first century B. C., their Roman conquerors. Neither the Egyptians nor the Romans possessed lateen sails; their square-rigged vessels could only exploit the more direct winds of the southwest monsoon. They were able to employ the violent winds of this season because their ships' hulls, joined together in the mortise-and-tenon fashion, were far stronger than the coir-sewn dhows of Arabia.<sup>21</sup> The Romans and Egyptians also employed these winds, because, as stated in the *Periplus* (39), the voyage to India was "hard-going, but absolutely favorable and shorter." In classical as in contemporary times, profits were inversely related to a voyage's

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<sup>20</sup>Ibn Majid, *Arab Navigation*, 227.

<sup>21</sup>Mortise-and-tenon vessels were edge-joined, shell-built ships like dhows. The rigid, closely-spaced mortise and tenon joints, which numbered in the thousands per vessel, were far stronger and more durable than the coir cord of the dhows. Ernest J. Ascher, "Graeco-Roman Nautical Technology and Modern Sailing Information: A Confrontation between Pliny's Account of the Voyage to India and that of the *Periplus Maris Erythraei* in the Light of Modern Knowledge," *Journal of Tropical Geography* 31 (December 1970): 12; and Lionel Casson, *Ancient Trade and Society* (Detroit: Wayne State University Press, 1984), 185.

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### **Direct Roman Shipping to India**

The Ptolemies did not capitalize upon Eudoxus' and Hippalus' discoveries. Fraser feels that the Ptolemies were incapable of exploiting these discoveries because of a lack of financial resources and "energy," resulting from internal strife in the Ptolemaic dynasty.<sup>22</sup> Archaeological evidence supports the claim that the Ptolemies did not trade directly with India, for excavations have uncovered almost no Ptolemaic coins in that country. By contrast, gold and silver coins from the reigns of Augustus and Tiberius "abound" in India.<sup>23</sup> At least 68 hoards of Roman coins have been found in India, primarily in the southern coastal

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<sup>22</sup>The internal strife was caused by a power struggle between Ptolemy Evergates II and his sister, Cleopatra II. Fraser, *Ptolemaic Alexandria*, 184; and Bevan, *History of Egypt*, 311.

<sup>23</sup>Fraser, *Ptolemaic Alexandria*, 184; Doe, *Southern Arabia*, 120-121; M. Rostovtzeff, *The Social and Economic History of the Roman Empire*, 2d. ed., rev. P. M. Fraser (Oxford: Oxford University Press, 1957), 1: 97; S. B. Deo, "Roman Trade: Recent Archaeological Discoveries in Western India," in *Rome and India: The Ancient Sea Trade*, eds. Vimala Begley and Richard Daniel DePuma (Madison: University of Wisconsin Press, 1991), 39. The fact that these coins were purposefully mutilated suggests that they were not used as Roman currency, rather, they were used as local currency or as bullion. K. V. Roman, "Further Evidence of Roman Trade from Coastal Sites in Tamil Nadu," in *Rome and India*, 125.

areas.<sup>24</sup> The largest hoard, 256 Augustan and Tiberian silver denarii, was found in 1965 in Bangalore.<sup>25</sup>

As evidenced by these coin finds, the Roman administration of Egypt beginning in the latter part of the first century B. C. resulted in a sharp increase in Egypt's maritime trade.<sup>26</sup> Support also comes from Strabo (17.1.13):

In earlier times, at least, not so many as twenty vessels would dare to traverse the Arabian Gulf far enough to get a peep outside the straits, but at the present time even large fleets are despatched as far as India . . . from which the most valuable cargoes are brought to Aegypt.

Furthermore, Pliny (*HN* 6.26.100-102) noted that initially the few Greek vessels that dared to make the voyage in the earlier era crept along the coast in a time-consuming fashion. Soon, however, the routes had evolved, and by the age of the early Roman Empire, ships starting from Ras Fartak in Arabia sailed directly to Patala, India, with the southwest winds directly behind them. Refinements continued to be made, and by Pliny's time, it was not unheard of to "set out the whole of the voyage from Egypt [to the Malabar

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<sup>24</sup>M. Seshadri, "Roman Contacts with South India," *Archaeology* 19 (October 1966): 245.

<sup>25</sup>*Ibid.*

<sup>26</sup>Rostovtzeff notes the "unexpected" rise of Roman commerce with the East. Rostovtzeff, *Social and Economic History*, 1: 66, 94-95.

Coast of India], now that reliable knowledge of it is for the first time accessible [the *Periplus*?]." It is notable that at no time does the *Periplus* contain specific references to Roman vessels calling at the ports of Arabia Felix. Yet, the very existence of the *Periplus* demonstrates a need for a trading manual of these coasts--a need that can only have come about if Roman trade in the Indian Ocean littoral was an established fact.<sup>27</sup>

Perhaps it is more important to ask why, instead of how, Roman mariners began to venture to India.<sup>28</sup> The economic principle of "economies of scale"<sup>29</sup> provides the simple answer. Initially, Roman demand for luxuries was relatively small; thus it was far more economic simply to purchase goods which had been obtained through numerous middlemen from the East. By the Augustan era, it was proving expensive to receive goods via the indirect caravan route. Direct Roman commerce with India was the solution--

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<sup>27</sup>Ibid., 1: 95. The extensive Roman coin finds in India serve to verify the claim that Romans were trading directly and extensively in the Indian Ocean littoral.

<sup>28</sup>The term "Roman mariners" encompasses the subject peoples of the Roman Empire, including the Greeks and Egyptians, both of whom played indispensable roles in the trade with the East. Miller, *Spice Trade*, 142. The author of the *Periplus* (29) by stating "the trees we have in Egypt," indicates that he was an Egyptian Greek.

<sup>29</sup>It is less expensive to manufacture and transport items in bulk--the more such items, the cheaper each individual item becomes.

it was far faster and cheaper, as goods could be transported in bulk in specially-constructed, large trading vessels, directly into the eager hands of the Mediterranean markets.<sup>30</sup> J. Innes Miller claims that Augustus clearly saw the need, as Rome grew, for a carefully-orchestrated Roman trade policy to ensure direct shipping with the Orient.<sup>31</sup> Strabo (17.1.13), the *Periplus*, and Pliny (*HN* 6.26.100-102), all indicate that increasingly direct Roman trade with India was occurring on a regular basis by this era.

It is not realistic to blame the Himyarites for failing to stop this increasing Roman trade. The Indian Ocean and its littoral region cover a vast area--there would be no way for the Himyarites to prevent Roman mariners from sailing upon this Ocean. It would perhaps have been less convenient if the Himyarites had denied the Romans access to their coasts and harbors. Nevertheless, because the coasts of Africa, Arabia, and India were under the control of

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<sup>30</sup>Rostovtzeff, *Social and Economic History*, 1: 67. Miller and Casson claim that Eastern goods were transported in large Roman "round ships" (merchant vessels; war ships were referred to as "long ships") on the order of at least 80 tons, and perhaps as large as 500 tons. These large vessels, built specifically for the spice trade, would further help to maximize profits. Miller, *Spice Trade*, 14; and Lionel Casson, "Ancient Naval Technology and the Route to India," in *Rome and India*, 10.

<sup>31</sup>Miller, *Spice Trade*, 13-15.

numerous political entities, the Romans would certainly have found a place to secure and re-supply their vessels. As it was, the Himyarites benefitted from the revenues obtained from Roman vessels that called at the ports of Arabia Felix, and the Romans benefitted from a most convenient location. Thus, in no way were the Himyarites less able than their predecessors to control the sea route. In fact, the *Periplus* states specifically that Rome was on good terms with the Himyarites. According to the *Periplus* (23), Charibaêl, King of the Himyarites "was a friend of the emperor, thanks to continuous embassies and gifts." Gifts were given to Charibaêl in return: "Horses and pack mules; goldware; embossed silverware; expensive clothing; copperware" (*Periplus* 24). Such bountiful gift-giving not only reflected a concerted Roman effort to organize its trade and secure friendly ports;<sup>32</sup> it also indicated that a thriving trade was taking place in South Arabia.

Nevertheless, many historians of the region feel that the initiation of direct Roman shipping to India greatly hurt the economy of Arabia Felix.<sup>33</sup> According to Philip Hitti, the author of a renowned history of the Arabs: "The

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<sup>32</sup>Miller, *Spice Trade*, 13-15.

<sup>33</sup>Philip Hitti, *The History of the Arabs: From the Earliest Times to the Present* (London: MacMillan, 1958), 58; Bidwell, *Two Yemens*, 4; Doe, *Southern Arabia*, 58; Stookey, *South Yemen*, 18; and Saunders, *Medieval Islam*, 7-8.



entry of Roman shipping into the Indian Ocean sounded the knell of South Arabian prosperity."<sup>34</sup> In this view, he is supported by statements from Strabo (17.1.13) and Pliny (*HN* 6.26.100-102), who report that the Romans were regularly voyaging to India and bypassing the Arabian middlemen. Furthermore, the increasing sophistication of Roman trade routes to India demonstrates that the maritime avenue was becoming cheaper, faster, and more direct. As the maritime route increasingly bypassed South Arabia's ports, their middlemen's profit most likely declined.

The *Periplus* (26) refers to Aden (also known as "Eudaimôn Arabia" or "Arabia Emporium" [Ptolemy 6.7.9], and currently under Himyari rule) as a "village" that had once been a prosperous port city. The author claims that "in earlier days" the city had obtained its revenues by acting as middleman between Egypt and India. Then, shortly before the work was written, the author says that Caesar "sacked" the port.<sup>35</sup> This last assertion is questionable indeed, for there is almost no corroborating archaeological or historical evidence to indicate that a Roman military force

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<sup>34</sup>Hitti, *History of the Arabs*, 60.

<sup>35</sup>*Ibid.*

was ever at Aden.<sup>36</sup>

The only indication that a Roman victory occurred in Arabia is Strabo's claim (16.4.21) that the Sabaeans and the Nabataeans (a northern Arabian tribe based in Petra in modern Jordan) were "subject to the Romans." Groom argues that this reference to the Sabaeans actually refers to a tribe situated at the northern end of the Arabian Peninsula.<sup>37</sup> References in the Bible (Gen. 25.3), Pliny (HN 6.32.151), and Strabo's synonymous mention of the Sabaeans and the Nabataeans supports this claim.

There are varying interpretations to the *Periplus'* claim (26) that Caesar "sacked" Aden. One school of thought takes the *Periplus'* claim literally, although which Caesar was responsible for Aden's destruction remains questionable.<sup>38</sup> It is also possible that the author of the *Periplus*, who wrote at least three-quarters of a century after Aelius Gallus' military expedition to Arabia Felix, lists the wrong place-names.<sup>39</sup> A third explanation

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<sup>36</sup>Strabo (16.4.24) notes that a Roman military expedition under the command of Aelius Gallus did not venture to the coasts of Arabia Felix.

<sup>37</sup>Groom, *Frankincense and Myrrh*, 44.

<sup>38</sup>Casson, "General Commentary," *Periplus*, 160. Miller postulates that Gaius (Caligula) may have been the Caesar who destroyed Aden as part of a Roman policy to eliminate competition from that entrepôt. Miller, *Spice Trade*, 14-15.

<sup>39</sup>Casson, "General Commentary," *Periplus*, 160.

concerns the manuscript itself, which contains numerous errors resulting from scribes and copyists who were unfamiliar with the remote places and exotic products that the *Periplus* describes.<sup>40</sup> Proponents of this interpretation claim that "Caesar" was really "Charibaêl," King of the Himyarites (*Periplus* 23).<sup>41</sup> In fact, the Himyarites had captured Aden, previously a Sabaeen port, at some point before the *Periplus*' authorship. It is likely that this battle ravaged the town and caused it to decline as a major port-of-call.<sup>42</sup> Thus, regardless of the reason behind Aden's fall, it was certainly not the entrepôt that it had been in the previous era.<sup>43</sup>

Strabo does, however, present less contestable evidence of Arabia Felix's decline. He makes no mention of Aden; rather in his glowing description of Alexandria (17.1.13), he indicates that the Egyptian city was, "for the most part," the receptacle of the exotic goods of the

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<sup>40</sup>Casson, "Introduction," *Periplus*, 5.

<sup>41</sup>Rawlinson, *India*, 112-113.

<sup>42</sup>Doe, *Southern Arabia*, 58.

<sup>43</sup>Aden slowly rose again to commercial prominence. Ptolemy's listing (6.4.9) of the city in the second century A. C. indicates that the port was once again engaged in active trading. Cited in Casson, "General Commentary," *Periplus*, 159.

Orient, and the "source of supply to the outside world."<sup>44</sup> The *Periplus* (26) confirms Strabo's claim: "[Aden] used to receive the cargoes of [Egypt and India] just as Alexandria receives cargoes from overseas as well as from Egypt." It appears that Alexandria was displacing strife-torn Aden as the meeting ground and trading place between East and West.<sup>45</sup>

#### **Aelius Gallus' Ill-Fated Expedition to Arabia**

Yet, the evidence presented by Strabo, Pliny, and the *Periplus* does not present an irrefutable case that the Romans had destroyed Arabia Felix's trade and its economy. There is, in fact, substantial opposing evidence; much of it is contained within the same classical works that have demonstrated the increase in direct Roman shipping to India.

Hourani argues that South Arabia did not begin its decline until sometime between the second and the sixth

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<sup>44</sup>Johnson discusses the rise to prominence of Alexandria during this period, furthered no doubt by Augustan rule. Allan Chester Johnson, *Roman Egypt: To the Reign of Diocletian*, ed. Tenney Frank (Baltimore: The Johns Hopkins Press, 1936), 2: 344-346. Strabo indicates (17.1.13) that the efficiency of the Roman Empire had made Alexandria an extremely wealthy city and port: "If, then, the man [Auletes, the father of Cleopatra] who administered the kingdom in the worst and most careless way obtained so large a revenue, what should one think of the present revenues, which are managed with so much diligence."

<sup>45</sup>Rostovtzeff, *Social and Economic History*, 1: 97.

centuries A. C.<sup>46</sup> Although this is indeed a broad time frame, even the earlier date is two centuries after Roman shipping to India was a well-established fact. According to Hourani:

The idea of trade as a fixed quantity tends to persist in popular economic thinking. One answer . . . is that the trade between the Roman Empire and India, into which the merchants of Egypt entered so vigorously, expanded enormously in the period with which we are concerned, so that there may still have been room for the South Arabians.<sup>47</sup>

Fahmy agrees that the Arabians continued to play a most significant role as spice exporters and commercial middlemen between the Mediterranean and the Orient.<sup>48</sup>

The expedition of Aelius Gallus (the Roman governor of Egypt) to Arabia Felix in 25-24 B. C. supports Hourani's assertion. Strabo (16.4.22) claims that accounts of Arabia's wealth from sources such as Anaxicrates and Agatharchides, and its continued prosperity spurred the Romans into equipping a military expedition to this relatively unknown region.<sup>49</sup> According to Strabo

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<sup>46</sup>George Fadlo Hourani, "Did Roman Commercial Competition Ruin South Arabia?" *Journal of Near Eastern Studies* 11 (1952): 292-295.

<sup>47</sup>Ibid., 294.

<sup>48</sup>Fahmy, *Muslim Sea-Power*, 42-43.

<sup>49</sup>G. W. Bowersock, *Roman Arabia* (Cambridge: Harvard University Press, 1983), 46-49.

(16.4.24), Augustus directly ordered Gallus to undertake the mission for "the purpose of winning the Arabians over to himself or of subjugating them." Augustus clearly desired some share in the wealthy trade of the Arabians, or, failing that, direct control of the trade through political domination of South Arabia.<sup>50</sup> The primary source for this expedition is a soldier's eye-witness account, recorded by Strabo (16.4.22-25).<sup>51</sup> In addition, Pliny (*HN* 6.32.160-161) and Dio Cassius (53.29) each lend their own interpretations to this event.

According to Strabo (16.4.23), Syllaeus, a Nabataean administrator who had promised to guide the Roman force, deceived Gallus from the start:

[Syllaeus] acted treacherously in all things, and pointed out neither a safe voyage along the coast nor a safe journey by land, misguiding him [Gallus] through places that had no roads and by circuitous routes through regions destitute of everything, or along rocky shores that had no harbors or through waters that were shallow or full of submarine rocks; and particularly in places of that kind behind the flood-tides, as

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<sup>50</sup>Miller sees Gallus' mission not as a single attempt to gain influence in Arabia and the East, but as a carefully-orchestrated Roman policy concerned with furthering the Empire's trade in the Indian Ocean littoral. Miller, *Spice Trade*, 13-16.

<sup>51</sup>Bowersock claims that Strabo, a personal friend of Aelius Gallus, used Gallus as an informant for the expedition of 25-24 B. C. Strabo's writings, however, do not confirm this assertion. Bowersock, *Roman Arabia*, 47.

also the ebb-tides caused very great distress.<sup>52</sup>

Gallus mistakenly built eighty long ships--oared, naval vessels such as the bireme and trireme--but these quickly proved useless, for the Arabians had no navy with which to combat these vessels. The fighting would have to take place on land. Realizing his error, Gallus built about one hundred and thirty transport ships (round ships), setting sail with ten thousand Roman infantry, five hundred Jews, and one thousand Nabataeans (under Syllaeus). After fourteen days at sea, during which time a number of Gallus' ships were lost, Gallus arrived at Leucê Comê, a Nabataean village situated on the western side of the northern Red Sea. Strabo (16.4.24) goes on to say that his men were so sick with scurvy and lameness "as a result of the native water" that Gallus had to spend the summer and winter there, waiting for his force to recover.

Gallus then proceeded to march southward through Arabia, using camels to carry water, and he eventually reached South Arabia. His first overtures with the people of that land were unfriendly; he battled his way successfully to Marsiaba (perhaps Marib), allegedly killing thousands of Arabians for every Roman. Gallus was now "only

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<sup>52</sup>This passages sounds less like deception than ignorance of the Arabian Peninsula and of the treacherous northern reaches of the Red Sea. Syllaeus was probably a convenient scapegoat, not a willful saboteur. Ibid., 47-48.

two days' journey from the country that produced aromatics, as informed by his captives" (Strab. 16.4.24). Then, according to Strabo (16.4.24) he was forced to retreat from Marsiaba for "want of water." If Marsiaba really was the Marib of Saba, this is a curious assertion, for the city was the site of the great Marib dam, which was located in a fertile valley and watercourse. Strabo, apparently, was trying to put the retreat in the best light; Dio Cassius' account (52.29), however, seems closer to the truth. He claims that Gallus turned back at the first defeat that he suffered at the hands of the Arabians.

According to Shelagh Jameson, Gallus was probably recalled because he had been "far too dilatory about the whole expedition from the outset."<sup>53</sup> Regardless of the reason for Gallus' turnabout, he and his troops returned overland, covering in sixty days what had taken them six months beforehand. The Romans made Syllaeus the scapegoat, and he was beheaded. Gallus suffered a demotion (Strab. 16.4.24).

The significance of Gallus' mission lies not in its accomplishments, but rather in its timing. This was one of the first imperialistic ventures of the Roman Empire,

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<sup>53</sup>Shelagh Jameson, "Chronology of the Campaigns of Aelius Gallus and C. Petronius," *The Journal of Roman Studies* 58 (1968): 76.



occurring only six years after its consolidation and formation following Augustus' defeat of Antony's and Cleopatra's naval forces at Actium in 31 B. C. That the Romans should dispatch an official military expedition to distant Arabia indicates the economic importance of that region. The Roman failure meant that South Arabia would continue to operate as an independent and middleman, and would, more than likely, continue to profit from this role.

#### **Effects of Roman Shipping upon Arabia's Economy**

Further evidence for Arabia Felix's abiding prosperity comes from the *Periplus* (21). Although Aden had declined as a Himyari entrepôt, the land had other important ports that continued to thrive. The most important of the Red Sea ports was Muza, located close to modern-day Mocha.

According to the author of the *Periplus*,

the whole place [Muza] teems with Arabs--shipowners and charterers and sailors--and is astir with commercial activity. For they share in the trade across the water [East Africa] and with Barygaza [in India].

The *Periplus* (24) lists the numerous products traded at this port, including the expensive, highly-desired commodities of myrrh and stacte oil. The *Periplus'* evidence (23-24) that the leaders of Himyar and Rome were on friendly terms further indicates that ports such as Muza were prospering, and that part of this prosperity was owed directly to an

increased Roman commercial presence in the Indian Ocean littoral.

The town of Okêlis was located farther down the Red Sea coast. This port was also under control of the Himyarites, and the *Periplus* (25) describes it as a "harbor, watering station, and the first place to put in for those sailing on [to India]." <sup>54</sup> While the profits from this watery pit-stop were surely far less than those obtained at Muza, it can be certain that the Himyarites managed to extract certain tolls from mariners calling at this harbor. In addition to Okêlis and Muza, the *Periplus* (16) indicates that the Himyarites controlled the Ausanic coast of Africa, located directly opposite of Arabia Felix.

The *Periplus* (27-28) then proceeds to catalog the busy Hadhramawti port of Qana, the only South Arabian port listed that was not currently under Himyari control. The author claims that "all of the frankincense grown in the land is brought into Kanê . . . [which] also carries on trade with the ports across the water--Barygaza, Skythia, Omana--and with its neighbor, Persis." <sup>55</sup> Again, the *Periplus* presents

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<sup>54</sup>The *Periplus'* catalog of these ports reveals extensive Himyari control of the coasts, stretching from Muza on the Red Sea to Aden on the Arabian Sea.

<sup>55</sup>Casson feels that this statement by the author of the *Periplus* indicates strict governmental control over the frankincense trade. Casson, "General Commentary, *Periplus*, 162.

the reader with a lively description of a prosperous Arabian port at a time when Roman shipping to India was thriving.

The *Periplus'* description (21-28) of a thriving Arabian trade coexisting alongside an equally flourishing Roman commerce (*Periplus*, passim; Pliny *HN* 6.26.100-102; Strab. 17.1.3) indicates that the Romans were not directly attempting to control trade in the Indian Ocean. Aelius Gallus' failure demonstrated that direct control was difficult, if not impossible for the Romans. Rather, through securing diplomatic agreements and friendly ports (*Periplus* 23, 24), the Romans ensured a viable, but competitive trade for themselves throughout the Indian Ocean littoral. Land-based caravan routes were rendered increasingly obsolete by the more direct and efficient shipping lanes from Egypt to India. Pliny's description (*HN* 12.32.63-65) of the expensive and time-consuming middleman-laden caravan route, indicates that, as a result of open-market pressures, a transformation was ready to take place, from the Arabian caravan route to the Red Sea route. Roman economic competition provided the impetus for this modification. The *Quran* (162.18-19) comments on the effect that the direct maritime route had upon Arabia Felix's land-locked kingdoms:

*Between the cities  
made opulent by Us  
We placed*

conspicuous hamlets--  
 which served as stages visible:  
 "Travel ye along these  
 night or day in safety!"

But they said:  
 "Our Lord,  
 prolong the intervals between our journeys.  
 They wronged themselves;  
 so We made of them legends  
 and tore them all to pieces!

Such a transformation in route usage, however, did not result in the regional economic decline of Arabia Felix, as this thesis will demonstrate shortly.

In addition to the *Periplus's* evidence, Pliny (*HN* 6.32.162) also indicates that Arabia Felix continued to prosper. He calls the tribes of Arabia "the richest races in the world, because vast wealth from Rome and Parthia accumulates in their hands." Pliny notes (*HN* 12.41.84) that India, China, and Arabia take more than 100 million sesterces every year from Rome--"that is the sum which our luxuries and our women cost us." The insatiable Roman demand for spices is also illustrated by the funeral of Nero's wife, Poppaea, where more perfume was allegedly burned in one day than Arabia produced in an entire year (Pliny *HN* 12.41.83). Pliny's acidic pen (*HN* 12.41.82) reflects the Roman frustration at Arabia's continued prosperity: "She puts her happiness to the credit of the powers above, although she owes more of it to the powers below."

Whatever the accuracy of Pliny's remarks on the commerce with Arabia Felix and India, they show that the Romans of the first century A. C. believed these areas were prosperous. For although the West was undoubtedly a large market for Eastern goods, there was also an extensive intra-Indian Ocean trade.<sup>56</sup> It is doubtful if Roman shipping had any influence on this indigenous commerce, for Roman mariners were largely concerned with conveying products to Mediterranean markets.

One must remember that South Arabia was not only a middleman for the Roman Empire, but it also supplied the Romans with its indigenous products, namely frankincense and myrrh. Archaeological evidence indicates that Shabwa, the capital of Hadhramawt, reached the height of its prosperity in the first century A. C., long after Roman shipping to India was a well-established fact. As Pliny reports (*HN* 12.32.58), there were two harvests of frankincense to meet the demand for this product, the main one in the summer, and a somewhat inferior harvest in the spring. Pliny goes on to

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<sup>56</sup>The *Periplus* contains numerous references to this indigenous trade. *Periplus*, passim; and Lionel Casson, "Egypt, Africa, Arabia, and India: Patterns of Seaborne Trade in the First Century A. D.," *Bulletin of the American Society of Papyrologists* 21 (1984): 39-47. Whitehouse cautions against the common mistake of overestimating the importance of Roman shipping in contrast to indigenous commerce. David Whitehouse, "Epilogue: Roman Trade in Perspective," in *Rome and India*, 216-218.

say (HN 12.32.60) that the premium summer crop was not collected until autumn, and ships travelling to India would miss this harvest, as the *Periplus* states (39, 44, 56) that they must leave Egypt around July. Thus, because an entirely separate timetable was needed to sail to Qana during the harvest season, the *Periplus* (28) instructs mariners to leave around September.

In light of this evidence, Groom claims that not only were Arabian products in great demand, but also that the overland route remained a viable, though less-popular, alternative to the maritime route, despite the increasing frequency of seaborne trade.<sup>57</sup> Pliny's laments notwithstanding, it is clear that the Romans were still trading for these goods and enriching the economic life of South Arabia well into the period of the Roman Empire.

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<sup>57</sup>Groom, *Frankincense and Myrrh*, 212-213.

## CHAPTER V

### CONCLUSIONS AND THE DECLINE OF ARABIA FELIX

In the final analysis, the evidence for Arabia Felix's continued commercial prosperity during the era of the Roman Empire remains somewhat contradictory. Beginning late in the first century B. C., there is evidence to suggest a decline, but contrary evidence points to prosperity and growth.

Scholars have generally taken a categorical position concerning the effects of Roman shipping upon South Arabian commerce: either Roman shipping irrevocably damaged South Arabian commerce or had no effect upon South Arabia's economy and its political geography. This study proposes a third, unconsidered alternative: Roman shipping fundamentally changed the political nature of South Arabia, while it left the region's economic fortunes relatively unscathed.

The rise of the Himyarite kingdom is the key to understanding this claim. The Himyarites make their first appearance in the late second century B. C. This kingdom rose swiftly to power, capitalizing upon its control of South Arabia's coasts, and upon the general unrest in South Arabia at that time caused by declining revenues from the caravan trade. The Himyarites absorbed the remnants of

Qataban in the second century A. C., and by the third century Himyar controlled Saba and Hadhramawt as well. Notably, Steven Sidebotham claims that the second century A. C. also witnessed the zenith of Roman shipping with the East.<sup>1</sup>

The general pattern in South Arabia is thus one of political upheaval, beginning around the first century B. C. and lasting until the third century A. C. Significantly, this upheaval occurs at the same time that Roman shipping to India was becoming a reality, and as the Red Sea route was slowly displacing the less-efficient caravan route to the Mediterranean. While there is evidence to disprove Hitti's claim that Roman shipping ended South Arabian prosperity, Hourani's opposing thesis also seems to have dismissed major evidence, such as the decline of Aden, that pointed to chaos and change in Arabia. Aden was one of the most important ports in the ancient world; its decline cannot be easily ignored.

The significance of Aden's demise lies in the fact that its fortunes were closely connected with its role as commercial middleman. Unlike other ports, such as Qana, which had important export commodities, Aden had no indigenous products to offer traders. As Roman trade

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<sup>1</sup>Sidebotham, "Ports," 34.



bypassed Aden, the entrepôt dwindled in commercial importance (*Periplus* 26).<sup>2</sup> Although Aden was under Himyari control, the misfortunes of this city probably hurt the other states of South Arabia more than the Himyarites. The Himyarites had several ports to rely upon; by contrast, the land-locked kingdoms of Arabia Felix were far more dependent upon the revenues generated from the caravan trade (Agatharchides 5.101c; *Quran Saba* 162.18-19), much of which originated at Aden. Muza by comparison, was never a part of the great overland routes, and its position on the Red Sea-side of South Arabia further indicates the new emphasis placed upon maritime routes. As the land routes began to decline, the revenues earned by the kingdoms of Arabia must have declined as well. This diminishing trade could not continue to support several independent kingdoms, each relying upon taxes and middlemen's profits for its economic well-being. A larger kingdom was needed, one that could control coastal trade and what remained of the caravan trade.<sup>3</sup> The Himyarites fit this role quite well; the previous principalities of South Arabia did not.

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<sup>2</sup>Additionally, Aden had been ravaged by battling factions struggling to gain control of it (see chapter 4).

<sup>3</sup>The *Periplus'* mention (20) of camels (probably belonging to caravans) in South Arabia, indicates that the land routes continued to function even at the height of direct Roman trade with India.

By the first century A. C., the Himyarites controlled almost all of the significant ports in South Arabia, with the exception of Qana which was under Hadhramawti control. Because the Himyarites also governed the Ausanic coast of Africa, traders from this kingdom could engage in direct commerce with Roman merchants. Furthermore, Himyar was able to obtain middlemen's profit from taxes and tolls levied on Roman merchants who stopped at the Arabian ports to barter, use their facilities, and replenish their water and stores before undertaking the long voyage to India. In effect, Himyar's coastal control of South Arabia suffocated the region's land-locked kingdoms, weakening them economically and politically. As Stookey noted, "the rise of shipping obviously gravely threatened the interest of the landlocked states and intensified their rivalry."<sup>4</sup> The commercial suffocation of the internal kingdoms ultimately resulted in their downfall and submission to Himyari authority.

Direct Roman shipping to India was responsible for the decline of the internal, caravan-trade based principalities of South Arabia; but it was also responsible for the rise of a larger, more centralized rule. Both Stookey and Van Beek state that the incense traffic was a primary factor in "determining the political history of ancient South Arabia,"

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<sup>4</sup>Stookey, *South Yemen*, 18.

a history that was marked by attempts to bring all of the states in Arabia Felix "under a single central authority."<sup>5</sup> South Arabia remained prosperous, as Hourani has noted, but it had undergone a fundamental transformation in the political sphere, and the fortunes of the smaller individual kingdoms did indeed suffer a decline. The fact that the *Periplus* refers prominently to Himyar (22-25), and Pliny (*HN* 6.32.161) calls the Himyarites the "most numerous tribe" indicates, already in the first century A. C, the political predominance of this kingdom. The *Periplus* does not even mention Ausan, Qataban, or Ma'in.

It is, perhaps, ironic that Rome fell well before the Himyarites of South Arabia. Already in the third century A. C., the Roman Empire's influence had greatly waned as a result of internal strife and external pressures.<sup>6</sup> The Empire had weathered an exhausting civil war, foreign (Germanic) elements were gradually displacing the local population, urban areas had decayed, and intellectual and spiritual thought stagnated.<sup>7</sup> Meanwhile, in South Arabia,

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<sup>5</sup>Van Beek, "Frankincense and Myrrh," 152; and Stookey, *South Yemen*, 16.

<sup>6</sup>Miller, *Spice Trade*, 220; and Sidebotham, "Ports," 34.

<sup>7</sup>Rostovtzeff, *Social and Economic History*, 502-541. Among the extensive works dealing with Rome's decline are Edward Gibbon, *The Decline and Fall of the Roman Empire* (1776-

the Himyarites united all of Arabia Felix in approximately A. D. 300, which was the first and, until A. D. 1990,<sup>8</sup> the last time that the region had been politically unified. In fact, by the mid-fourth century A. C., Aden had fully recovered from the civil strife that had devastated the port earlier, and according to the Byzantine writer Philostorgius (*Hist. Eccles.* 3.4), Roman ships once again docked there regularly to trade for goods from India.<sup>9</sup>

If Roman trade and shipping were not responsible for the ultimate economic and political deterioration of ancient Arabia Felix, what precisely caused the decline that later took place? No single factor, it seems, was responsible; rather, a series of internal and external factors caused Arabia Felix's collapse. While a sharp decrease in the volume of maritime commerce was in large part responsible for Arabia Felix's decline, the reasons for this decrease are more complex than mere maritime competition with the

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1788; reprint, New York: Fenelon Cooper, 1899); Mortimer Chambers, *The Fall of Rome: Can it be Explained?*, 2d ed. (New York: Holt, Rinehart, and Winston, 1970); Solomon Katz, *The Decline of Rome and the Rise of Medieval Europe* (Ithaca: Cornell University Press, 1955); and Arthur Ferrill, *The Fall of the Roman Empire: The Military Explanation* (New York: Thames and Hudson, 1986).

<sup>8</sup>North and South Yemen united on 22 May 1990.

<sup>9</sup>Cited in Casson, "General Commentary," in *Periplus*, 159.

Romans.

The weakness of the Himyarites by the latter part of the fourth century indicates the presence of rifts within the ruling classes. Himyar, divided along tribal lines, wasted much of its energy and resources in attempting to control civil unrest and secessionist movements.<sup>10</sup> These rifts rendered the Himyarites extremely vulnerable to attack and conquest by foreign powers. Furthermore, a dry period in South Arabian climatic history, beginning about the fourth or fifth centuries A. C. and continuing to the modern era, had a negative impact on the region and also weakened Himyarite rule.<sup>11</sup> This drying-up, coupled with pressure from an increasing human and animal population, destroyed much of South Arabia's vegetative cover. Also, irrigation works, an attempt to provide food and fodder for this relatively large population, eventually were completely silted-over (see "sayl" irrigation in chapter 1), and may have made the land uncultivable by bringing salt to the surface.<sup>12</sup>

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<sup>10</sup>Stookey, *South Yemen*, 19.

<sup>11</sup>Groom, *Frankincense and Myrrh*, 226-227.

<sup>12</sup>These factors would also help to explain the contemporary rarity of the frankincense and myrrh tree in modern Yemen, a rarity that is becoming more acute as this, the most populous nation in the Arabian Peninsula, modernizes and develops. *Ibid.*, 226-228.

One of the most important external factors in the decay of Arabia Felix's commercial power was the decline in the fortunes of the Roman Empire. Although Roman weakness resulted in a greater Arabian share of the maritime spice trade, the instability of Rome also served to contract greatly the market for Eastern goods. With the establishment of Germanic dynasties throughout the former western Roman Empire by the late fifth century A. C., little remained of the previous eras' demand for the luxuries of the Orient. Thus South Arabia's revenues declined substantially. In addition, by the fifth century A. C., much of the Red Sea trade had begun to pass through the Aksumite port of Adulis, the most important harbor on the west side of the Red Sea, and a significant center for the export of African frankincense. The growth of Adulis deprived the Arabians of "even the profits of their ports of call."<sup>13</sup>

The growth of Christianity, spurred on by Constantine's pro-Christian policies and reforms in the early fourth century A. C., and by Theodosius' (A. D. 378-395) subsequent adoption of it as the official religion of the Roman Empire, also weakened Arabia's economic position. The oft-persecuted Christians, having been granted a

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<sup>13</sup>Hourani, "Roman Commercial Competition," 295.

reprieve, at once commenced with the persecution of the pagans. In its persecution, the Church eliminated an important market for Arabian frankincense when it outlawed the use of incense, which was closely associated with paganistic ritual.<sup>14</sup> When the Western Roman Empire collapsed, it struck its final blow to Arabia's maritime trade, for the center of the Mediterranean world now shifted to Byzantium (Constantinople), which became the capital of what remained of the Roman Empire. Because of Byzantium's location, the Persian Gulf, rather than the Red Sea, became the center for the maritime spice trade from the Orient.<sup>15</sup> In addition, overland spice routes from China were opened up; these routes, winding through Central Asia, bypassed South Arabia entirely.

A final external factor, the rise of Islam, also contributed to the fall of Arabia Felix. Not only did Islam's rise sever Arabia Felix's remaining contacts with Byzantium,<sup>16</sup> but also the caliphs of Islam soon left the

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<sup>14</sup>R. A. Markus, *Christianity in the Roman World* (New York: Charles Scribner's Sons, 1974), 123-124; Groom, *Frankincense and Myrrh*, 162; see also Johannes Geffchen, *The Last Days of Greco-Roman Paganism*, trans. Sabine MacCormack (Amsterdam: North-Holland Publishing Company, 1978), 115-222.

<sup>15</sup>Stookey, *South Yemen*, 20-21.

<sup>16</sup>Charles Verlinden, "The Indian Ocean: The Ancient Period and the Middle Ages," in Chandra Statish, ed., *The Indian Ocean: Explorations in History, Commerce, and Politics* (New Delhi: Sage Publications, 1987), 41.

Arabian Peninsula (in the eighth century A. C.) for Damascus and later Baghdad, shifting the center of Islamic political and socio-economic life northward. "Henceforth the stream of Arabian history flowed in northern channels."<sup>17</sup>

At least for several centuries, this statement remained true. Although the Umayyids and subsequently the Abbasids maintained governors in South Arabia,<sup>18</sup> in reality the political situation there was one of unrest and fragmentation, as various sectarian groups engaged in conflict in Arabia Felix. In fact, from about A. D. 750-1174, South Arabia remained the battle-ground of petty chieftains and warring factions. Throughout this era, South Arabia's maritime trade stagnated, for under the Abbasids, the Persian Gulf, not the Red Sea, was the focus of maritime trade and of the revenues that this trade entailed. Later on, South Arabia did undergo a revival, lasting for several centuries, as a center of East-West trade. This revival began in the twelfth century, with the founding of the Ayyubid dynasty in Arabia Felix by Saladin. Because Saladin promoted Red Sea trade, at the expense of Persian Gulf

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<sup>17</sup>Hitti, *History of the Arabs*, 66.

<sup>18</sup>The Umayyid dynasty led the Islamic world from A. D. 661 to A. D. 750. Following a civil war beginning in A. D. 747, the Abbasids overthrew the Umayyids and became the leaders of the Islamic Empire, ruling it for over five hundred years. For more information on the Islamic Empire, see Saunders, *Medieval Islam*, passim.



trade, this rise in commerce continued, and by the era of the Rassulid dynasty (A. D. 1229-1454), Arabia Felix was once again a flourishing land, deriving substantial revenues from maritime traffic. The coming of the Portuguese in the early sixteenth century actually helped strengthen Arabia Felix's and especially Aden's economy to an even greater degree for a period of time. Within a few decades, Aden remained the main strategic port not controlled by the Portuguese in the Indian Ocean littoral, and it profited greatly from the fruits of this role.

Records from the Venetian colony in Alexandria reveal that from A. D. 1560-1564, Alexandria exported 1,310,454 pounds of pepper annually.<sup>19</sup> This amount was greater than that which was exported before the Portuguese had devised the Cape route.<sup>20</sup> This revival in the old routes of trade was also evidenced by the carrying capacity of the Venetian merchant marine, which obtained many products from Arab traders. During the sixteenth century, there is evidence that the carrying capacity of the Venetian merchant marine actually grew, rather than declined, as has generally been

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<sup>19</sup>Pepper maintained a preeminent position in the spice trade from the ancient era until the pre-modern era.

<sup>20</sup>The authenticity of these documents has not been determined. Museo Civico, Venice, Archivio Dona della Rosa, busta 217, f. 276, quoted in Frederic Chapin Lane, "Venetian Shipping During the Commercial Revolution," *The American Historical Review* 17 (January 1933): 229.

supposed. In 1499, the Venetians had twenty-five ships of 240 or more tons each, for a total carrying capacity of around 10,000 tons. In 1558, by comparison, Venetian merchants maintained 27 ships of 360 or more tons each, for a total carrying capacity of 14,850 tons.<sup>21</sup>

The effects of this revival, however, gradually dissipated. Although the trade of the region now known as Yemen continued to flourish even after this period, the region was no longer autonomous--it became divided among the Ottoman Empire, Great Britain, and numerous, petty sultanates in the Hadhramawt. What remained of the South Arabian trade became an adjunct of an expanding commerce managed by external colonial powers.

In conclusion, it is interesting to note that the decline of ancient Arabia Felix was primarily initiated by a series of factors that appeared, on the surface at least, beneficial to Arabia's commercial fortunes. The collapse of the Roman Empire should have allowed Arabia to regain its uncontested hegemony over the spice trade. This did not happen, however. The erosion of the Mediterranean market

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<sup>21</sup>Sanuto, II. 1080-1081, 1242-1249 and *Diarii* in Biblioteca Marciana, Venice, MSS It., Cl. VII. 230, ff. 418, 481-483 in Lane, "Venetian Shipping," 225-226; and Museo Civico, Venice, Archivo Dona della Rosa, busta 217, f. 46 in *Ibid.*, 235.

left Arabia the middleman for a swiftly declining trade. Later, the rise of Islam in the seventh century A. C. should have strengthened Southern Arabia as well, but the capitals of the theocratic Islamic Empire established by the Prophet Muhammad quickly moved from the Arabian Peninsula to the Fertile Crescent and to North Africa, taking along with them all of the economic benefits that are the fruits of an expanding empire. Thus, despite later revivals in maritime trade, Arabia Felix was never to regain the pivotal role it had played as spice middleman between Europe and the Orient.

The collapse of the Marib dam in the latter part of the sixth century A. C. is deeply symbolic of the decline of Arabia's commercial and political fortunes. For by this time the Himyarites no longer had the revenues with which to renovate the dam or to maintain the empire's infrastructure. Although Arabia Felix would later regain a portion of its earlier prestige and wealth, the great dam of Sheba was never rebuilt:

*Over Saba too  
there lay  
a constant sign (of danger)--  
verdant fields to right and left!  
"Eat of the abundant fruit  
provided by your Lord  
and be grateful to Him . . .  
a healthful land--  
a mild and kindly master*

But (midst this ease)  
they ignored it!  
We sent upon them  
the flood of 'Arim  
and changed their gardens fair  
in to wilderness  
with only here and there  
the bitter fruit  
of tamarisk and lote!

Quran Saba 162.15-16

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