

Slavery, Agriculture, and Malaria in the Arabian Peninsula

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Introduction

THE GOAL of this book is to describe, in as much detail as the sources permit, a system of slave and servile agricultural labor, employing mainly sub-Saharan Africans, which prevailed in the traditional Arabian Peninsula. Previous studies of slavery in the Arabic world have focused almost exclusively on non-agricultural employments of slaves, most notably domestic labor, military servitude, or concubinage. The use of slaves in productive sectors of the economy such as agriculture has rarely been noticed in the literature, much less studied systematically. This book therefore is intended to address a quite considerable lacuna in our understanding of the institution of slavery, particularly African slavery, in the Arab world.

As with most books about slavery, this book will deal heavily with the traditional concerns of social history: hierarchy, social mobility, demographic processes, and the daily lives of subalterns. Nonetheless, this book belongs as much to the field of environmental history as it does to social history. As an academic subfield, the environmental history of the Middle East is only now beginning to be written. Alan Mikhail wrote as recently as 2013 that, despite some good work done in recent decades, the Middle East is “one of the gaping holes in the global story of the environment.”¹ This book represents a preliminary attempt to fill in this gaping hole. In addition, I believe this book could serve as an example of the possible benefits that historians studying the Arabian Peninsula could derive from environmental history. I will argue throughout this text that the African contribution to the agriculture of the Arabian Peninsula can be fully understood only

within the context of environmental history, in particular the interaction between economics and geography, epidemiology, and human biology.

Overall this study will argue that, as the result of the interaction between economic, cultural, and environmental factors, African agricultural slavery in the Arabian Peninsula had a distinctive, hybrid character. From the cultural and social standpoint, as one might expect, African agricultural slavery in the Arabian Peninsula had obvious affinities to slavery as practiced throughout the Middle East. Nonetheless, from the standpoint of genetics and disease, African agricultural slavery displayed characteristics that were strikingly similar to slave systems in the Atlantic world of the seventeenth through the nineteenth centuries. In both systems of slave agriculture, the malaria threat inherent in the fertile lowland agricultural zones encouraged the dominant population to exploit these dangerous environments by proxy, by means of African slaves with intrinsic or acquired immunity to malaria infection.

The Historiographical Background: African Slaves in Arab Agriculture

Although the slave systems in the Arab world have been the subject of some fine scholarship, on the whole, slavery in the Middle East has been significantly under-studied compared with slavery in the Atlantic world.² In 1989, historian Bernard Lewis lamented the “remarkable dearth of scholarly work” on slavery in a Middle Eastern context, and by and large Lewis’s observation is still valid today.³ The literature that does exist about slavery in the Islamic world focuses on nonproductive uses of slaves, such as sexual slavery (concubines), harem guards (eunuchs), slave soldiers, and domestic servants. Indeed, scholars of slavery have long argued that slaves “produced nothing” (Orlando Patterson) or were “not a labor unit” (Philip Curtin) in Islamic societies.⁴ More recently, Gwyn Campbell and others have argued that this distinction between productive and unproductive slaves is a “false dichotomy,” noting, for example, that even apparently nonproductive slave activities, such as military slavery, are encouraging economic production by providing security for markets and supply routes.⁵ Nonetheless, despite this current shift in the literature away from broad assumptions about the “nonproductive” character of Middle Eastern slavery, we still know relatively little about slaves employed in economically vital sectors such as the crafts or agriculture.

Lewis's "remarkable dearth" of Islamic slavery literature has been most pronounced in the study of agricultural slavery within the Islamic Middle East, which is a particularly neglected corner of an underworked field. Our knowledge about the agricultural use of African slaves is limited to a few often-cited examples, all sharply restricted in both space and time. One celebrated use of slave agricultural labor was the employment of the Zanj, an African population used in the ninth century to remove the top layer of the salt-impregnated soils of southern Mesopotamia in order to expand sugar and other agricultural production in "dead lands" in Iraq.⁶ The eventual rebellion of the Zanj, inspired by religious sectarianism as well as their miserable living conditions, helped fatally weaken the Islamic Abbasid Caliphate. Nonetheless, another system of African agricultural slavery thrived nearby in the tenth century. According to the Persian traveler Nasir-I Khusraw, "thirty thousand Zanzibari and Abyssinian slaves" worked in the "fields and orchards" of the al-Hasa oasis of eastern Arabia. Their owners were the Qarmatians, a Shi'ite sect that declared independence from the Abbasid Caliphate around the time of the Zanj rebellion.⁷ Unfortunately, we have few sources other than Khusraw's account of this curious tenth-century system of African agricultural slavery. One scholar, Salah Trabelsi, has made the case that the employment of slaves in agriculture was fairly widespread throughout the era of the Islamic conquests, during which time captured populations were enslaved and distributed as booty among the victorious Muslims. As Trabelsi himself admits, however, the evidence for this early Islamic agricultural slavery is rather thin, and some of his interpretations are open to question.⁸ Moving forward in time, there are some indications that African slave labor was used (perhaps not exclusively) in sugar plantations in early modern Morocco and in Oman, though these slave systems eventually collapsed along with the Islamic sugar industry as a whole owing to a lack of local fuel for sugar refining and competition from cheaper American sugar.⁹

African agricultural slavery again emerged as a theme in various parts of the Arab world in the nineteenth century. According to Gabriel Baer, the use of slaves for agricultural tasks in nineteenth-century Egypt was "not uncommon," and revolved around unpleasant jobs such as sugar production in Upper Egypt and drawing well water throughout the Egyptian rural countryside.¹⁰ Egyptian agricultural slavery probably reached its height in the 1860s, when even Egypt's poor *fellaheen* (peasant farmers) began to acquire enslaved African farmhands to cash in on the short-term cotton price spike that accompanied the American Civil War.¹¹ Agricultural slavery flourished

around the same time in the Ottoman Empire, though for very different reasons: as Ehud Toledano has pointed out, approximately 150,000 Circassian slaves flooded Ottoman domains in the late 1850s and early 1860s, and many of these slaves were employed in agriculture, though most were manumitted by the late nineteenth century.¹² An export-based slave plantation system also arose in Zanzibar and the vicinity on the Omani-dominated East African coast in the mid-nineteenth century, initially to take advantage of high clove prices, and later to produce cereal crops for export to the Arabian Peninsula.¹³ Similar plantations were established, though on a much smaller scale, along the Shebelli River of southern Somalia, though in this case these plantation slaves were owned by local pastoralist populations as well as Arab traders.¹⁴ Slave plantations were also established or enlarged in coastal Yemen and Oman in the late nineteenth century to produce dates for export.¹⁵ In addition, a number of sources describe slave-like employment of Africans in agricultural labor in the fertile Saharan oases of North Africa, in particular on the borderline between the Arab-speaking and Tuareg Berber cultural zones, and in the oases controlled by the Sanusi religious order in the nineteenth-century Libyan Desert.¹⁶

While these nineteenth-century uses of African slaves in agriculture are well attested to in the scholarly literature, the phenomenon of African agricultural slavery in contemporary northern and central Arabia has received virtually no attention. Indeed, I've managed to come up with only a handful of references to it in the current literature. Murray Gordon's *Slavery in the Arab World*, for example, devotes a single enigmatic line to the phenomenon, noting that African slaves "proved adaptable for use on the large estates in the *Hijaz*."¹⁷ Similarly laconic is John Hunwick and Eve Trout Powell's comment in *The African Diaspora in the Mediterranean Lands of Islam* that "in Arabia, agricultural labor was generally considered an inferior type of work, especially by the nomadic peoples. Hence, it was frequently carried out by slaves."¹⁸ In much the same vein, William Ochsenschwald notes in his study of the slave trade controversy in the *Hijaz* that the Arabs there "chiefly wanted servants for work in the home, though some slaves were used for . . . agricultural labor."¹⁹ A few other authors, such as Suzanne Miers, Abdussamad Ahmad, Beatrice Nicolini, and Abd al-'Alim 'Ali Abu Haykal, have also noted the existence of a system of agricultural slavery in Arabia, but give no details.²⁰ The existing literature, therefore, has nothing concrete to tell us about the origins, scale, or prevalence of African slave agriculture within the Arabian Peninsula interior. This study ventures into almost entirely unexplored ground.

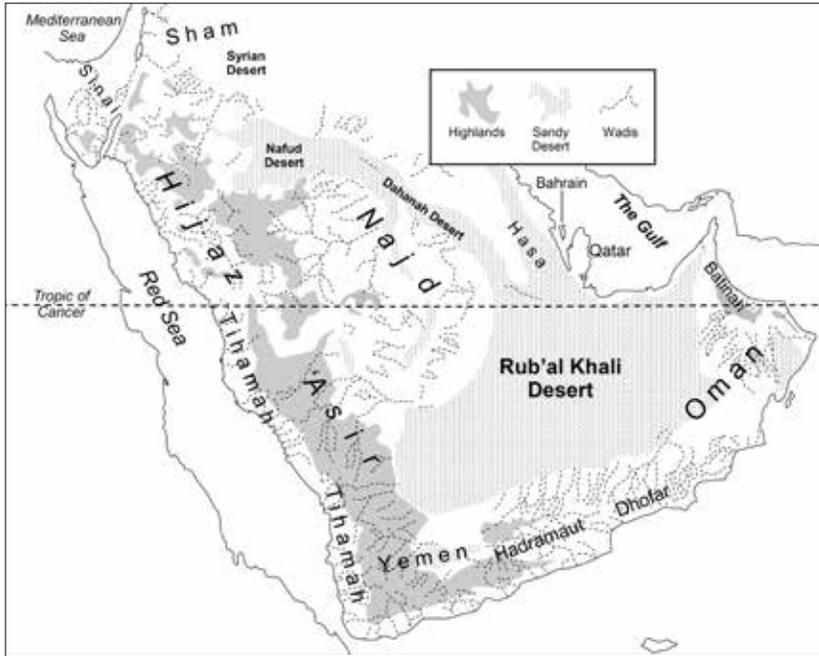
Scope of the Inquiry

Spatial Parameters

In terms of geographic extent, this book will take as its subject the Arabian Peninsula as a whole, so a word or two about the region is in order. Spatially, the Arabian Peninsula occupies more than three million square kilometers, an area nearly ten times as large as Germany and nearly one-third the size of the United States. Desert is overwhelmingly the dominant landform throughout the peninsula, but as might be expected over a territory so large, there are important local variations, which help to divide the territory into a number of useful subregions.

The Hijaz, which means “the barrier” in Arabic, received the name from its rugged, volcanic mountain ranges. These ranges serve as a barrier insofar as they form a wall separating the Arabian interior from the Red Sea, which was in fact created by the same tectonic processes that formed the Hijaz’s mountains. The Hijaz is predominantly arid, consisting in large part of gravelly soil or bare rock, including large areas of *harrah*, or basalt lava flows. As a result, pastoralism has historically been the predominant lifeway practiced in the Hijaz, though a few favored drainage channels, such as the Khaybar and the Medina oases, hosted long-established agricultural communities. Despite its overall aridity, the Hijaz has historically boasted of a number of fairly large urban centers, such as Jeddah and Mecca, which accommodated thirty thousand and seventy thousand inhabitants, respectively, in the early twentieth century. The wealth of these cities, however, was derived from religion rather than agriculture. Both Mecca and Medina have historically been almost entirely dependent on Islamic pilgrims for their revenue, and pilgrim income has allowed these cities to subsist on imported foodstuffs, mostly from Egypt. In addition, as we will see later in the book, these cities, and the pilgrims they attracted, played an important role in the history of the African slave trade in the Arabian Peninsula.

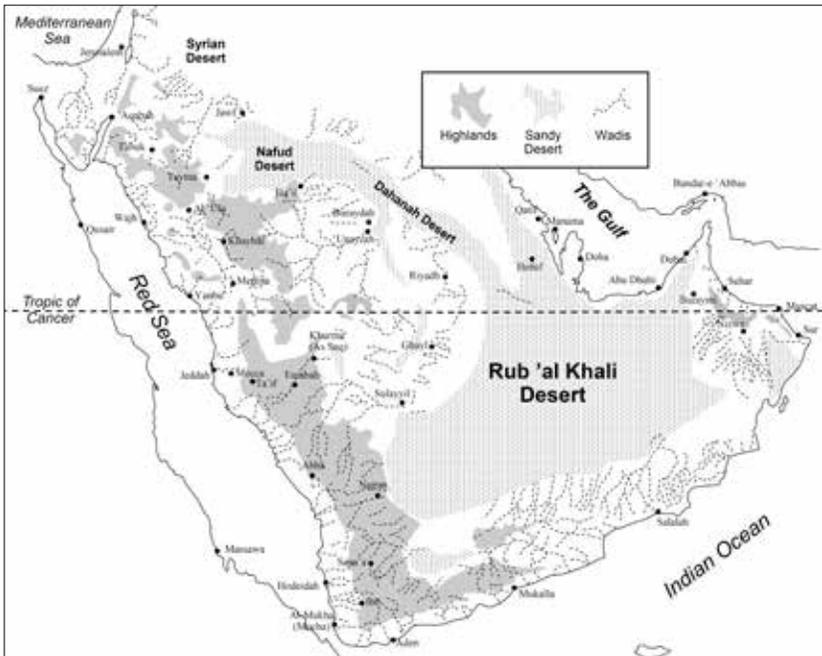
West of the Hijaz, and along the entire length of the Red Sea, stretches the Tihamah coastal strip. For the most part, Tihamah is best suited to nomadic pastoralism, as it is very arid even in the south, and hot even by Arabian standards. Nonetheless, Tihamah also supports a number of important port cities, including Jeddah, though as Mecca’s main port, Jeddah is usually considered a city of the Hijaz. In addition, agriculture is possible in some areas of Tihamah, especially in the south, where mountain rainfall fuels flash floods, or *sayl*, which penetrate the dry Tihamah and can be harnessed for agricultural production. It should be noted that



Map I.1. Regions of Arabia

Tihamah is heavily influenced by its close proximity to Africa, not only in terms of flora and fauna, but also in terms of culture. Tihamah's traditional conical grass huts, for example, appear nowhere else in Arabia, but echo building styles on the African side of the Red Sea.²¹

To the east of the Hijaz lies Najd, meaning “highlands” in Arabic. Although far less mountainous compared to the Hijaz, Najd gets its name from a series of local escarpments and (in the north) small mountains which differentiate it from the flatter terrain immediately to the east and west. As with the Hijaz, pastoralism is the predominant lifeway in Najd, but thanks to the widespread availability of groundwater, slightly higher rainfall, and important seasonal watercourses, most notably the Wadi al-Rimah and the Wadi Fatima, agriculture was practiced in Najd to a far greater extent than in the Hijaz, mostly in a series of villages and towns stretching from Jabal Shammar (Mountain of the Shammar) in the north to the inland delta of the Wadi Fatima to the south, and then southwest alongside the Jabal Tuwayq escarpment as far as Ghayl and Sulayyil. Several of the towns of Najd were also important trade hubs, especially ‘Unayzah, Buraydah, and Ha’il. The nearby oasis of al-Hasa is often considered to be an extension of



Map I.2. Towns of Arabia

Najd, though as we will see in chapter 1, al-Hasa is almost unique in Arabia for its fertility and population density and could be considered as a region unto itself.

In the southern heel of the Arabian Peninsula lies Yemen, an Arabic term which means “on the right hand.” Yemen is the geographical antithesis of al-Sham, meaning “on the left hand,” which is the traditional Arabic term for Syria. Both terms presume an eastward-facing hypothetical observer standing in the Hijaz, which in turn tells us something about the centrality of the Hijaz and its holy sites in the traditional Arab worldview. In any case, Yemen shares the mountainous topography of the Hijaz, but differs noticeably from the Hijaz in terms of its abundant summer rainfall. As a result of rain and altitude, the mountain highlands of Yemen enjoy a humid subtropical climate found almost nowhere else in Arabia, and Yemen is unique in the Arabian Peninsula for having far more farmers than nomadic pastoralists. Yemen also played an important historical role in regional and international trade, in part due to its strategic location at the mouth of the Red Sea, a major trading corridor. It also reflects the fact that Yemen was almost unique in Arabia for having a valuable

export commodity, namely coffee; indeed, mocha coffee bears the name of the now-derelict coffee exporting city of al-Mukha on the Yemeni coast. Yemen has lost both of these advantages in the modern era because of European competition, however, and is now one of the poorer regions in Arabia, whereas in the past “Arabia Felix,” as Yemen was known, was quite possibly Arabia’s most prosperous region.

‘Asir, in turn, is a transitional zone between the Hijaz and Yemen, notable for its relatively high rainfall, an advantage tempered somewhat by high levels of malaria. Unlike other regions of Arabia, which have names corresponding to geographical features, ‘Asir is named for a tribe dominant in the region. Historically, ‘Asir has been something of a backwater, the home of fiercely independent mountain tribesmen.

To the west of the historical territory of Yemen, but within its modern-day borders, lies Hadramaut, a collection of massive canyon-like valleys cut through an arid coastal plateau. Hadramaut means “death has come” in Arabic, though the origins of this term are obscure. The Hadrami, as the people of Hadramaut are called, traditionally combined animal pastoralism and agriculture, which is practiced in the depths of Hadramaut’s valleys using a combination of flood diversion and groundwater exploitation techniques. Hadramaut is notable for being cut off from the rest of Arabia by mountains and the vast Rub’ al Khali desert. As a result, Hadramaut’s natural outlet is to the Indian Ocean, and thus it has traditionally been heavily influenced by Swahili, Indian, Malay, and Indonesian culture. This reflects in part the limited resources of Hadramaut, which has encouraged the Hadrami to seek their fortunes abroad. For example, an estimated eighty thousand Hadrami were living in the Dutch East Indies in 1931.²² It also reflects an influx of non-Arab peoples to the region, such as the wives that Hadrami Arabs had married while overseas. The result was one of the most ethnically and culturally diverse regions in Arabia, to the point that one observer in 1940 was surprised to find that “Malay has become a ‘second language’ in the Hadhramaut.”²³

Eastward still of Hadramaut lies Dhofar, one of the Arabian Peninsula’s more unusual landscapes. In Dhofar, a modest but fairly steep mountain range catches the northernmost fringe of the Indian Ocean monsoon, creating a number of unique microclimates, such as a tropical “mist oasis” environment on the mountain foothills, a zone of incense-producing trees in the mountain rain shadows, and an intermediate “termite savannah” region common in Africa but found nowhere else in Arabia. Dhofar also marks the zone in which the coconut displaces the date palm, which is

ubiquitous farther north in Arabia.²⁴ As might be expected given the variety of microclimates in Dhofar, its peoples practiced a number of overlapping lifeways, such as coastal fishing, incense gathering, and agriculture. They also practiced animal husbandry, including cattle herding, a practice that exists almost nowhere else in Arabia. It should be noted that the area immediately to the north, south, and west of Dhofar's mountains includes some of the most barren and waterless wastelands of the Arabian Peninsula.

Eastward and northward of Dhofar is Oman, a mountainous area near the mouth of the Gulf. The term "Oman" is a rather nebulous one, previously applied to a number of regions that are outside of the modern territory of Oman, including the modern nation of the United Arab Emirates, which was once called "Trucial Oman" by the British. To confuse matters further, even within the core area of Oman, two distinct entities have traditionally coexisted: an outward-looking, cosmopolitan coastal region heavily engaged in the Indian Ocean mercantile world; and an inward-looking, religiously conservative interior, usually ruled by an *imam*, the leader of the Ibadhi sect of Islam. Oman's relatively high rainfall (by Arabian standards), high water table in the mountains, and significant domestic mineral resources (again, by Arabian standards) have combined to ensure that Oman has remained one of the most important and densely inhabited regions of Arabia from as far back as the Bronze Age, four thousand years ago. In addition to these domestic resources, the history of Oman, even more than Hadramaut, is intertwined with the sea. Oman long served as an important trade entrepôt, capitalizing upon its strategic location on the Gulf of Arabia and the Gulf of Oman. What is more, fishing has historically played a major role in Oman's economy; European observer S. B. Miles quipped in 1919 that "the whole coast of Oman is a continuous series of fishing stations."²⁵ An important subregion within Oman is al-Batinah, an area of intensive palm cultivation on the coast at the foot of the western al-Hajar mountain range. These palms are in decline today, but British traveler J. R. Wellsted observed in the early nineteenth century, with only moderate exaggeration, that the palms of al-Batinah "form a continuous grove" for a "distance of one hundred and fifty miles," and that "a traveler may proceed the whole distance without ever losing their shade."²⁶

Moving eastward and up the Gulf from Oman we find ourselves in the Gulf coast of Arabia, a coastal region whose fortunes, to even a greater extent than Oman, are tied to the sea. In the modern day, the Gulf coast is divided into sovereign states: the United Arab Emirates, Qatar, and

Kuwait, with Saudi Arabia claiming a stretch of coastline between the two latter nations. Historically, however, terms such as “Qatar” were mere geographical abstractions, and the coastline of both the Arabian side and the Iranian side of the Gulf was inhabited by highly mobile and shifting populations living in relatively small, mostly autonomous communities.²⁷ Population movement was constant, triggered by local failures in the water supply, siltation of harbors, shifts in the productivity of the pearl banks, and excessive taxation levied by internal strong men or by states external to the region. Although some pastoralism and agriculture was practiced in this region, both occupations were limited by low rainfall and infertile soils. Rather, the Gulf Arabs depended primarily on the sea for survival, fishing with both boats and weirs, diving for pearls, and participating in both local *cabotage* and long-distance Indian Ocean trade.²⁸ Gulf populations also earned notoriety by taxing or attacking the trade of others, an occupation that the Gulf Arabs regarded as a legitimate extension of mainland intertribal raiding into the sea, but that British and other European powers interpreted as piracy, thus earning the lower Gulf region the designation of the “Pirate Coast” until the early 1800s.²⁹

The only part of eastern Arabia to practice agriculture on a large scale was Bahrain, which, although only a small island archipelago, nonetheless has occupied a disproportional place in eastern Arabian history. Bahrain means “the two seas,” which may be a reference to its midpoint location in the Gulf, or may refer to two types of water, fresh and salt. Either meaning would be apt. Bahrain has been an important middleman trading city for nearly five thousand years; the ancient Mesopotamians, who knew it as Dilmun, exported grain and wool there, and received copper, cotton, and other goods in return. In addition, Bahrain’s numerous natural springs have long made it a regional center of agriculture and have allowed it to host a much larger population than its small size would suggest. Bahrain’s population in the early twentieth century was approximately one hundred thousand souls, nearly four times the population of the nearby peninsula of Qatar, which is fifteen times the area of Bahrain. Bahrain’s high population, agricultural productivity, and mercantile wealth, which in the past was bolstered by the presence of nearby pearl banks, has ensured that Bahrain has been the frequent target of expansionist states, including the Ottomans, the Omanis, the Persians, and most recently the British.

The following chapters will attempt to trace the use of African agricultural slaves in all of these regions of Arabia, but the picture that emerges is much clearer in some areas than others. Although it is likely that a certain

number of slaves were used in agriculture in 'Asir, where high malaria rates would have made slave agriculturalists an attractive proposition, I have been unable to find any evidence for it. Much the same can be said of Yemen, where I suspect that the presence of a large community of Arab farmers would have precluded the need to employ many slaves in agriculture endeavors in any case. More sources are available for the Hadramaut and Oman, and more still for the Gulf coast countries, al-Hasa, and Bahrain, though the picture that emerges is still somewhat indistinct. It is in the Hijaz and Najd regions that agricultural slavery comes into the sharpest focus. This is not to say that agricultural slavery was disproportionately concentrated in Najd and the Hijaz. The apparent preponderance of slavery in these two provinces could just as easily be an artifact of the evidence itself, given the relatively large number of travelers' accounts available concerning these regions, as compared to the rest of the Arabian Peninsula. Alternatively, the greater visibility of slavery in the Hijaz and Najd may reflect the central role played by the Hijaz in general, and Mecca in particular, in the African slave trade, a subject we will return to in chapters 2 and 4.

Temporal Parameters

In terms of temporality, this study will focus on the nineteenth and early twentieth centuries. This focus, however, reflects the limitations of the sources rather than the reality of the phenomenon under study. The use of African slaves and servile African labor for agriculture in the Arabian Peninsula almost certainly predates this period and may even predate the Islamic era, and I will discuss the evidence for the antiquity of agricultural slavery in Arabia in some detail in chapter 5. Suffice it to say at this point that from the standpoint of environment, economics, and culture, the factors that favored the use of African labor in agriculture in the nineteenth and early twentieth centuries were all present to some degree in earlier centuries as well. Logic, if not hard data, suggests that some African agriculturalists therefore existed throughout the period of traditional Arabian history.

The term I have just used, "traditional Arabian," requires some discussion. Traditional Arabia can only be understood in the context of its counterpart, "modern Arabia." As defined in this text, the period of modern Arabia does not have an exact start date, but is defined instead by a set of fundamental, transformative changes brought to the Arabian Peninsula by a set of new technologies and new political conventions imported from the Western world. The process began at sea in the nineteenth century, where

the imposition of British naval power and the advent of the steamship disrupted earlier Arab patterns of naval raiding and tribute collection as well as established techniques of Indian Ocean trade. In the early twentieth century, the arrival of the automotive age crippled the power of Arabia's dominant camel-breeding tribes, in part by destroying the market for Arabia's camel exports, but also by blunting the military advantage of Arabia's camel Bedouins. Bedouin military power was further undermined by the use of the airplane, both by the British and later by newly founded Arab states, for reconnaissance and warfare. The modern era also brought with it fixed national boundaries that struck a death blow to Bedouin camel nomadism, which depended on unfettered scope of movement within their tribal *deera*, or customary pasture grounds. From the standpoint of agriculture, the most transformative technological innovation was the adoption of tube wells and diesel pumps. These new wells drilled into Arabia's deep aquifers and rendered small-scale oasis crop cultivation obsolete. Arabian agriculture is now an industrial venture practiced on a massive (and wasteful) scale, overseen by expatriate technical experts. These technological and political changes were paid for by one further breakthrough: the discovery of oil throughout the northern and eastern portions of the Arabian Peninsula, which transformed some of the world's most impoverished peoples into some of the world's richest.

The glittering lights of Arabia's modern cityscapes, however, should not blind us to the fact that Arabian life in the traditional period took place on a very different scale and followed quite different patterns. In contrast to the modern era, in which the concentration of population into cities has become the norm, Arabia's population was traditionally diffused and scattered. Nomadic pastoralism was the dominant economic activity, both in terms of its territorial expanse within the Arabian Peninsula and the number of people who followed this lifeway. Pastoralists were also the politically dominant group within the peninsula, especially the *sharif* ("noble") camel-breeding tribes, since the mobility they derived from desert-adapted camels gave them a decisive military advantage. These pastoralists lived in symbiosis with Arabia's settled, or *hadr*, population, which was concentrated in small towns and villages throughout the peninsula. The main basis of exchange was desert fats and proteins, desert firewood and charcoal, and hides for the carbohydrates, cloth, finished leather, and metalwork provided by the towns.³⁰ This exchange was by no means equal; indeed, camel pastoralists were able to expropriate a portion of *hadr* production for themselves through raids or through tributary payments.³¹

Overall, the economy of the Arabian Peninsula, especially in the interior, was subsistence- rather than market-oriented.

Political structures in the traditional Arabian Peninsula tended to be fairly weak, as the egalitarian traditions of pastoralist tribes curbed the power of desert sheikhs, and the towns commanded few resources and had little sway over the surrounding desert. Significant political entities usually arose only when the sheikh of a pastoral group managed to establish himself as an emir, or local strong man, in one of the towns. This was the case in the nineteenth-century Rashidi dynasty, whose power was defended both by warriors of the camel-breeding Shammar tribe and by a large household of slave soldiers, mostly of Abyssinian origin or descent. Alternatively, political structures could be established when charismatic leaders rallied both hadr and Bedouin populations behind a religious ideology, as was the case in both the rise of Islam in the seventh century and the rise of the nineteenth-century Wahhabi state.³² Still, other state structures in Arabia resulted from outside patronage, such as the Ghassanid and Lakhmid dynasties in the immediate pre-Islamic period or the emirate of the Arabs established by Egyptian rulers in western Arabia during the Middle Ages.³³ Once established, these political entities tended to prove ephemeral due to the peninsula's precarious resource base, the shifting fortunes and policies of the established states surrounding the Peninsula, or both.

This is not to say that the traditional Arabian Peninsula was unchanging or timeless. Change was, in fact, a constant, especially on the level of politics, where the machinations of internal tribal groups and emirs, combined with interference from external political powers (Egyptians, Byzantines, Persians, Abyssinians, British, etc.), constantly reshaped the political map of Arabia. Other changes occurred intermediately, such as with the rise and fall of specific trade routes along the Red Sea and the Gulf, or through the interior of Arabia.³⁴ Such temporary changes, however, had a limited impact on the deeper structures of Arabian society and material culture. It is useful, in this respect, to recall the distinction made by the great French historian Fernand Braudel between *histoire événementielle*, the history of specific people and events, and the *longue durée*, the underlying structures and continuously recurring patterns of history that can remain fairly constant over very long periods of time.³⁵ While Arabian politics and trade route fluctuations occurred at the level of *histoire événementielle*, the concept of *longue durée* is more useful when seeking to understand agriculture, pastoralism, and other Arabian Peninsula lifeways. Nasir-i Khusraw's depiction of Arabian Bedouin and hadr populations in

the eleventh century, for example, differs very little from those described by Charles Doughty and other European travelers in the late nineteenth century. R. B. Serjeant notes, in a similar vein, that every agricultural practice described in a fourteenth-century Yemeni agricultural manual by al-Malik al-Afdal was still being carried out in Yemen in 1970: a visitor could “actually see, from day to day, these usages enacted before one’s eyes in the fields of South Arabia.”³⁶ What is more, Daniel Potts notes that “it is unlikely that there would have been much difference between the [date] gardens of Dilmun during the Bronze Age and those of Bahrain in the early twentieth century.” According to Potts, “no significant change, apart from the introduction of *falaj* [qanat] irrigation [in the fourth century CE], seems to have disrupted the essential continuity in agricultural praxis for roughly 4000 years.”³⁷ “Traditional Arabia,” therefore, is Arabia of the *longue durée*.

The process of transition between traditional and modern Arabia occurred at different times in different regions of the Arabian Peninsula. Change occurred earliest in coastal areas such as Oman, where British naval control over the seas surrounding the Peninsula disrupted established trading patterns. One of the more important disruptions, for the purpose of the present study, was an active British attempt to suppress the slave trade in the nineteenth century, though, as we shall see, this trade did survive in a diminished form via smuggling well into the twentieth century. Another early disruption was the collapse of the domestic Arabian handicraft industries in the face of cheaper European and (eventually) Japanese manufactures, and the collapse of the eastern Arabian pearl industry in the face of world wars and competition from Japanese cultured pearls. However, change came much more slowly to the interior and rural regions of Arabia. Traditional Arabia survived longest in the Omani and Yemeni interiors, Najd, and the rural regions of the Hijaz. In Saudi Arabia, the full transition to modernity—in other words, the subjugation of the Bedouin, the centralization of the state, and the shift from a subsistence economy to economic affluence—was still not complete as late as the 1970s.³⁸

Source Materials

One of the perennial problems facing scholars of the Arabian Peninsula is the relative paucity of source materials. In contrast to European states, and even in contrast to the established Islamic polities of Egypt and Turkey, the weak and short-lived states of the Arabian Peninsula have produced

almost no documentary record. Nor has the Arabian Peninsula produced much in the way of native historians or chroniclers, and those who do exist are far more interested in political and religious matters than in rural affairs. As Salah Trabelsi notes, classical Arab historians were urbanites who “disdain[ed] from evoking the dull and insipid life of the people of the countryside and, *a fortiori*, that of slaves stupefied by this punishing work.”³⁹ A historian of Arabian Peninsula environmental history, therefore, cannot afford to be choosy, and must be willing to consider all information available. This study therefore will draw from diverse academic fields, including archeology, anthropology, medical science, and genetics. Material from these disciplines has its limitations, however. Archeologists have done relatively little work in the Arabian Peninsula, a neglect that some authors have ascribed to the profession’s overall disdain for Arabian history, and in any case, slavery or servile labor systems are difficult to distinguish from other forms of labor on the basis of archeological remains.⁴⁰ Anthropological sources, in turn, are limited by the fact that most research was done in the Arabian Peninsula during the modern era, or during the period of transition to it, and thus is an imperfect window through which to view traditional Arabian Peninsula lifeways. What is more, anthropologists have worked disproportionately with Arabian Bedouins, such as the Rwala or Al Murrah tribes, and not with the settled populations among whom agricultural slavery was practiced.

As a result, the bulk of the material in this study will be drawn from two distinct, though interrelated, sources: archival materials relating to Britain’s “undeclared empire” in the Arabian Peninsula; and published accounts of European, American, and Arab travel in Arabia.⁴¹ Given the central role of these materials as sources for the present study, it is worth our while to discuss each briefly.

During the nineteenth and twentieth centuries, the British played an increasingly important role in the affairs of the Arabian Peninsula, in large part because British hegemony in Arabia was seen by the British as a means to safeguard British India. Indeed, the important southern Arabian port city of Aden, on the Yemeni coast, was ceded by the ruler of Lahaj to British India in 1838, thus becoming an overseas extension of Britain’s Indian possessions. Britain was also drawn into Arabian affairs by their concerns regarding the Hajj, the annual pilgrimage that attracted thousands of Muslims from British colonies, which the British feared could serve as a pump for the distribution of disease, sedition, or both back into British territory.⁴² The high point of British involvement in Arabia was during World War I,

when Arabia became a battleground between the British and the Ottoman Empire. Most importantly for the present study, Britain became involved in Arabian affairs through its policy of suppressing the Indian Ocean slave trade.

Britain's undeclared empire in Arabia was administered by political residents and agents, stationed first in Bushire in southern Persia and later in Muscat, Aden, Jeddah, Doha, Abu Dhabi, and other political centers on the Arabian coast. Officially, these residents oversaw British interests and the welfare of British subjects living in the Arabian Peninsula. Unofficially, these agents served as a shadow government in Arabian coastal areas, most especially in the Gulf and in Oman, where local rulers gave up a great degree of their sovereignty in exchange for British recognition and protection.⁴³ Fortunately for historians, the bureaucracy of Britain's undeclared Arabian empire generated a trove of documents, mostly in the form of letters between the political residents and agents of Arabia and their supervisors in British India and/or the British Foreign Office. The main limitation of these documents for the study of slavery and agriculture in the Arabian Peninsula is that they privilege maritime affairs and deal primarily with the coastal regions of Arabia rather than the interior. This disadvantage is to some degree counterbalanced by a significant advantage: quite a few of these letters touch on slavery, since both the slave trade into Arabia and the manumission of slaves already within Arabia were ongoing British concerns.

The most valuable single source produced by the British government, however, is the *Gazetteer of Arabia*, a classified reference work produced in 1917 for British diplomatic and military personnel. The *Gazetteer* owes its origins, in part, to a previous British publication, J. G. Lorimer's *Gazetteer of the Persian Gulf, Oman, and Central Arabia*, which, despite its title, included relatively little information on the Arabian interior. This deficiency became a matter of grave concern once Britain entered World War I, and central Arabia became a crucial theater of war between the British (and their Arabian ally, the Sharif of Mecca) and the Ottomans (who were supported by their own Arabian ally, the Rashidi dynasty of Ha'il).

The task of filling in this hole in British intelligence was given to a secretive group of Arabists working in Cairo, who compiled data from many sources, including published travelogues, information collected by Britain's political residents and agents in Arabia, and work performed by the British Government's intelligence service in Cairo, including the archeological-cum-espionage expedition carried out from 1914 to 1915

by T. E. Lawrence in the Ottoman Levant.⁴⁴ The *Gazetteer* is not without its limitations, most especially the disproportionate coverage it gives to military affairs, such as the number of tribesmen in arms, the attitude of specific leaders towards Britain, and (in one notable case) the practicability of transporting field guns across the Dhofar coastal plain.⁴⁵ Nonetheless, it remains the single best and most comprehensive document concerning demographic patterns in the traditional Arabian Peninsula, and the data it provides on population size, population composition, and well depths will be used as the basis for several systematic investigations in the chapters that follow. It should be noted that edited versions of the first two volumes of the *Gazetteer* were reprinted in 1979. These volumes add some additional material from post-1917 sources, but since the project was apparently discontinued halfway through, the edited 1979 *Gazetteer* does not lend itself as readily to systematic examination.⁴⁶

The other major body of sources upon which this study will rely is the corpus of nineteenth- and early twentieth-century travelogues on the Arabian Peninsula written by European, American, and Arab authors. Some anthropologists, such as Madawi al-Rasheed, have critiqued this body of literature, arguing that European travelers failed to grasp basic concepts that would have been clear to “any social scientist trained in the last fifty years or so.”⁴⁷ Nonetheless, I am far from the first scholar of the Arabian Peninsula to make heavy use of these documents; a number of influential scholars of the Middle East, including F. E. Peters, Norman Lewis, and Alexei Vassiliev, have all employed these sources in the study of the Arabian Peninsula.⁴⁸ Even scholars of the Middle East whose first language is Arabic, such as Jibrail S. Jabbur, Madawi al-Rasheed, Soraya Altorki, and Raouf Sa’d Abujaber, have found these sources indispensable to their investigations.⁴⁹ Al-Rasheed herself, for example, relies on thirty traveler’s accounts penned by twenty-two different European authors in her study of Ha’il and the Rashidi dynasty.

The authors of these travelogues came to Arabia with various motives. Some, like Charles Doughty, were eccentrics, seeking artistic inspiration and self-affirmation from Arabia’s desert landscapes. Others came to Arabia as horse traders, scholars, diplomats, soldiers, or pilgrims. Still others combined one of these erstwhile professions with more clandestine aims, and served as spies for the British or French governments. As Clive Smith has noted, during the nineteenth century “the difference between intelligence work and private travel was never precisely defined.”⁵⁰ Almost all of them saw themselves not as mere travelers but as explorers, delving into

the dark recesses of “unknown Arabia,” in the words of R. E. Cheesman.⁵¹ In actuality, of course, these “explorers” were nothing of the sort, and they mostly trod along well-known paths in the company of Arab guides and companions. This study will therefore employ the more neutral term “traveler” to describe such individuals, whatever their stated (or actual) motives for entering Arabia, and despite the pretensions many of them had to original discoveries in the Arabian Peninsula.⁵²

It might be expected that, given the various motives and backgrounds of these authors, their work would be highly uneven in quality, a combination of honest reporting and flights of fancy. However, this was not the case, in large part due to the fact that these authors understood themselves to be part of a larger tradition of travel writing on Arabia. Nearly all of these authors were well read on the travels of their predecessors in Arabia, and quite often commented upon or critiqued the findings of other travelers. In his 1884 article “Voyage dans L’Arabie centrale,” for example, French traveler Charles Huber commented on the work of nearly all travelers to pass through the same region before, including the Swiss traveler John Lewis Burckhart, the Italian traveler Carlo Guarmani, the Finnish academic G. A. Wallin, and the British travelers Charles Doughty, Lady Anne and Wilfrid Scawen Blunt, and William Palgrave. Huber, for the most part, concurs with the findings of these earlier travelers, with the exception of Palgrave, whom he finds guilty of repeated exaggerations, such as overstating the dangers of the Nafud desert and overestimating the age of a mosque in Buraydah by at least three hundred years.⁵³ Huber’s work, in turn, was weighed and judged (mostly favorably) by later travelers. The result of this constant process of reflection and critique was a corpus of literature that rewarded accurate reporting and aggressively sought out misinformation and hyperbole.

Accurate reporting on Arabian affairs was further fostered by the work of the Royal Geographical Society, founded in 1830. Although this society began as an informal dinner club, by the 1850s it had become a powerful institution under royal patronage with strong connections with British governmental and diplomatic leaders, particularly in the British foreign office. The Royal Geographical Society funded numerous “explorations” of Arabia, and also encouraged travelers to report on their Arabian adventures in public meetings, in which the findings of travelers were commented upon and critiqued by a learned audience. Even travelers who traveled as independent agents without any Geographical Society support, such as the stammering and reclusive Charles Doughty, were encouraged

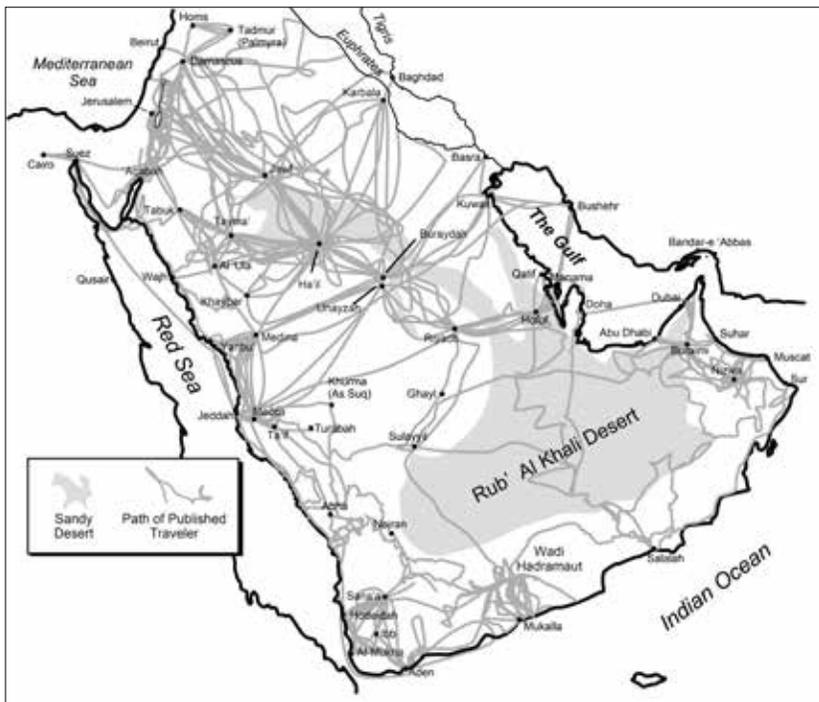
to speak at the Geographical Society. The French maintained an analogous institution, the Société de Géographie, to foster exploration and geographical knowledge, though France sent fewer travelers to Arabia. Both societies were founded and maintained in large part to support European imperialist ventures in Arabia and elsewhere, but they also acted to ensure quality control and accuracy within the corpus of travel literature.

The corpus of European travel writing on Arabia is not without its flaws. Most travelers were creatures of their age, and carried with them a set of Orientalist assumptions about Arabia and its supposedly timeless, primitive inhabitants.⁵⁴ The Geographical Society was also highly chauvinistic, banning women from its membership and meetings until 1913. This was not simply an injustice to women, but also to history itself, since it marginalized the work of several important female travelers in Arabia, including Lady Anne Blunt, Mabel Bent, and Gertrude Bell. In addition, the Royal Geographical Society actively worked with the government to ensure that travel into Britain's undeclared Arabian empire remained a British monopoly. In the words of Ameen Rihani, an American traveler of Syrian descent, Arabia was open "only to a few favoured Englishmen who combined . . . the interests of the Royal Geographical Society with those of the Foreign Office."⁵⁵ Even Englishmen were not immune to interference by the same institutional establishment, as is the case with G. Wyman Bury, a British political agent and keen student of Yemeni history and demography who was forced out of Yemen entirely after running afoul of his superiors. Our understanding of turn-of-the-century Yemen would undoubtedly be greater had he been allowed to remain. Despite these problems, the work of the Royal Geographical Society probably did more to foster than discourage the collection of accurate knowledge concerning the Arabian Peninsula.

The main limitation of the corpus of Arabian travelogue literature, as it exists today, is its narrow temporal extent. Although European travelers and merchants have long been active in the Middle East, in the period before the nineteenth century, most followed the prevailing trade routes along the Egypt–Red Sea or Mesopotamia–Gulf corridors, and few entered the Arabian Peninsula itself. What is more, pre-nineteenth-century explorers were overwhelmingly interested in antiquities and biblical studies rather than in the contemporary Arab inhabitants of the Middle East.⁵⁶ Only in the nineteenth century did travel within the Arabian Peninsula become increasingly common, largely as a side effect of European colonial expansion into Egypt and India.

Once again, however, there are compensating advantages. The most important advantage is the geographical extent of these studies. Since most of our travelers imagined themselves to be explorers, they actively sought to fill in the “blank spaces” in the map of Arabia, and competed to be the first to cross certain desert expanses, such as the Rub' al Khali desert of southern Arabia. As a result of this competition, European travelers observed and recorded notes on nearly the entirety of the Arabian Peninsula during the nineteenth and twentieth centuries, as is clear from map I.3, which shows the approximate paths taken by more than ninety different European travelers during the years 1807–1949. True, some areas are overrepresented (especially in northern Arabia) and others underrepresented (especially in the interior of the country, around Ghayl and Sulayyil). Nonetheless, overall, the competitive pressures exerted by the market for travel books and the Royal Geographical Society were a boon for modern scholars studying the traditional Arabian Peninsula.

Finally, this corpus of travel documents has several advantages that are relevant to the study of the environmental history of Arabia. European and



Map I.3. Travelers in Arabia, 1807–1949 CE

American travelers may not have thought like modern social scientists, but they did tend to be fairly observant about Arabian agricultural practices, partially because of their novelty, but also because the small patches of green in the Arabian Peninsula contrasted so starkly with the overall desert bleakness of the landscape. As a long-time inhabitant of the Arabian Peninsula myself, I can understand this sentiment. Even more importantly, nineteenth- and early twentieth-century European travelers were keenly interested in African slavery. In addition to being intrinsically exotic, slavery and the slave trade were then under active assault by European governments and thus were likely to be of interest both to the author and to his or her readers. As a result, these travelogues will serve as the main source of information in the next two chapters, which consider Arabian Peninsula agricultural techniques and the role played by slaves within those agricultural systems.