ISLANDS IN THE NILE SEA: THE MARITIME CULTURAL LANDSCAPE OF THMUIS, AN ANCIENT DELTA CITY

A Thesis

by

VERONICA MARIE MORRISS

Submitted to the Office of Graduate studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

May 2012

Major Subject: Anthropology

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Approved by:

Chair of Committee,	Shelley Wachsmann
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ABSTRACT

Islands in the Nile Sea:

The Maritime Cultural Landscape of Thmuis, an Ancient Delta City. (May 2012)

Veronica Marie Morriss, B.A., The Pennsylvania State University

Chair of Advisory Committee: Dr. Shelley Wachsmann

In ancient Egypt, the Nile was both a lifeline and a highway. In addition to its crucial role for agriculture and water resources, the river united an area nearly five hundred miles in length. It was an avenue for asserting imperial authority over the vast expanse of the Nile valley. River transport along the inland waterways was also an integral aspect of daily life and was employed by virtually every class of society; the king and his officials had ships for commuting, as did the landowner for shipping grain, and the 'marsh men' who lived in the northernmost regions of the Nile Delta. Considering the role of water transport in ancient Egypt we know surprisingly little about the maritime environment along the inland waterways of the Nile Delta. The physical interface between man and river is frequently obscured by the dearth of evidence for Delta waterways and fluvial harbors, and a lack of awareness for ancient hydrological conditions.

This thesis provides a preliminary reconstruction of the maritime cultural landscape of one Egyptian city, Thmuis, located in Egypt's eastern Nile Delta during the Hellenistic and Roman periods. It will demonstrate how the inhabitants of Greco-Roman Thmuis perceived, utilized, and interacted with their maritime environment, by incorporating available archaeological, material, geological, and textual evidence from Tell el- Timai (Thmuis).

These sources indicate that the Egyptians developed numerous ways to harness the dynamic riverine landscape of the eastern Nile Delta. Methods of irrigation were employed to divert and control the fruitful waters of the flood. Canalization enhanced the connectivity of the Nile Delta when the primary branches of the river were not suitable for sailing. Harbors were specially adapted to the shifting riverine conditions. When physical effort would not suffice, gods and goddesses were invoked to assist in the perils associated with life along the Nile, but also to ensure favorable conditions for navigating the inland waterways and the seas. After three thousand years of interaction with the Nilotic landscape, the Delta people developed a rich and complex relationship with their riverine environment that is evident in the Mendesian ideology, infrastructure, and history.

DEDICATION

To my parents, Alexander and Lisa Staats Morriss

When the Nile comes over the land, the cities alone are seen rising above the water, resembling more nearly than anything else the islands of the Aegean Sea….

Herodotus, Histories II.37

ACKNOWLEDGEMENTS

I wish to thank, first and foremost, my advisor and chair, Professor Shelley Wachsmann, for his continued guidance and encouragement throughout this process. I especially thank him for opening doors to new worlds and bringing fresh insights to everyday life.

I would like to thank my mentor, Professor Robert Littman, who has been by my side throughout my academic career and provided immense support to my endeavors in Egypt. Without him this thesis would not have been possible. I also am indebted to the many colleagues and mentors who aided my research in Egypt, particularly Jay Silverstein, Mohamed Gabr, Dr. Matthew J. Adams, Professor Adam Shahat, and Professor Donald Redford.

I would like to show my gratitude to my committee members, Professor Deborah Carlson and Professor Nancy Klein, for their encouragement and insightful comments. Thank you to my consummate editor, Doug Inglis, for his tireless efforts.

Last but not least, I would like to thank my parents, Lisa and Lex, for being a pillar of support throughout all of my pursuits.

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INTRODUCTION

At the dawn of civilization in the Nile Valley, people settled upon four levees of the Mendesian branch of the Nile (fig. 1.1).[1] These sandy embankments protruded from the landscape in a southwest to northeast direction and provided the earliest settlers a safe abode from the annual floodwaters (fig. 1.2). Here the first settlement of Mendes, initially known as '*Anepat*, "Place of Greenness," forged its beginnings amidst the watery landscape. A short distance north, the river emptied into the Mediterranean Sea, later called by the Egyptians the "Great Green" or the "Great Syrian Sea."[2] Upon this river, boats carrying cargoes from the eastern Mediterranean sailed to the various *entrepots* within the eastern Nile Delta. To the east, marshes abounding with reeds and papyri were accessible only by the local papyus-skiff. This area, known by the earliest inhabitants as *Laḫaḫta* or the "Watery Place," was a feature of the landscape until modern times. It is depicted in the *Description de l'Egypte* maps as a large marsh known as "the Daqahliyyah Lake" (fig. 1.3).[3]

This thesis follows the style and format of the *American Journal of Archaeology*.

[1] Redford 2010, 211. The coring work of Larry Pawlish indicates that Mendes was constructed upon four ancient levees aligned southwest to northeast.

[2] For a discussion of the term Wadj-wer, see Meeks 1997 and Kitchen 1978.

[3] Jomard 1809-28, Atlas pl. 35.

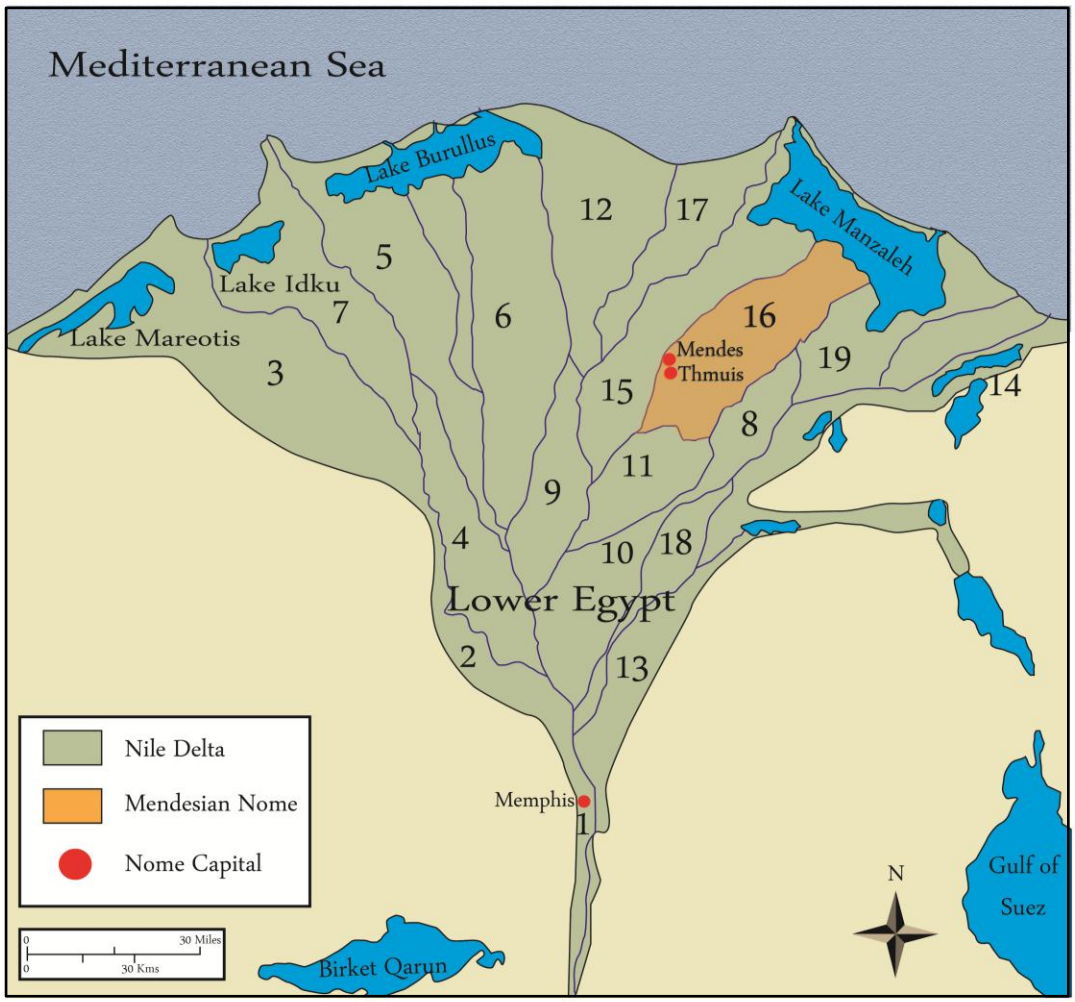

Fig. 1.1. Location of the Mendesian nome in the northeastern Nile Delta.

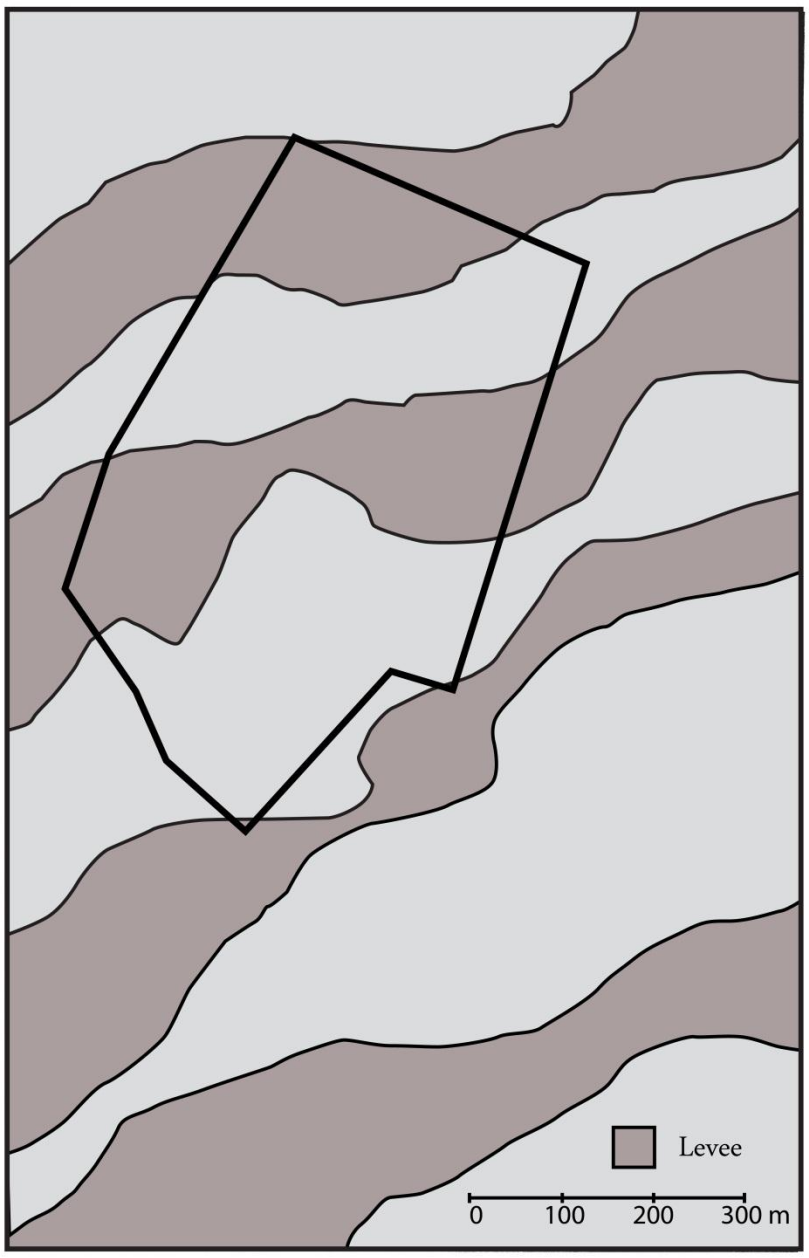

Fig. 1.2. Distribution of the Predynastic levees of the Mendesian Nile (after Redford 2010, fig. 1.1).

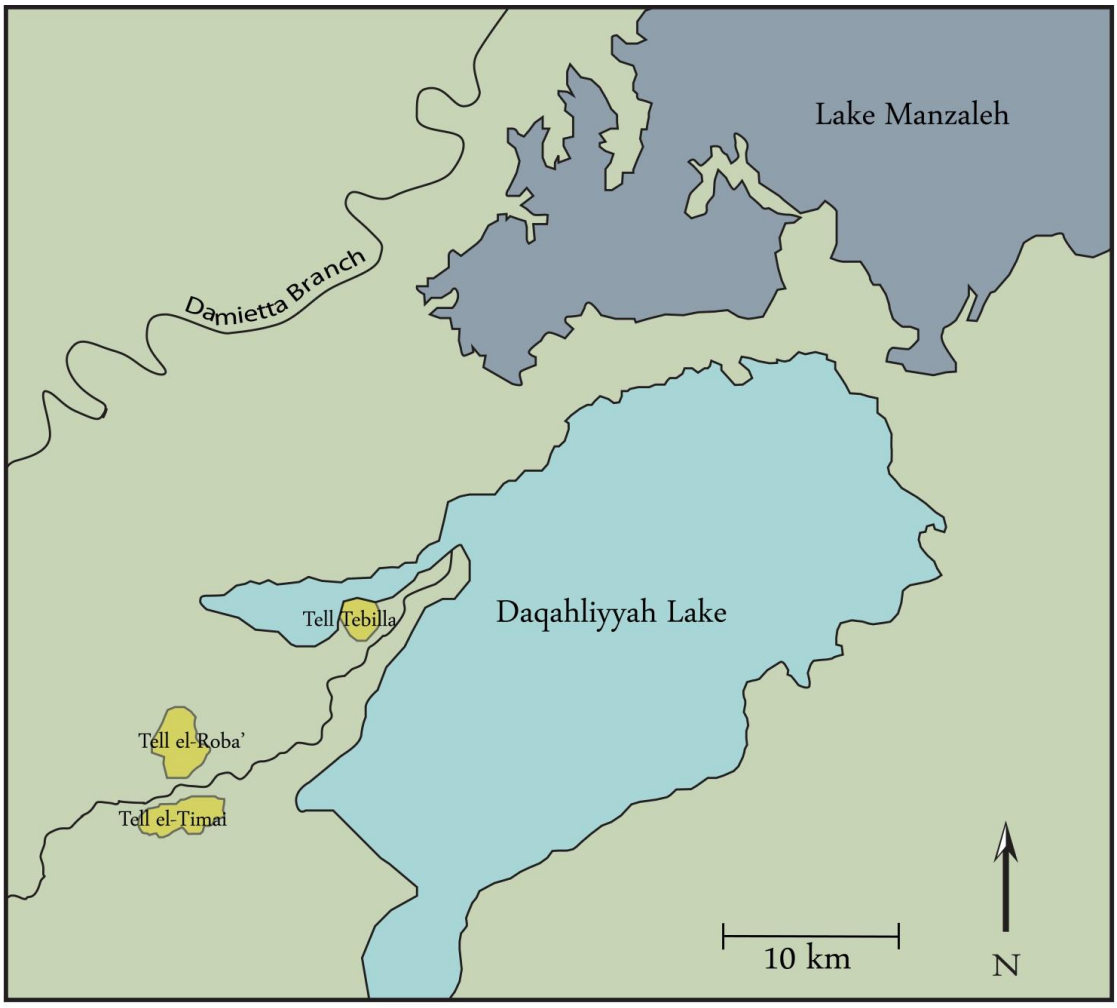

Fig. 1.3. The Daqahliyyah Lake in the northeastern Nile Delta (adapted from Jomard 1809-28, Atlas, pl. 35).

For nearly three millennia ‘Anepat slowly grew, settlement upon settlement, destruction layer upon destruction layer, into a mound that now stands 9.6 m (31 ft) above the surrounding landscape.[4] The city flourished as a hub of trade; situated along one of the eastern arteries of the Nile and within sight of the coast, the cities of Mendes, and later Thmuis, provided to the merchants of the Levant and the northern Aegean access to the markets and commodities of Egypt. The people of the Mendesian nome adapted wholly to their dynamic riverine environs; they developed artificial canals, basins, and harbors to control and utilize the waters of the Nile. When physical efforts would not suffice they resorted to divine assistance to harness control over their uncertain maritime environment. The local cults of the Mendesian nome reflect the Egyptians’ cognitive understanding of the unpredictable environment in which they lived. However, like the tides of time, the courses of the Nile shifted and the descendants of ‘Anepat were eventually cut off from their lifeline. By the ninth century C.E. the cities of Mendes and Thmuis were largely deserted.

The primary goal of this thesis is to examine the maritime space of ancient Thmuis and to discover how the inhabitants of the city perceived, utilized, and interacted with their riverine environment.

[4] Holz (1969, 261-2) notes that Tell el-Timai stood 34 ft above the surrounding fields during his time.

Maritime Cultural Landscape

The foundation for the maritime cultural landscape maintains that there exists a physical interaction between man and his surroundings. Any culture that has developed an intimate connection with its maritime environment, whether be it at sea or along inland waterways, will have a defined maritime space which is utilized via specialized watercraft. Christopher Westerdahl first coined the term, *maritime cultural landscape*, in 1978.[5] Initially the term was established for heritage management purposes dealing with both submerged and terrestrial remains. It was neither developed, nor suited, for theoretical objectives; later the term was fleshed out and developed into an applicable subdivision of maritime and nautical archaeology. Since then, numerous scholars have tackled the study of maritime cultural landscapes and have subsequently provided a basis for the implications and success of such a theory. While there is still room to debate the intricacies of maritime cultural landscape theory, this does not fall within the scope of this present study.

The underlying framework for this theory relies equally on material remains and cognitive archaeology.[6] Delving into the mindset of the ancient mariner is the ultimate goal, and knowledge of both the physical and cognitive landscape of a particular society is crucial for any attempt at understanding the maritime cultural landscape of the past. Naturally, the theory encompasses all activities that fall under the category of human

[5] Westerdahl 1978; see also Westerdahl 1992, 6.

[6] Westerdahl 1994, 266.

utilization of maritime space. These will often include: settlement, fishing, shipping, and various affairs that require water transport.

For an economy that was heavily reliant on river transport, harbors were an integral feature in the maritime landscape of Egypt. Interest in the 'Egyptian harbor' has increased in recent years. While fragmentary customs accounts and colorful tomb paintings attest to the existence of harbors on the Nile, the archaeological evidence for these facilities is scarce, particularly in the Nile Delta. Unlike the permanent and often monumental facilities found at seaports, Nilotic harbors were constructed under entirely different parameters. Fluctuating conditions, dictated by the flow of the Nile, influenced the construction of riverine harbors. As a result, transitory facilities were often adopted in lieu of more permanent designs using stone-works. Therefore, the task of locating such facilities can often be problematic. Geophysical surveying and geological coring are the foremost methods for delineating the harbors of the Nile Delta. The work of several scholars has helped unveil the elusive Nilotic harbor and paved the way for future studies of its design, function, and role. These elements are crucial to understanding the physical interface between man and river.

CHAPTER II

HISTORICAL CONTEXT

Historical and archaeological sources provide significant data about maritime activity at Thmuis and the city's interaction with its landscape. This chapter reviews the historical and political climate of Egypt from the Late Period through the Islamic conquest, focusing on significant events pertinent to Thmuis' existence and maritime activity. As there is an abundance of available historical narratives concerning Egypt, this chapter takes a narrow look at the development of the delta cities along the Mendesian Nile.[7]

Thmuis/Ta-mawt

The Egyptian city of *Ta-mawt* ("new land"), known to the Greeks as Thmuis, is located amidst the salt-ridden soils of the Eastern Nile Delta within the Dakhaliya province.[8] Today, the modern villages of Timai el-Amdid and Kafr el-Amir Abdulla Ibn Salam encroach upon the North-East and North-West limits of the tell; Kafr el-Amir is

[7] For the history of Egypt, see Shaw 2000; Grimal 1994; Redford 1992a; Redford 2001.

[8] Ochsenschlager 1967, 32; Hansen 1965, 31.

perhaps a development of the medieval Arab suburb of Thmuis (fig. 2.1).[9] The tell itself stretches nearly one and a half kilometers in breadth and lies half a kilometer south of the smaller Tell el-Roba, or ancient Mendes.

During pharaonic times Thmuis was located within Mendes' administrative district, or nome (fig. 1.1). The Mendesian nome was home to several satellite communities. Mendes is the Greek name for the early settlement of 'Anepat, later known as *Djedet*; it was settled by the Buto-Maadi culture (4000-3200 B.C.E.) during the Predynastic period.[10] The city prospered throughout antiquity, despite its partial destruction on several occasions, and rose to become capital of the 29th Dynasty (398-380 B.C.E.). Beginning in the fourth century B.C.E., however, the shifting of the Mendesian branch of the Nile marked a decline for the Pharaonic city of Mendes, and by Claudius Ptolemy's time (90-168 C.E.) the majority of its inhabitants had migrated southwards to Thmuis, or Ta-mawt.[11]

The Egyptian name Ta-mawt appears frequently in Egyptian texts as a denomination for a type of arable land created by the migration of the Nile.[12] Its roots can be traced back to the New Kingdom under Thutmosis III (1479-1425 B.C.E.), and the term is often equated with the Arabic '*gezira'*, or island.[13] This etymology of

[9] Mackay (1976, 9) notes that 'Al-Mawrada' was the old name for Kafr el-Amir Abdullah. It presently lies alongside the ruins of Tell el-Timai.

[10] Redford 2010, 212.

[11] According to Meulenaere (1976a, 1), Ptolemy places the capitol of the Mendesian nome at Thmuis.

[12] Blouin 2006, 84.

[13] Janssen 1961, 79.

Fig. 2.1. Map of modern Tell el-Timai and Tell el-Roba.

'Thmuis' suggests the settlement developed on a relatively new area of land, perhaps a landlocked island, which was created by the dynamic course of the Mendesian Nile.

The city itself is documented in historical texts from the fifth century B.C.E. until to ninth century C.E. Although Herodotus (484 - 430 B.C.E.) provides the earliest literary reference to Thmuis as a settlement in the nome of the Calasaries, it is possible that the city's origin can be traced back earlier.[14] It is likely that Thmuis initially developed as a suburb of neighboring Mendes. The notion that the cities were contiguous in antiquity is still a matter of debate among scholars.[15] Whether Thmuis was a later development of Mendes or a separate municipal entity, the impingement of cultivation in recent times has separated the settlements into two tells. These tells rise several meters above the surrounding landscape, much as they did during antiquity.

Herodotus also provides in his account the first reference to the Mendesian branch, a tributary of the Sebennytic branch, whose mouth opened along the coast of the Mediterranean.[16] The Mendesian Nile was the nome's lifeline. As the tributary migrated and slowly diminished in importance so did the prosperity and survival of the cities within its vicinity. Thus, an understanding of the hydrology of the region is crucial for the study of the maritime cultural landscape of Thmuis.

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[14] The Calasaries were one of the two military classes described Herodotus (Rawlinson 1928, II.166) in Egypt.

[15] Holz (1969, 254) notes the finding of pottery shards and worked stone in the agricultural fields between the two tells as evidence that the two sites were contiguous during antiquity. To date, however, no investigations have confirmed this hypothesis.

[16] Hdt., II.17 (Rawlinson 1928).

During the first century C.E. Thmuis appears to have supplanted Mendes as capitol of the Mendesian nome, and was responsible for the production and distribution of the popular perfume, *Unguentum Mendesium.*[17] The perfume industry, alluded to by several historians, was started at Mendes and was perhaps later adopted by Thmuis. The nome became famous for the production of this renowned and expensive unguent, which was exported throughout the Mediterranean world up through Roman times.[18]

> *Certain places produce the best perfumes…of henna the Egyptian is judged the best, next to it being the Cyprian and the Phoenician…The metopian and the Mendesian are made best in Egypt, and are made from the oil obtained from bitter almonds.*[19]

While the manufacturing site at Mendes has yet to be discovered, unguent vessels (*unguentaria*) are a common find at Mendes. Several unguentaria were also discovered near the harbor of Thmuis during the 2009 and 2010 University of Hawaii field seasons. Although they have not been dated their presence near the harbor presumably reflects Thmuis' continuation, or at least participation, in the Mendesian perfume industry.

At the beginning of the fourth century C.E. the city became an Episcopal See and remained a stronghold for Christianity throughout the Coptic period up until the arrival

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[17] Meulenaere 1976a, 1; On the Mendesian perfume, see Plin. *HN* XIII.1 (Bostock and Riley 1855).

[18] Redford 2010, 173.

[19] Ath., 15.688 (Yonge 1854).

of the Arabs.[20] Unfortunately, the textual record of Thmuis during these later centuries is sparse and we are left with only a small collection of cursory references to the site. During the first centuries of Islam under the Umayyad and Abbasid Dynasties, Arab sources reveal that Thmuis retained a role as an administrative division (*Kura*).[21] By the time of the Fatimid Caliphs in the 10th century AD, however, the city was abandoned presumably due to the changing hydrology of the north-eastern Nile Delta.[22]

The recent history of Tell el-Timai is marked by intermittent exploration by looters, archaeologists and farmers, known as *fellahin,* who remove the phosphate-rich mudbrick (*sebakhin*) from the tell to use as fertilizer. The northernmost tip of the site witnessed the brunt of sebakhin activity during the last two centuries, and excavation revealed that the suspected northern harbor's uppermost strata were stripped away. The expansive 'basin' in this section of the tell is likely the result of these destructive acts (fig. 2.2). In addition to the pillaging of mudbrick, the past centuries have certainly witnessed extensive robbing of stone from the monuments that litter the ruins. A stroll through the village of Kafr-Amir, situated on the northwest of the site, will attest to the local villagers' remarkable ingenuity at incorporating into their modest adobe houses the ancient architectural elements of their forefathers. Ancient limestone lintels grace the front steps or doorjambs of the humble homes. Sadly, this phenomenon has removed

[20] Meulenaere 1976b, 5.

[21] Mackay 1976, 6.

[22] Mackay 1976, 9.

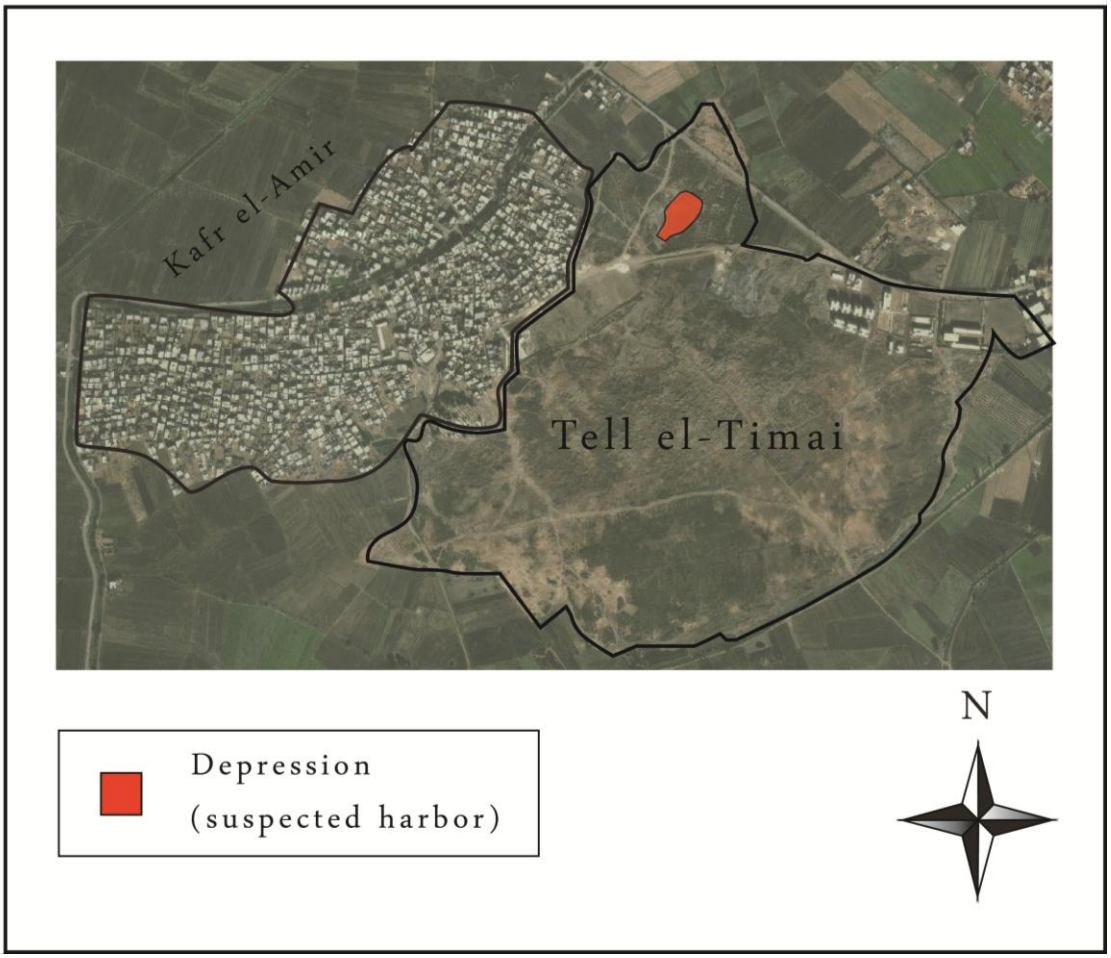

Fig. 2.2. Depression in the northern sector of Tell el-Timai. Location of the suspected northern harbor of Thmuis.

nearly all traces of Thmuis' former marvels, including the Greco-Roman temple beside the suspected harbor.

The Swiss Egyptologist Edouard Naville directed the first systematic exploration of Tell el-Timai in 1892 for the Egypt Exploration Fund. His discovery of a burnt storage house in the southwest extremity of the tell revealed the second largest cache of papyri ever discovered in the Nile Delta.[23] These documents offer a rare glimpse into the economic and administrative system within the Mendesian nome during the Roman period.[24] Shortly after the discovery of the papyri, a group of four Hellenistic and four Roman mosaics were discovered in the early 20th century.[25] The most beautiful of these portray a Ptolemaic queen, perhaps Arsinoe II, with the prow of a ship atop her head. The identification of the woman in these two mosaics, now housed in the Greco-Roman Museum of Alexandria, has been the subject of debate among scholars.[26] More recently, the University of Hawaii has uncovered several phases of occupation and destruction in the northern sector of the tell. The details of these findings will be discussed below as they relate to the history of Thmuis.

[23] Meulenaere 1976c, 15.

[24] K. Blouin (2006) discusses the Mendesian corpus in her thesis.

[25] Daressy 1914, 184; Blouin 2006, 261.

[26] For a discussion of the Thmuis mosaics, see chapter V.

The Late Period (664- 332 B.C.E.)

One of the most transformational periods in Egyptian history followed the Third Intermediate Period in Egypt, when internal strife and political division ran amuck. The arrival of Greek settlers in the Nile Delta the seventh century B.C.E. prompted a lively foreign trade that transformed Egypt economically, politically, and culturally. The period under discussion can be broken into four distinct phases: the Saite dynasty (664-525 B.C.E.); the First Persian Occupation (525-404 B.C.E.); a period of Egyptian independence (404-343 B.C.E.); and the Second Persian Occupation (343-332 B.C.E.).[27]

Psammetichus I (664-610 B.C.E.), ruler of the north-western Delta town of Sais, was the first of his time to appreciate the importance of foreign trade. With his rise to power, and the beginning of the Saitic period, he implemented a foreign policy that created a new ethnic niche within the Nile Delta. Although Greek merchants had frequented Egypt since at least the eighth century B.C.E., the stationing of Greek mercenaries by Psammetichus at key locations (*stratopeda*) throughout the Delta was a new phenomenon.

> *He also regularly treated with kindness any foreigners who sojourned in Egypt of their own free will…; and, speaking generally, he was the first Egyptian king to open to other nations the trading places (emporia) throughout the rest of Egypt and to offer a large measure of security to strangers from across the seas. For*

[27] For an account of the different phases of the Late Period see Lloyd 2000a.

> *his predecessors in power had consistently closed Egypt to strangers, either killing or enslaving any who touched its shores.*[28]

Psammetichus' policy on foreign trade effectively opened Egypt to the Greeks. Perhaps realizing the tremendous wealth associated with this trade, Amasis (570-526 B.C.E.), the successor of Psammetichus, ingeniously put it under state control through the establishment of Naukratis in the western Nile Delta.[29] This city became the chief port of trade for Egypt, through which all imports had to pass and pay customs.[30] Although short-lived, this policy put a strict control on Greek trade and directed all fiscal profits to Pharaoh. In 525 B.C.E. the Persians invaded the eastern frontier of Egypt. At the great Battle of Pelusium the superior naval and land tactics of Cambyses overwhelmed the Egyptians. Under the Persians, restrictions through Naucratis were abolished, and the strict control of Greek trade in Egypt was no longer in practice; Naucratis lost its status as chief emporion. Greek trade relations in Egypt continued unaltered, and possibly even increased, as Herodotus mentions:

> *When Cambyses the son of Cyrus was marching upon Egypt, many Hellenes arrived in Egypt, some, as might be expected, joining in the campaign to make profit, and some also coming to see the land itself…*[31]

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[28] Diod. Sic., I.67.9-10 (Oldfather 2004).

[29] Pfeiffer 2010, 16.

[30] Hdt., II.179 (Rawlinson 1928).

[31] Hdt., III.139 (Rawlinson 1928).

A Persian satrap presided over the administrative system already in place. While the local towns maintained a degree of autonomy, all fiscal affairs were under the yoke of the Persians. Aramaic gradually became the official language of state affairs.[32] In an effort to incorporate Egypt into the Persian network of communication, and perhaps also to facilitate trade, Darius completed the construction of a canal (510-497 B.C.E.) begun during the Saite period which effectively linked the Mediterranean with the Red Sea.[33]

The city of Thmuis emerged sometime during the middle of the first millennium B.C.E., in the midst of the First Persian Occupation of Egypt (525-404 B.C.E.). Although Herodotus is the first historian to speak of Thmuis, it is likely that the settlement was already in place by his time.[34] The same is true for his reference to the Mendesian branch, which by all means was the region's primary waterway since Pre-dynastic times. Unfortunately, apart from Herodotus' testimony, we know virtually nothing of Thmuis during this time. The initial Persian conquest was punctuated by revolts, instigated on all accounts by the exploitation of Egypt's military, naval, and economic resources.[35] Amongst this unrest, a family of military leaders came forth from the Mendesian nome, removed the rival claimants to the throne, and expelled the foreign rulers from Egypt. The heavy yoke of Persian domination was thereby lifted and for half a century Egypt, though riddled with instability, maintained her independence.

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[32] Redford 2010, 144.

[33] Lloyd 2000a, 375; Redmount 1995; Sneh et al. 1975; Diod. Sic., I.33 (Oldfather 2004).

[34] Hdt., II.166 (Rawlinson 1928).

[35] Lloyd 2000a, 376.

At this time, Mendes reached the apex of her existence. As capital of 29th Dynasty, the city prospered despite the quarrels that persisted between the various rulers. Economic activity continued, unhindered by the instability of the fifth and fourth centuries B.C.E. The discovery at Elephantine of a rare customs account, known as the Ahiqar Scroll, offers a glimpse into Egypt's trade relations with East Greece and Phoenicia in 475 B.C.E.[36] In addition to the invaluable information provided on taxation, cargoes, and the sailing season during Classical antiquity, this document reveals the existence of a lively foreign trading enterprise under the Persian Satrapy. The location of the port alluded to in the Ahiqar Scroll is often associated with Heracleion-Thonis in the western Nile Delta. However, the discovery of Greek amphoras and Phoenician oil jars in the harbor warehouses at Mendes and of similar wares at the satellite port of Tell Tebilla, provide evidence of this trade in the eastern Nile Delta and reflect the Mendesian nome's possible role as a port of call for the ships mentioned in the Aramaic document.[37]

The vulnerability of the Mendesian mouth of the Nile as a primary eastern point of entry into Egypt is witnessed on several accounts: first, in 454 B.C.E. when an Athenian fleet sailed up the Mendesian Nile in a desperate attempt to liberate the Delta during the initial Persian domination; and then, in 373 B.C.E. when Artaxerxes III attempted to re-conquer Egypt by sending a fleet of 600 ships commanded by the satrap

[36] Yardeni 1994.

[37] Pfeiffer (2010) believes the ships mentioned in the Ahiqar Scroll paid duty at Heracleion-Thonis. Redford (2010), however, provides evidence for this trade at the northwestern harbor of Mendes. According to Gregory Mumford (1999-2004), the prevalence of East Greek and Phoenician wares is much less pronounced at Tell Tebilla than it is at Naucratis.

Pharnabazos up the Mendesian branch to Memphis.[38] Fortunately for the Egyptians, Pharnabazos demonstrated a lack of determination; his invasion coincided with the beginning of the inundation, and the Persians were forced to withdraw.

These accounts are testimony to the vitality of the Mendesian branch of the Nile as a transit corridor between the Delta and the Mediterranean Sea; commercial and naval vessels could enter the river mouth when conditions permitted. As the ceramic assemblages from both Mendes and Thmuis indicate, the Mendesian River played a vital role in the commercial and military ventures within the eastern Nile Delta. The mouth was well-fortified with defenses since at least 374/373 B.C.E. when Nectanebo I embarked on a wide-scale fortification effort that effectively secured all entrances to Egypt by land and sea.[39] Despite the Pharaoh's strategic planning, Persian determination to control Egypt was persistent, and in 343 B.C.E. Egypt fell for a second time to them. A reign of terror followed as temples were plundered, defenses were toppled, and cities were burned. Mendes was all but decimated perhaps in retribution for being a stronghold of Egyptian independence; its harbor facilities were destroyed, its monuments broken and burned, and its nobility butchered.[40] This marked the beginning of Mendes' slow but steady decline.

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[38] Redford 2010, 144, 181. Artaxerxes III finally succeeded in conquering Egypt in 343 B.C.E.

[39] Lloyd 2000a, 380.

[40] Redford 2010, 185.

Under the Ptolemies

The arrival of the Macedonian king, Alexander the Great, was, needless to say, welcomed by the Egyptians who had tired of their Persian rulers. Mendes, too, celebrated the ousting of Persian authority and erected a statue in honor of Alexander's successor, Ptolemy I.[41] Although Greeks had established a presence within the country as mercenaries and traders, never before had Egypt witnessed such an influx of settlers. Greeks streamed into Egypt; many settled along the coast in Alexandria, while others ventured into the Nile Delta and further south into Upper Egypt.

The first three Ptolemies were generous to the native Egyptians. They took an interest in Egyptian ideology and they were mindful of maintaining the support of the priesthood.[42] This is reflected by Ptolemy II Philadelphus' (285-246 BC) campaign to visit the cities of his country. Mendes was bestowed the honor of being the first city to receive Philadelphus. Thanks to the discovery of the Mendes Stele (ca. 264 B.C.E.), which the king erected to commemorate his visit, we know the details of this occasion. Around 280 B.C.E., the king sailed to Mendes perhaps via the Butic Canal (see chapter III) and a great ceremony ensued in which Philadelphus paid his tribute to the ram-god of the nome. The stele mentions three waterways upon which the king rowed the god's sacred bark: the "Great Canal," the "Water of the Anchorage," and a third body of water

[41] Redford 2010, 188.

[42] Lloyd 2000b, 405.

over which he ferried the image of the god.[43] The location and exact nature of these waterways remains uncertain, but he is perhaps referring to a canal or tributary of the river, a harbor, and a lake. If Philadelphus' visit to the Mendesian nome did not immediately win him the favor of the citizens, his elimination of transit dues (the ferry toll and the bread tax) and reduction in taxes levied on the Mendesian township certainly won him wide acclaim within the nome. The generosity of the king, however, was not without motive.

Ptolemy II Philadelphus inherited a vast empire maintained through the Ptolemaic naval supremacy achieved by his father. When Philadelphus visited Mendes in 280 B.C.E., he was at the height of his power; he ruled a thalassocracy that extended up the Levantine coast, into southern and western Anatolia, as far north as the Black Sea, across the Aegean and into Southern Greece.[44] His interest was not confined to the Mediterranean Basin, but extended across the Indian Ocean and into the Far East, where pearls, silk, and exotic spices abounded. Philadelphus' establishment of the Red Sea ports Berenike and Myos Hormos facilitated the India trade and ensured a consistent flow of luxuries to the Hellenistic world. Alexandria reveled in its newly found success and quickly became the cosmopolitan center of the world.

Careful to maintain this prestigious position against his foremost rivals, the Macedonians and Seleucids, Philadelphus understood how important it was to adapt to

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[43] Redford 2010, 194.

[44] Marquaille 2008, 46.

the needs of the Egyptians. Like his father Ptolemy I Soter, Philadelphus embraced the title of Egyptian kingship that was required to establish control over the native population. Unlike Ptolemy I, however, Philadelphus took this effort one step further by establishing the first ruler-cult in Egypt.[45] Egyptian tradition placed the pharaoh as intermediary between the divine and the physical. Pharaoh carved out his place in the chaotic universe by maintaining the role of protector of order (*ma'at*). Realizing the importance of Egyptian ideology and determined to root the Ptolemaic dynasty within the pharaonic tradition, Philadelphus made himself a god king and established his very own cult. The king's consort and sister, Arsinoe II, was also accorded divinity and was incorporated into the pantheon of Greek and Egyptian gods. To affirm their presence within the capital city Alexandria, two colossal statues of Philadelphus and Arsinoe-Isis welcomed foreign ships that entered the great harbor of Alexandria.[46]

To establish common ground with their native neighbors, the newly established Greek populace looked to the Egyptian pantheon for aspects of Greek ideology. The most popular of these gods, Zeus and Aphrodite became the equivalents of Amun and Isis.[47] Although the equation of Egyptian deities with their Greek counterparts was practiced perhaps as early as the Saitic period, under the Ptolemies this phenomenon reached an apex.[48] Ptolemy I was responsible for the introduction and promotion of the

[45] Pfeiffer 2008, 388.

[46] Pfeiffer 2008,387.

[47] Pfeiffer 2008, 388.

[48] Hockman 2010, 25.

Greco-Egyptian god Serapis. Along with his consort Isis, Serapis became an emblem of Ptolemaic kingship, and thus the most venerated of gods during the Hellenistic period. Under their protection, Egypt thrived both economically and culturally under the first two Ptolemaic leaders.

During the third century B.C.E., Mendes and Thmuis partook in the brief return to prosperity. Today, Ptolemaic pottery litters the surface of both sites. Coins discovered in the harbor at Mendes attest to activity between the arrival of Alexander the Great and Ptolemy IV (221-205 BC).[49] The suspected harbor at Thmuis also bears witness to much of this activity. Ceramics found within it, including Aegean amphora fragments, indicate that the waterfront was in use between the third and mid-second centuries B.C.E. These imports indicate that even with the dissolution of Ptolemaic provinces in the Aegean between the late third and second centuries B.C.E., Aegean imports apparently continued to enter Egypt unhindered. Philadelphus' visit to the Mendesian nome had a significant impact on the cities of Mendes and Thmuis. Greeks settled amongst the Egyptians and several famous historians, including Asclepiades and Thrasyllus, visited the cities. During these golden days Greeks and Egyptians interacted on mutual terms. Several Egyptians from the Mendesian nome even maintained distinguished positions in the local administration and military.[50] Unfortunately, this welcomed hiatus from the turbulence of the preceding times did not last.

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[49] Redford 2010, 199.

[50] Lloyd 2000b, 405.

At the end of the third century B.C.E. unrest spread through Egypt. Dissatisfied with the policies of Ptolemy IV (221-204 B.C.E.), the native Egyptians retaliated in what became known as the Egyptian Revolt, whereby an independent kingdom was established at Thebes. A failing economy resulted in an increase in taxation which, in turn, led to insurgency. The Ptolemaic administration lost the vital support of the Egyptian priesthood, which Philadelphus had so carefully maintained, and the country was torn apart by political and nationalistic turmoil. In 196 B.C.E., Ptolemaic forces subdued the rebel forces of Busiris, a neighboring town of Mendes.[51]

It is possible that Mendes and Thmuis shared a part in the revolution. Certainly, the archaeological evidence corresponds to a significant upheaval during the second century B.C.E. Activity at the harbor of Mendes tapers off after the death of Ptolemy IV in 204 B.C.E., and many of the waterfront facilities were abandoned. At Thmuis, destruction deposits dated to the mid-second century B.C.E. are evident in the harbor and its associated facilities. Toppled mudbrick and scorched ceramics litter the buildings surrounding the waterfront, while the discovery of ballistae and a decapitated human skull within the harbor paint a vivid account of what ensued.[52] Ptolemaic history of the late fourth century B.C.E. documents the use of catapults and ballistae during the famous Battle of Salamis.[53] These anti-personnel projectiles were launched from the smallest caliber of stone throwers, compact in design so that they could be used in urban

[51] Redford 2010, 201.

[52] Two ballistae were found during excavation in 2010, one within the harbor basin and the other in a nearby structure.

[53] Lloyd 2000b, 397; for more on Hellenistic navies, see Murray 2011.

conflict or aboard small warships or freighters, perhaps offensively stationed along the Mendesian River. Small projectiles like these would have been used to target marines, deck crews or shore personnel when used in either naval warfare or naval siege warfare. The discovery of the two ballistae in the destruction deposits around Thmuis' harbor area might be evidence of a tactical attack on the city during the second century B.C.E. It is not certain whether this attack was related to the revolts that characterize the beginning of this century or to Antiochus IV Ephiphanes' brief conquest of the Nile Delta during the Sixth Syrian War.

A decrease in flow of the Mendesian Nile did not help economic matters, and by the beginning of the first century B.C.E. the harbors of Mendes and Thmuis silted up while the river meandered eastward.[54] By this time the majority of Mendes' inhabitants had migrated south to Thmuis; the city probably established a new eastern harbor that facilitated trade with the new course of the river. The damaged facilities surrounding the suspected northern harbor at Thmuis were filled in with debris and prepared for a later foundation. Unfortunately, these strata were stripped by sebakhin activity in recent times. At the end of the century, a modest temple was constructed atop a mudbrick structure which bordered the former harbor. The foundation was composed of re-used and well-worn limestone blocks from the quarry of Tura in Cairo.[55] Shortly thereafter, Egypt fell to Rome.

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[54] Redford 2010, 201; Ceramic evidence within the harbor of Thmuis indicates a terminus around the mid-second century B.C.E., following the destruction.

[55] Samples of the limestone were analyzed by Adam Shahat, geologist of the Tell el-Timai Harbor Project.

Roman Rule

Roman interest in Egypt was centered upon three enterprises: agriculture, mineral resources, and trade with the Far East.[56] Rome's heavy reliance on Egyptian grain put a taxing burden on the centers of the Nile Delta. The Roman regime developed an effective system of taxation, both in kind and currency, which milked Egypt's resources dry. Mineral extraction in the Eastern Desert became a focal point for the procurement of exotic stones.[57] Control of Egypt also equated to control over the vast imports of luxuries from the Orient that passed through the ports of Berenike and Myos Hormos.[58] Rome became rich at the expense of the Egyptians.

In addition to its economic position, Egypt also held a strategic military vantage for Rome's military campaigns in the east. In 68 C.E. Titus, son of the emperor Vespasian, led a legion of troops to quell a Jewish revolt in Jerusalem. Josephus relates that the ships of Titus sailed from Nicopolis (near Alexandria) along the Nile to Thmuis, whereupon they disembarked and continued overland to Jerusalem.[59] Regarding the itinerary, it appears that Thmuis was as far east as Titus' fleet could travel along the inland waterways. This account provides some interesting details regarding the hydrology of the eastern Nile Delta during this period (see chapter III), as well as the

[56] Peacock 2000, 419.

[57] Peacock 2000, 419.

[58] On Roman trade in the Red Sea and beyond, see Sidebotham and Wendrich 1999; Sidebotham and Wendrich 1996; Casson 1989; Peacock and Blue 2006.

[59] Joseph, IV.11.5 (Whiston 1737).

strategic position Thmuis held along the eastern frontier. It is tempting to presume that Titus moored his fleet of long-ships at a harbor of Thmuis for the duration of his campaign, but there is no concrete evidence to validate this.

In the second half of the second century C.E., increased financial burdens, coupled with crop failures and the spread of plague created a disastrous situation. The papyri discovered at Thmuis offer accounts of this event.[60] Intolerable conditions gave rise to a group of armed rebels, known as *Boukoloi.* These bandits terrorized the Mendesian nome and areas of the northern Nile Delta in what became known as the Boukoloi Revolt. A vicious cycle began when the Roman administration retaliated with extreme measures of taxation. Unable to meet the fiscal demands of the Roman Prefect, villagers fled their land and joined the insurgents. Previously, taxes were adjusted according to the flood and annual crop yield.[61] Frustrated with the revolt, however, the Roman administration drafted measures that effectively placed the tax-burdens of the rebels upon the shoulders of the remaining villagers who had not departed. As a result, the regions of the Nile Delta witnessed a massive depopulation. Philo of Alexandria (20 B.C.E. - 20 C.E.) relates:

> *Villages and towns are rapidly depopulated and emptied of their inhabitants, who left the country and scattered in places where they had missed.*[62]

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[60] Blouin (2006, 341-372) provides an account of the papyri which document the Boukoloi revolt.

[61] Peacock 2000, 420; Blouin 2006, 38.

[62] Blouin 2006, 373.

The revolt of the Boukoloi was detrimental to Thmuis and the rest of the Mendesian nome. This was not the end for Thmuis, however. Christianity quickly gained favor within the city walls and Thmuis became an Episcopal See at the beginning of the fourth century C.E. In the mid-fourth century C.E., Ammianus Marcellinus (AD 353- 378) relates that the settlement was one of the most important Egyptian towns of his time.[63] Despite Diocletian's' great persecutions in 303 C.E., when in fact the local bishop Phileas was martyred in Alexandria, the city remained a stronghold for Christianity throughout the Coptic period up until the arrival of the Arabs.[64] Mendes appears to have survived as a 'metropolis' alongside Thmuis, but evidence of Christian occupation at Mendes ends with the arrival of the Arabs in 641 C.E.[65] Thmuis, however, retained a role as an administrative division (*Kura*) during the first centuries of Islam under the Umayyad and Abbasid Dynasties.[66] By the time of the Fatimid Caliphs in the 10th century C.E., after several attempted revolts which devastated the city, Thmuis was finally abandoned.[67] Several small suburbs that flanked the mounds of Tell el-Ruba and Tell el-Timai persisted and retained the fragmentary names of the two former cities that once dominated the region; Tata (Djedet), Mondid (Pr-banebdjed), and Tumay.[68] Even today, the vestiges of these ancient suburbs remain. Timai el-Amdid and Kafr el-Amir

[63] Meulenaere 1976a, 2.

[64] Meulenaere 1976b, 5; Redford 2010, 207; Peacock 2000, 431.

[65] Redford 2010, 209.

[66] Mackay 1976, 6.

[67] Mackay 1976, 9.

[68] Redford 2010, 210; Mackay (1976, 9) relates that Al-Mawrada was an old name for Kafr el-Amir Abdullah.

Abdulla Ibn Salam, as they are now called, encroach upon the North-East and North-West limits of the tell.

Conclusion

The Late Period of Egypt was a truly tumultuous era in which instability at home and the threat of Persian occupation was constant. This was a time when the ports of Egypt were essentially open to Greek trade, and Greek mercenaries were among the Pharaoh's elite guard. While military families vied for power, local gods and animal cults dominated the religious scene. Thmuis was established amidst this backdrop, perhaps as early as the fifth century B.C.E., alongside her sister-city, Mendes.

The Mendesian nome occupied a strategic military zone in the Nile Delta. Early in her history, Thmuis probably functioned as a satellite harbor of Mendes, involved in the thriving economic activity of the fifth through fourth centuries B.C.E. Following the destruction of Mendes and Thmuis at the beginning of the Second Persian Occupation (343- 332 B.C.E.), the cities witnessed a brief return to normalcy.

Ptolemaic thalassocracy encouraged trading ventures in the Mediterranean and Aegean. Evidence from the harbors of Thmuis and Mendes attest to lively commercial activity from these regions between the third and mid-second centuries B.C.E. The period of revolution during the mid-second century B.C.E. destroyed the harbor facilities

at Thmuis. Thereafter, a declining Mendesian Nile marked the final end for the eastern harbors at Mendes during the first century B.C.E.

With Mendes waning, Thmuis took the lead. Thmuis' position in the northeastern Nile Delta was utilized by the Romans for economic and military purposes. The city's location along the Butic Canal facilitated the transport of grain and provided an attractive launching point for military ventures in the east. The Roman Empire's high demand for agricultural output ultimately put a heavy burden on the Mendesian nome. In the second century C.E., faced with an economic crisis, the inhabitants of the nome revolted in what became known as the Boukoloi Revolt. The consequences of the revolt were disastrous for the city of Thmuis which never fully recovered.

CHAPTER III

TOPOGRAPHY OF THE NORTHEASTERN NILE DELTA

In recent years, interest in the paleo-hydrology and paleo-landscape of the Nile Delta has increased. Several studies have partially traced the defunct branches of the Nile to understand the effects of the river system on settlement patterns. A few of these studies have been completed in the eastern Nile Delta, for instance at Pelusium. The majority of research conducted, however, is heavily concentrated in the western Nile Delta. The well-known sites of Naucratis, Thonis-Heracleion, and Alexandria have attracted scholars for decades, and it is of no surprise that the majority of geological work has centered on these areas. Despite the preponderance of attention in the west, several notable studies have been completed in northeastern Delta, and have certainly directed new light onto this region. Manfred Bietak's geophysical work at Tell el-Daba, approximately 50 km northwest of Thmuis, has provided a model for future work in the Nile Delta.[69] Bietak demonstrated the efficiency and importance of incorporating geophysical and geological data into archaeology, correlating settlement distribution of Avaris with its surrounding hydrology. Jean-Daniel Stanley's work along the easternmost fringe of the Egyptian coastline has uncovered a wealth of information regarding the evolution of Pelusium and the Pelusiac branch of the Nile. Several studies

[69] Bietak 2009.

focused specifically on the sites of Mendes, Tell el-Timai, and Tell Tebilla seek to understand aspects of the hydrology around these settlements. Apart from the work of these scholars, few studies on the hydrology of the eastern Nile Delta have been completed. For this reason, our understanding of the former waterways in the region is minimal. The purpose of this chapter is to discuss the available historical, archaeological, and geological evidence concerning the landscape and waterways of the northeastern Nile Delta.

The Holocene River

The Nile River maintained an integral role in the economic, political and cultural affairs of Egypt throughout antiquity. From the ancient Egyptian perspective the waters of the Nile were the life-source for agriculture, commerce, and travel throughout the extensive river valley. Settlement generally followed the course of the river; when a river branch silted up or took a new course, settlements either perished or people devised ways to divert the life-giving waters of the Nile. Most Egyptian settlements were centered upon the river.

During antiquity the rivers of the northeastern Nile Delta inundated the floodplains each year, depositing loads of suspended sediments along their banks. Over time this phenomenon resulted in the creation of natural berms alongside the riverbanks, known as levees (fig. 3.1). For the Egyptians, these levees provided an escape from the annual floodwaters. Each year, a new layer of fresh silt was deposited across the flood

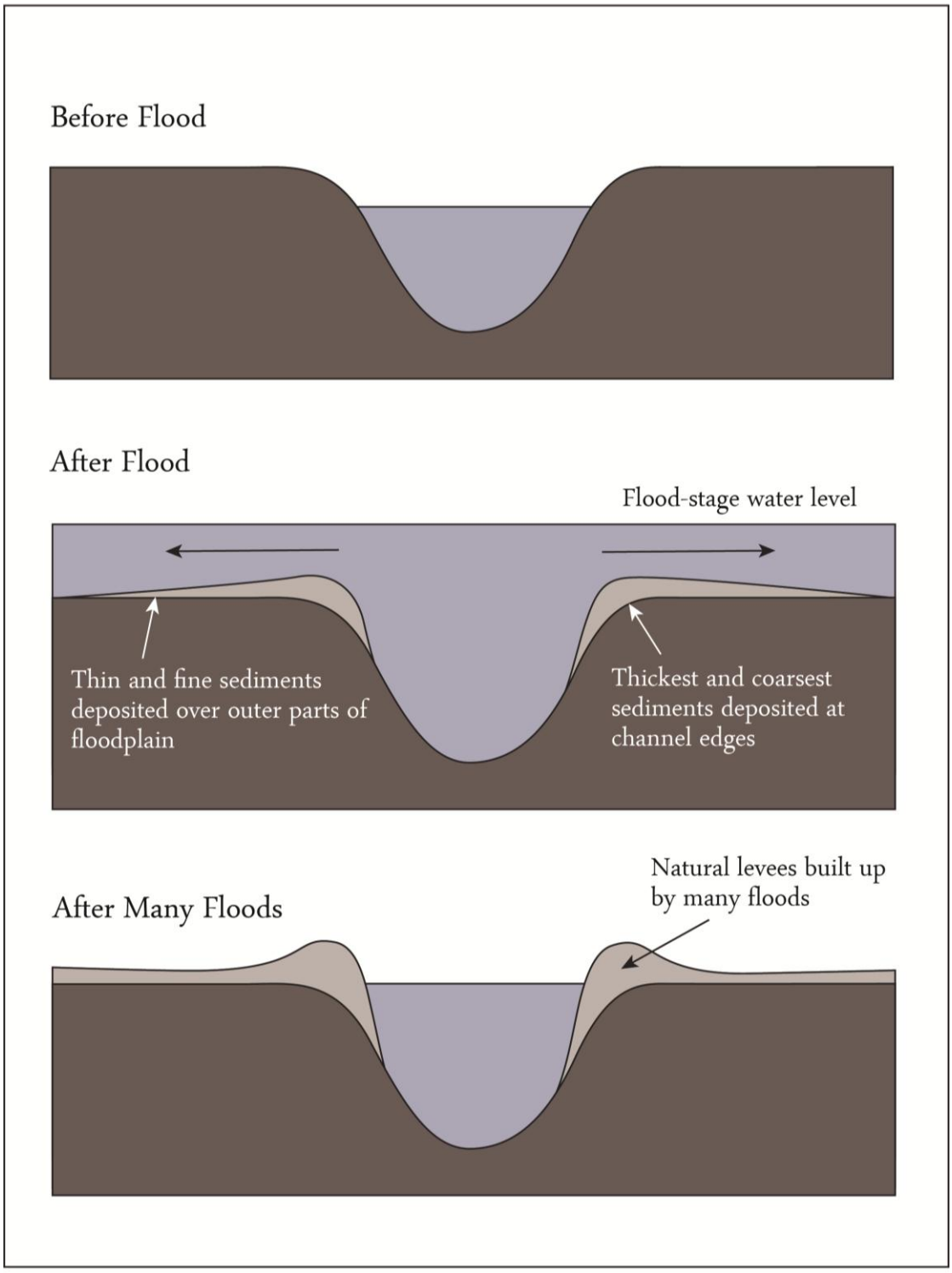

Fig. 3.1. The formation of a levee.

plain, and thereby increased its height. The levees upon which people settled, maintained their height above the encroaching alluvial landscape through continuous occupation. In fact, a distinctive feature of many tells today is their substantial elevation relative to the nearly flat surrounding landscape.

People also inhabited natural sand islands created by the Paleolithic river. During the early and mid-Pleistocene, forceful Nile floods created sand mounds, also known as *geziras* ('islands') or turtle-backs.[70] Originally these geziras stood above the alluvial plain and often provided havens for settlement within the Nile Delta. Most of these sand mounds were eventually buried by the continuous deposit of alluvial sediments. Today, the only viable means for determining whether a settlement was established upon a levee or a sand gezira is through coring. At Mendes cores revealed that the settlement was established upon four ancient levees of the Mendesian Nile which ran southwest to northeast (fig. 1.2).[71] Given its name, ta-mawy ('new land'), it seems logical that Thmuis was also built atop a natural levee of the Mendesian River. Generally, this term is employed for a type of land that is newly created by the meandering of the Nile.[72] Coring in the northern sector of Tell el-Timai in 2009, however, revealed gezira sand in a single auger at a depth of approximately 8-10 m. The presence of gezira sand suggests that Thmuis was founded, at least partially, upon a Pleistocene turtle-back. Additional coring across the tell is needed to substantiate this hypothesis.

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[70] Andres and Wunderlich 1992, 158.

[71] Redford 2010, 2, 211-12.

[72] Janssen 1961, 79.

The landscape of the Nile Delta underwent extensive changes throughout the course of history. The most profound of these changes occurred more recently after the construction of the two dams at Aswan in 1964 and several barrages on the Nile.[73] One of the most devastating results of the dam has been the departure of the annual Nile flood. The majority (98%) of the flood discharge and suspended sediments are no longer distributed across the Delta, causing extensive coastal erosion and increased salinization of the groundwater.[74] Consequently, the dynamic landscape of the ancient Nile Delta is no longer evident. A crucial phenomenon when considering the Egyptian landscape is the annual fluctuation of the river prior to the completion of the Aswan Dam.

For the Egyptians the area known as the Nile Delta was called, *Mehit*, or quite literally, 'the papyrus marsh.' The region was called such because during antiquity at least one third of the landscape was underwater throughout the year.[75] Each summer coinciding with the appearance of the star Sothis (Sirius), the waters of the Nile rose following rains in the distant African Lakes plateau and the Ethiopian highlands.[76] Unlike the Tigris and Euphrates rivers in Mesopotamia, the Nile inundation was a highly predictable phenomenon that was usually detected in mid- June and peaked in late August-September.[77] During the period of inundation, the settlements of Lower Egypt,

[73] Cooper 2008, 75; Banna and Frihy 2009, 1594.

[74] Stanley and Warne 1993, 633.

[75] Brier and Hobbes 1999, 218.

[76] Cooper 2008, 75.

[77] Cooper 2008, 75.

which were situated on natural levees and geziras, remained above the waters and exuded the appearance of islands amidst a sea.[78]

> *With a little imagination it would be easy to think that you were lost in the middle of a calm sea, but one without the slightest allure*.[79]

When the river was at its highest, transport along the Nile was easiest. Water levels rose to at least 2.5 m above the countryside and sometimes reached as high as 3.5 m during an exceptionally large flood.[80] At this time, conditions along the main branches of the river were at their best. This was generally the season when large cargoes of stone and grain were loaded onto barges for transport.[81] Land transport proved both laborious and expensive so the transfer of men and goods was conducted primarily on the river. Furthermore, the annual inundation, transformed the majority of the inhabitable landscape into a watery abyss, making land routes virtually non-existent. An interconnected system of waterways and artificial canals made the Nile Delta navigable for most of the year, if not year round for watercraft with minimal draughts.[82]

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[78] Strabo, XVII.4 (Jones 1932); Diod. Sic. (Oldfather 2004, I.36) compares the Delta under inundation to the Cyclades.

[79] Fabre (2004-5, 46) cites this quote from a geographer who visited the Delta in 1935.

[80] Cooper (2008, 78) mentions these levels from observations made in more recent times. Modern levels of the flood (before Aswan High Dam) are comparable to those in the medieval Arab period. It is assumed, therefore, that conditions on the Nile were generally similar throughout antiquity.

[81] Cooper (2008, 85) notes that the practice of moving grain from the granaries to the transfer points at the river ports was a yearly feat; Doyle 1998, 240; Lindsay (1968, 145) discusses a Roman document dating to 40 AD in which a landlord coordinates the transport of bulk commodities overland to the river ports before the waters of the flood peaked.

[82] Cooper 2008, 80; Strabo, XVII.4 (Jones 1932).

The first century C.E. Roman mosaic from the Temple of Fortune at Praeneste, Italy (fig. 3.2) provides an alluring depiction of the Nile Delta under flood. A galley transports troops near the shore of a temple, brailed-sailed vessels navigate across the inundated plains, a private vessel hunts hippopotami in the marshes, and papyrus skiffs skirt between villages. The mosaic offers an idyllic yet accurate scene of what life was like in Nile Delta during the inundation. One of the Thmuis mosaics (fig. 3.3) would be right at home amongst this waterscape.

The flood waters quickly declined between October and November, resulting in a period of low Nile where only the primary river branches, and perhaps a few of the major canals, were navigable by boat.[83] When the river was at its lowest, navigation on the inland waterways was fraught with difficulties and danger, and was presumably impassible for larger cargo vessels. More recent accounts of the low Nile suggest that the water level in the Delta was 6.5 m below those of the flood, and that the widths of the river branches were reduced to half their normal span. In the early 20th century, G. Dempster described the sailing conditions during low Nile:

> *Navigation is… most unreliable… during the summer months when, on account of sand bars, (the river) becomes almost impossible on certain reaches, except for the shallowest draught boats.*[84]

[83] Cooper 2008, 75, 79-80.

[84] Dempster 1917, 1.

Fig. 3.2. The Nile mosaic from the Fortuna Primigenia Temple in Palestrina dated to the first-second century B.C.E. (courtesy Museo Nazionale Prenesto).

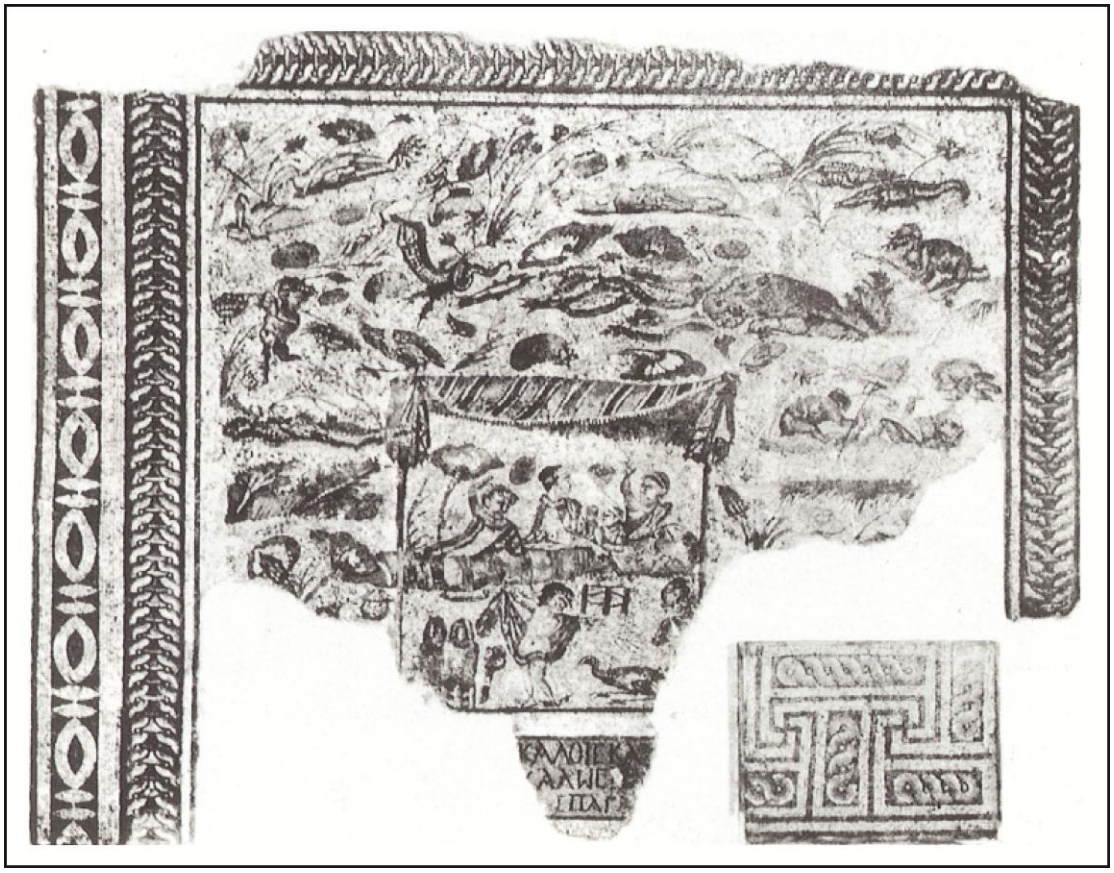

Fig. 3.3. A fragmentary mosaic from Thmuis depicting a banquet on the Nile dated to the third century C.E. (Eternal Egypt website; courtesy Graeco-Roman Museum in Alexandria).

Devices, known as nilometers, were employed to carefully monitor and measure the waters of the Nile. These consist of either a staircase built into a well or a quay with a fixed scale. The most common remains are from the Greco-Roman period. Measurements were important predictors for the outcome of the harvest and, thereby, for determining the annual land tax.[85] One such nilometer, built in 715 C.E., still exists in the heart of Cairo at el-Rawdah (Roda Nilometer). Plutarch (2nd century C.E.) mentions several Nilometers in the Nile Delta, including ones at Memphis, Xois (central-north Nile Delta), and Mendes.[86] Taking into account the economic role of the Nile Delta for agriculture production (namely grain export), it is not unlikely for such devices to have been employed throughout the region. The fact that Plutarch mentions Mendes as one of cities with such a device indicates the nome's dependence on the annual flood for agriculture and trade.

Considering the aridity of the Nile Delta today, it is difficult to envision the appearance it took during antiquity. Locating the former waterways that traversed the landscape is the first step to understanding how the Egyptians interacted with this highly dynamic and volatile riverine environment.

[85] Peacock 2000, 420.

[86] Blouin 2006, 156.

Irrigation

As early as the Amratian Period (4100-3600 BC), people employed rudimentary forms of irrigation.[87] Early in history these techniques were simple: the dredging of river channels, the construction of earthen dams and the diversion of water into fields.[88] Later, irrigation became more complex. Artificial waterways and lakes were excavated to expand the natural floodplain and to maintain transport routes, while harbors and quays were constructed to facilitate trade. To enhance economic productivity, the Egyptians devised an ingenious method of basin irrigation which survived into the mid-19th century.[89] Several basins of varying sizes were constructed alongside the river. During the flood, water was let into these basins to a depth of 1-2 m and held for 40-60 days before it was drained.[90] This was sufficient time for the suspended silt to be deposited onto the fields. The basin-irrigation system that characterized the Nile Delta landscape created a floodplain that was intersected with dykes, which held the flood water for set periods.[91] Prior to Roman times, the number of canals in the Nile Delta made it virtually impossible to traverse the region from east to west, and also provided a security barrier for the cities against overland attacks.[92]

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[87] Doyle 1998, 2.

[88] Doyle 1998, 2.

[89] Hurst 1957, 38.

[90] Hurst 1957, 38.

[91] Cooper 2008, 78.

[92] Fabre (2004-5, 50) notes the construction of roads and the Butic Canal during the Roman period.

Egypt's network of natural and artificial waterways formed a complex hydraulic system that could have only been maintained through an organized government. The construction of canals, and even lakes, became a popular royal endeavor about which rulers often boasted.[93] The papyri unearthed from Thmuis shed further light on irrigation within the Mendesian nome (see below). The texts reveal that the nome employed an extensive irrigation system that diverted, stored, and drained water for cultivation purposes.[94] The system was maintained through the implementation of corvee labor and taxes levied by the state.[95] Corvee labor and taxes played an integral role in the maintenance of Egypt's inland waterways since the Old Kingdom.[96] The development and maintenance of the hydraulic network around Thmuis and Mendes reflects a highly organized Imperial enterprise centered on maximizing agricultural production and commerce.

Geological Factors in the Northeastern Nile Delta

Figuratively and literally speaking, the eastern Nile Delta was highly fluid during antiquity. Hydrological changes were swift and often the result of a combination of natural and anthropogenic factors. The landscape was characteristically low and flat and

[93] Doyle 1998, 2.

[94] See Blouin 2006.

[95] Blouin 2006, 165.

[96] Hurst (1957, 49) suggests that the implementation of corvee labor for dredging canals dates back to the Old Kingdom.

the former Nile branches which once transected Lower Egypt were prone to lateral shifting.

At around 3000 B.C.E. the Nile Delta coastline was roughly 20-50 km south (inland) from its present position. The coastal cordon consisted primarily of sand ridges and wetlands (marshes and lagoons). These wetlands prevailed in the northern Nile Delta for much of antiquity and extended farther inland than modern Lake Manzaleh does today (fig. 3.4).[97] Although the sea level progressively rose until approximately 500 B.C.E., the northern Delta plain maintained a slight elevation above the sea and prograded northward at a rate of nearly 10 m per year due to the sediment load deposited by the annual flood.[98] During this span of time two primary eastern Nile branches, the Mendesian and the Pelusiac, flowed strongly. The prevailing west-east offshore currents of the Mediterranean gradually transported Nile sediments to the east, and resulted in a general eastward migration of the two river lobes (fig. 3.5).[99]

Rates of subsidence are both high and variable across the northern Nile Delta. In general, this variance has caused the relative northeastward tilting of the Delta plain. The northeastern region of the Nile Delta is subject to numerous highly active tectonic processes. The area is bounded on the northwest and southeast by two faults that lie perpendicular to the coast, while the southern portion has a fault that is horizontal to the

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[97] Stanley and Warne 1993, 632.

[98] Coutellier and Stanley 1987, 268; a recent study by Becker and Sultan (2009, 953) estimates that the coastline around modern Damietta is subsiding at rate of 6-8 mm/yr, while the area around the ancient Mendesian Nile is experiencing a moderate subsidence of 2-6 mm/yr.

[99] Coutellier and Stanley 1987, 268.

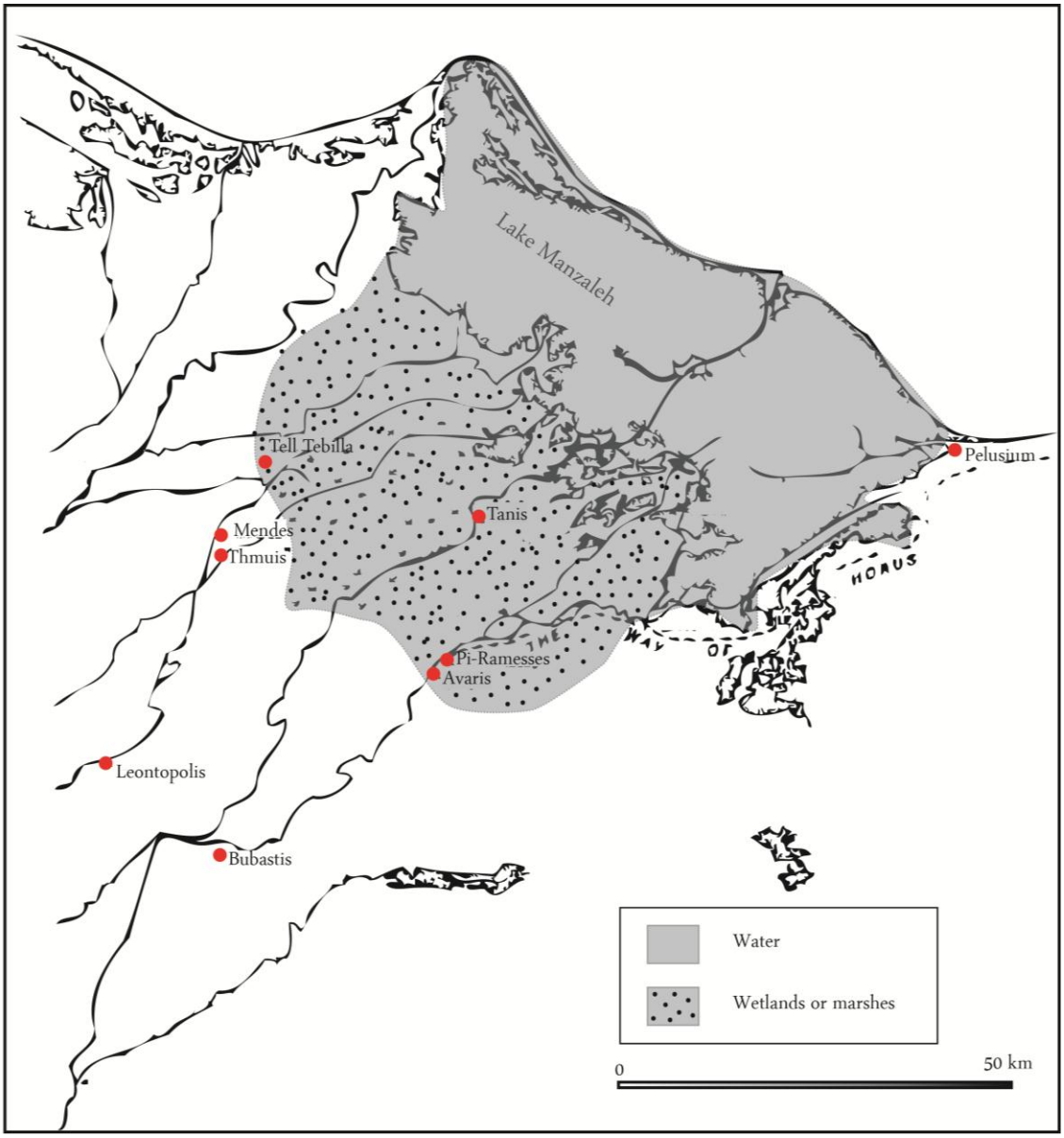

Fig. 3.4. The wetlands of the Nile Delta during antiquity (adapted from Redford 2010, fig. 8.6).

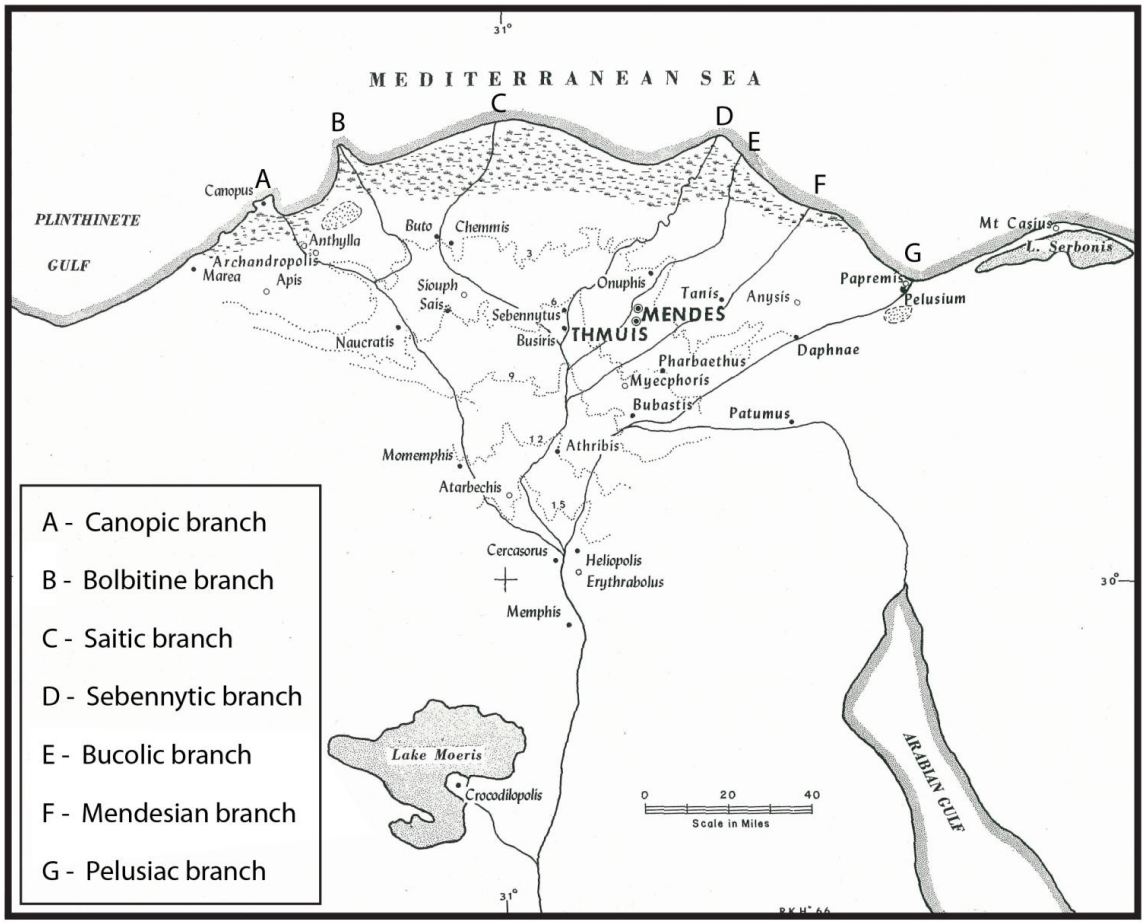

Fig. 3.5. The branches of the Nile according to Herodotus (modified from Holtz et al. 1980, pl. 2a).

coast. Due to these fault zones, the region comprising modern Lake Manzaleh (north of Mendes and Thmuis) has traditionally experienced the highest rates of subsidence.[100] These factors caused this region to remain inundated for much of antiquity up until the beginning of the 19th century.[101]

At the beginning of the Common Era, natural and anthropogenic factors resulted in major changes in the local hydrology of the eastern Nile Delta. Population increase during Hellenistic times put a significant demand on maximizing agricultural production. Ultimately, this led to extensive land reclamation projects and increased canalization and irrigation of the Delta plain.[102] At the same time, Nile discharge, particularly in the Mendesian branch, began to wane and the primary channels subsequently began to gradually silt up. Delta progradation diminished and several branches had to be artificially maintained through organized dredging, while others such as the Mendesian could not be sustained due to diminished water flow.[103] Seismic activity in the northeastern-most portion of the Nile Delta, coupled with the substantial subsidence of the central areas, gradually created a slight westward tilt. This favored a shifting of the Nile branches toward the west.[104] By the end of the first millennium C.E. the eastern Delta tributaries were still in a state of decline. Further change was triggered by three

[100] Stanley and Warne 1993, 629.

[101] Coutellier and Stanley 1987, 269; Stanley and Warne 1993, 632.

[102] Blouin (2006, 235, 373, 397) discusses the effects of canalization and irrigation on the local hydrology of the Mendesian nome.

[103] Stanley and Warne 1993, 632.

[104] Van Wesemael 1988, 128; Stanley et al. 2008, 459.

major Nile floods in 813, 816, and 820 C.E.[105] These events, evidenced by Nilometer records, marked the beginning of the final end for the Pelusiac River. Loads of Nile sediment, carried eastward along the coast by longshore currents, rapidly silted in the Pelusiac Nile and effectively cut the settlement of Pelusium off from both the river and the sea.[106] Nile channel flow suddenly shifted from the northeast toward the northwest, and the former Nile branches of the eastern Nile Delta (Pelusiac, Tanitic, and Mendesian) migrated westward to the area now crossed by the Damietta branch.[107]

By the end of the first millennium C.E. the seven branches of the Nile, proclaimed by classical historians, had declined to only two; Rosetta and Damietta (fig. 3.6). Defunct channels were subsequently converted into canals that no longer reached the coast but irrigated the landscape.[108] It is around this time that the present configuration of Lake Manzaleh took shape. Sea level rise during the mid-first millennium C.E. inundated the low coastal region of the northeastern Delta plain, creating modern Lake Manzaleh, described as 'an alkaline wilderness highly charged with salts.'[109] Regional geophysical and geoarchaeological studies in the northeastern Nile Delta reveal a highly complex and variable evolution of hydrology. Natural and anthropogenic processes, including seismic activity, coastal processes, subsidence, river

[105] Goodfriend and Stanley 1999, 150.

[106] Goodfriend and Stanley 1999, 150; Cooper 2008, 64.

[107] Stanley et al. 2008, 459.

[108] Stanley and Warne 1993, 632.

[109] Said 1992, 264.

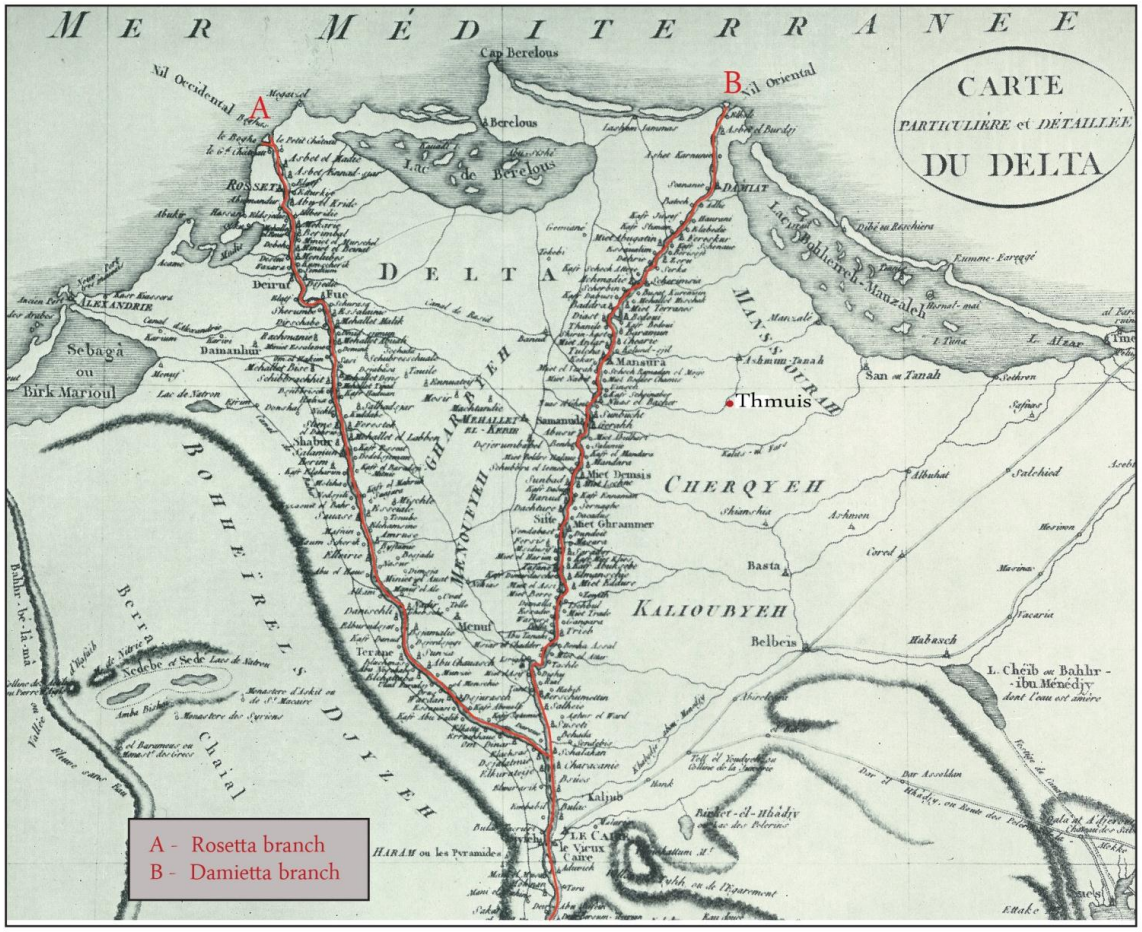

Fig. 3.6. Map of the modern Nile Delta and its associated waterways (adapted from Mentelle and Chanlaire 1799, *Carte Physique et Politique de l'Egypte*).

discharge, climate change, sea level rise, and artificial irrigation, subjected the region to extensive changes throughout history. The continual reworking of the landscape and hydrology has left a complex evolutionary history that is evident only through extensive geophysical examination and geological coring.

Local Hydrology

"Mendes, along the crag of the sea, farthermost horn of the Nile, where the goat-mounting he-goats have intercourse with women."[110]

Due to the geological, natural, and human-induced processes described above, the topography of the ancient eastern Nile Delta was highly fluid. Consequently, tracing the defunct waterways that fed the region of Thmuis and Mendes has proven problematic. While ancient authors from the fifth century B.C.E. up to the second century C.E. refer to the Mendesian branch of the Nile (fig. 3.7), few actually provide specific details regarding the route of the river.[111] Occasionally, Mendes and Thmuis are mentioned, perhaps indicating that a course of the river flowed somewhere within the vicinity of the cities.[112] Again, the sources are incredibly vague and leave much room

[110] Strabo, XVII.19 (Jones 1932).

[111] Cooper 2008, 30.

[112] Strabo (Jones 1932, XVII.19-20) mentions the Mendesian nome in his description of the Mendesian mouth; Pliny (Bostock and Riley 1855, *HN* V.11) states that the city of Mendes was one such town that gave its name to its associated river (the Mendesian).

	Herodotus 450 BCE	**Scylax** 350 BCE	**Diodorus Siculus** 59 BCE	**Strabo** 24 BCE	**Pomponius Mela** 40-41 CE	**Pliny** 23-79 CE	**Ptolemy Claudius** 90- 168 CE	
River	Mendesian	Mendesian	Mendesian	Mendesian	-	-	-	Busiritic
Associated Mouth	Mendesian	Mendesian	Mendesian	Mendesian	Mendesian	Mendesian	Mendesian	Phatmitic
Town	Mendes Thmuis	'a city'	Mendes	Mendes	-	Mendes	Thmuis	

Fig. 3.7. References made by ancient historians to the Mendesian hydrology.

for conjecture. Disagreement among modern scholars regarding the exact path of the river around Mendes and Thmuis is inevitable.

Two scholars' interpretations of the available historical accounts have been recognized as the most authoritative on the ancient geography of the Nile Delta. Unfortunately, John Ball's (1942) and Omar Tousson's (1925) geographies are often contradictory and based largely upon personal conjecture. For instance, Ball's (1942) interpretation of Herodotus' account maintains that the Mendesian flowed west of Mendes and Thmuis (fig. 3.8).[113] Omar Tousson (1925), on the other hand, concludes that the river of Herodotus ran between the two cities (fig. 3.9).[114] While both scholars present plausible theories regarding Nile hydrology, an examination of the primary sources reveals a lack of conclusive evidence. This is largely due to the paucity of reliable and detailed accounts on the topography of the Nile Delta prior to the Islamic era. Scholars dealing with the pre-Islamic period (i.e. antiquity) have little other choice than to use the available sources at hand with the utmost scrutiny. An examination of the classical sources prior to Claudius Ptolemy's map (second century C.E.) reveals not a single reference to the route of the Mendesian branch apart from the location of its mouth in relation to the other six neighboring mouths of the Nile. According to these sources, the Mendesian was the fifth branch encountered if travelling from west to east. Ball's and particularly Tousson's conjectures have become standard projections for the

[113] Ball 1942, 27.

[114] Tousson 1922, pl. 3.

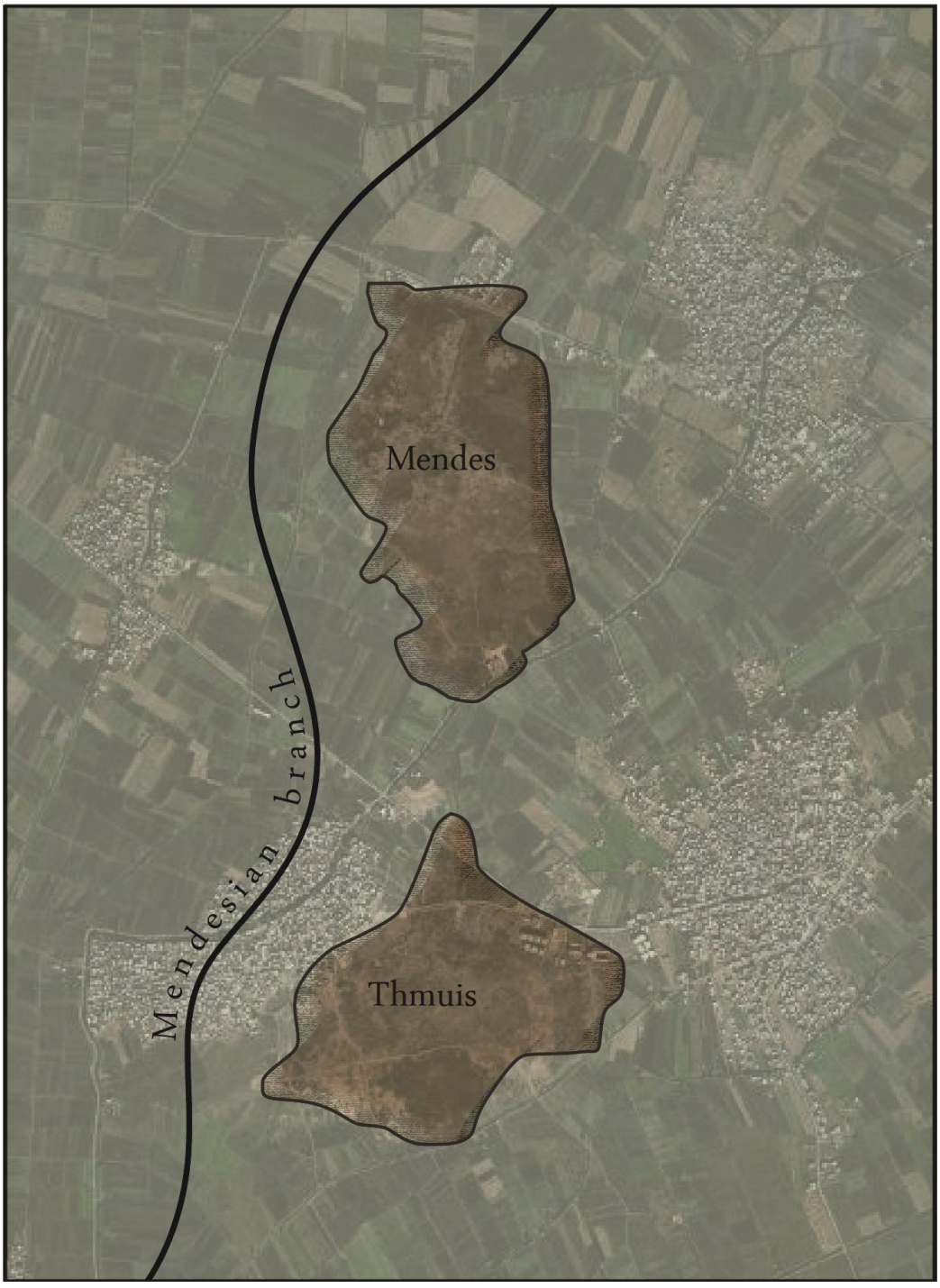

Fig. 3.8. John Ball's (1942) interpretation of Herodotus' account of the Mendesian hydrology.

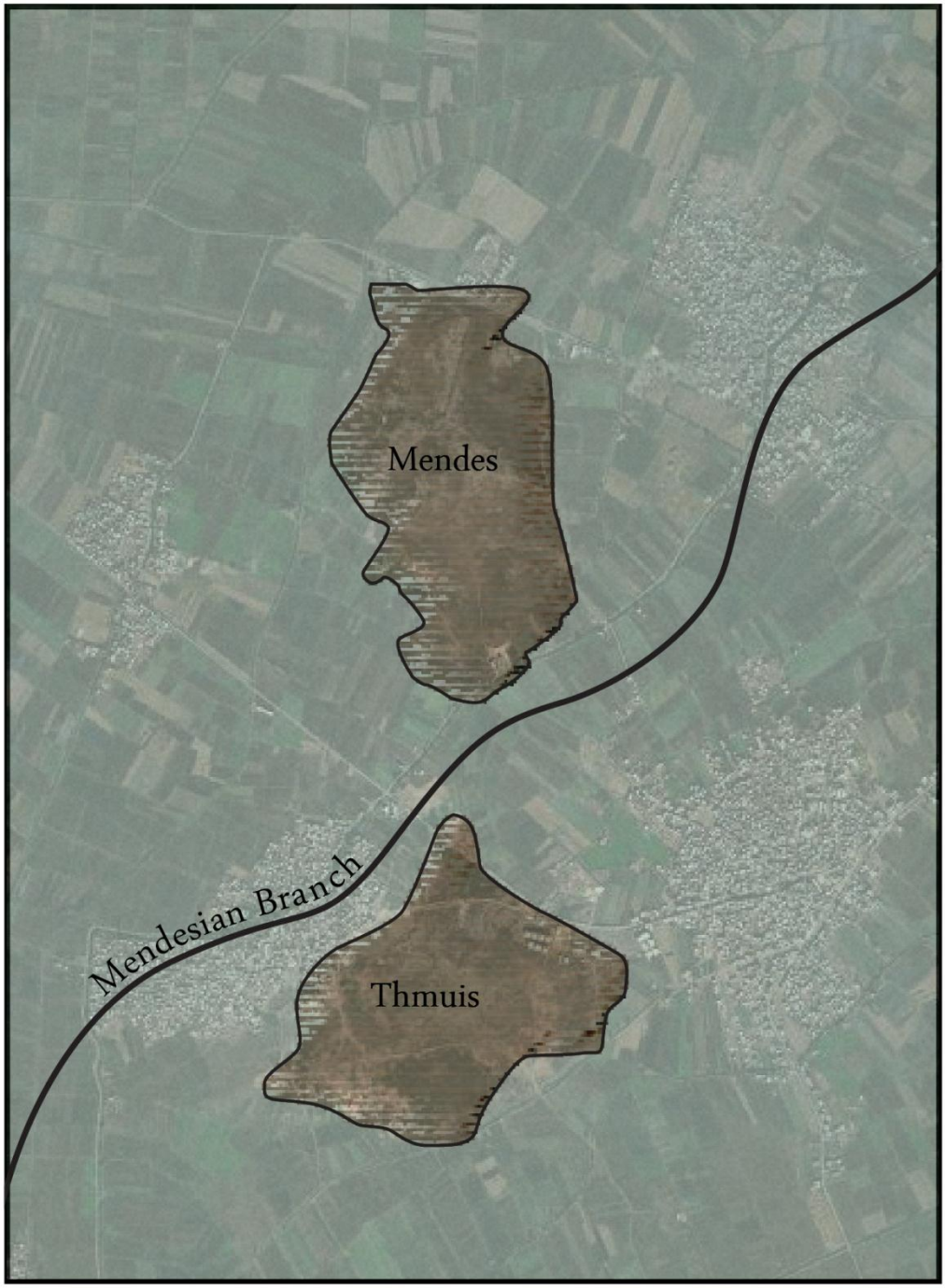

Fig. 3.9. Omar Tousson's (1925) interpretation of Herodotus' account of the Mendesian hydrology.

courses of the river branches during antiquity. These assumptions, however, must be considered with caution.

Nearly three dozen maps dating between the second century C.E. and the 20th century depict either Mendes or Thmuis.[115] Unfortunately, the majority of these maps are copies of earlier maps, many of which are erroneous. For the purpose of reconstructing the local hydrology around Mendes and Thmuis through antiquity, there are five relevant maps from Roman, Medieval, and modern times.[116] The first, modeled after Claudius Ptolemy's (90-168 C.E.) *Geographia*, is in fact the oldest surviving map to show Thmuis (fig. 3.10).[117] It is also the first source to depict the route of the river. While Ball and Tousson have created several maps of the Nile courses based on their individual interpretations of Herodotus and others, their cartography must be considered separately.

The available historical accounts indicate that between the first century B.C.E. and the mid-first century C.E., the eastern Nile Delta witnessed several major hydrological changes (figs. 3.11-12). Herodotus, Scylax, Diodorus Siculus, and Strabo all mention both a Mendesian river and a Mendesian mouth in their accounts. By the middle of the first century C.E., however, Pomponius Mela and Pliny mention only the Mendesian mouth, but not its associated waterway. In the following century, Ptolemy

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[115] For the cartography of Mendes and Thmuis, see Holtz 1980a.

[116] These are the maps of Claudius Ptolemy (modeled after *Geographia*), Muhammed Ibn Hawqal, Ortelius, and George Daressy (see recent investigations).

[117] Holtz 1980a, 3-4.

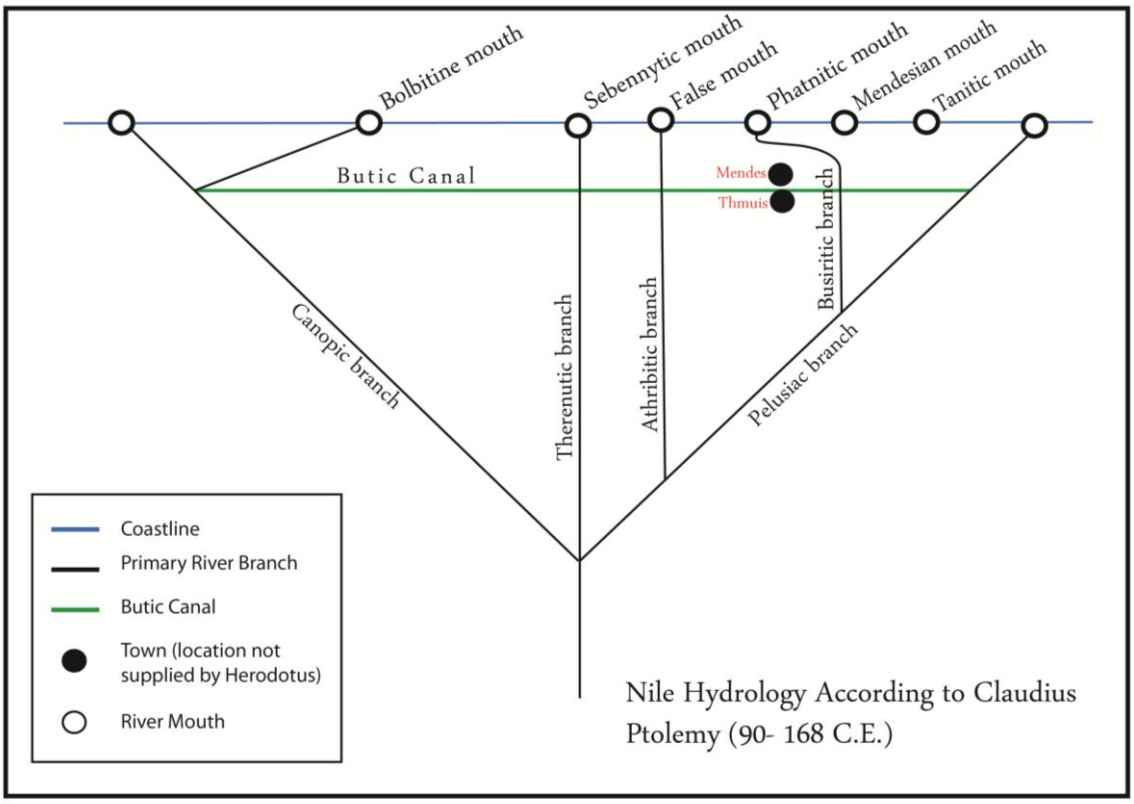

Fig. 3.10. Hydrological changes in the Nile Delta during the second century C.E.

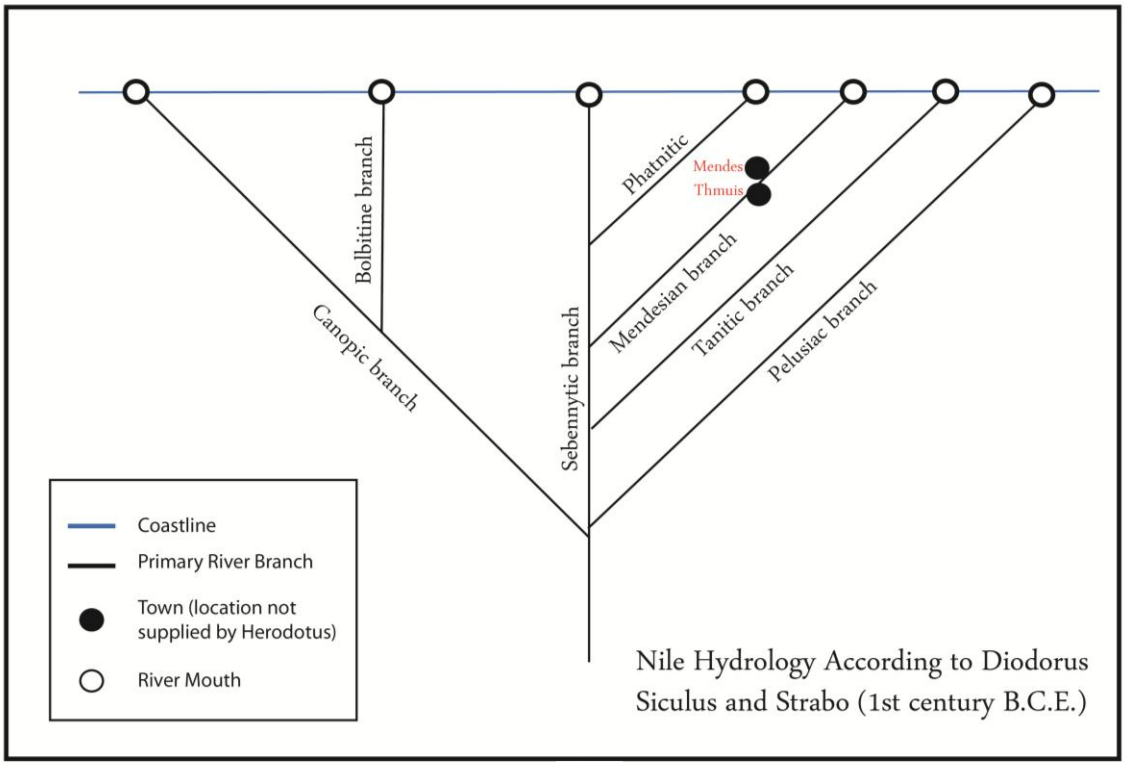

Fig. 3.11. Hydrological changes in the Nile Delta during the first century B.C.E.

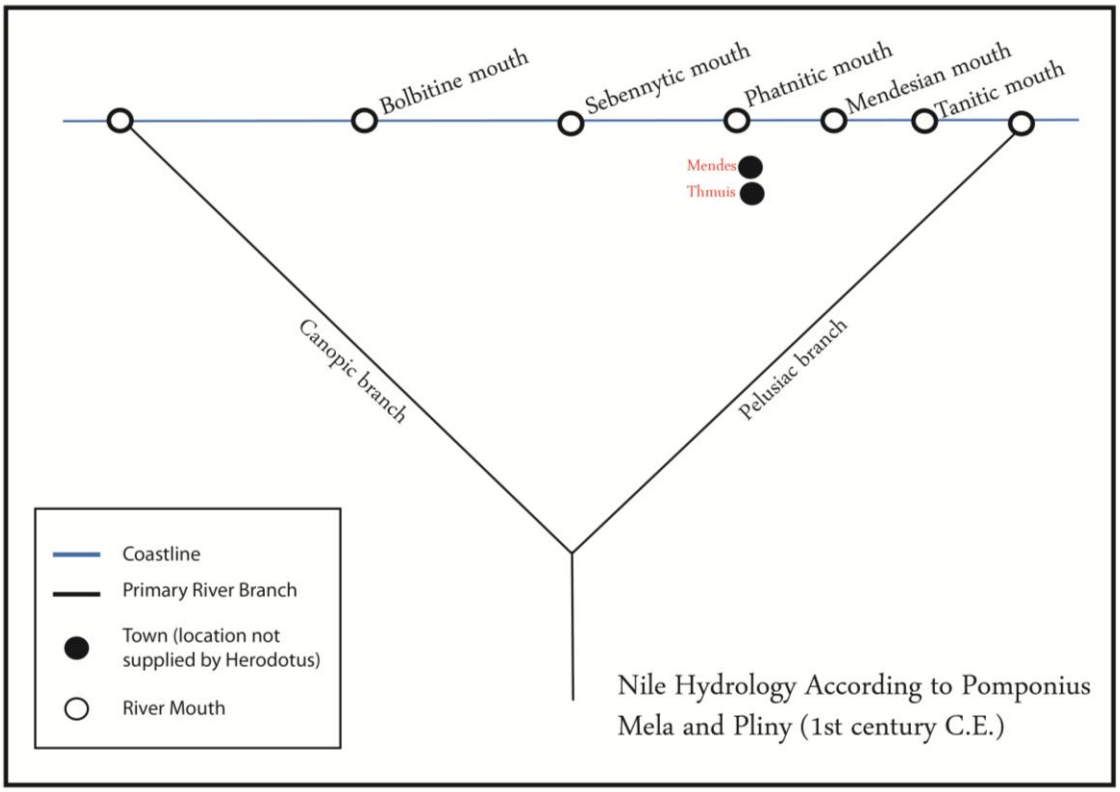

Fig. 3.12. Hydrological changes in the Nile Delta during the first century C.E.

also omits the Mendesian River from his map. Instead, Ptolemy depicts a new waterway, the Busiritic, which passes to the east of Thmuis and debouches into the Mediterranean through a so called Phatmitic mouth. John Cooper (2008) suggests that the Phatnitic/Pathmetic mouth mentioned by Ptolemy's predecessors is associated with the Busiritic River. Earlier historians describe this mouth as located directly west of the Mendesian mouth. [118] This would imply that during the second century C.E. the Mendesian River no longer reached the sea, and a new river known as the Busiritic carved a path east of Thmuis before it meandered west of the former Mendesian outlet and entered the sea through the Phatmitic mouth (fig. 3.10). Some scholars have equated the Busiritic River with the former Tanitic branch which flowed further east and which also appears to have declined in conjunction with the Mendesian.[119] Based, however, on the list of towns that Ptolemy places to the east and west of the Busiritic River, Cooper concludes that the river does not follow the typical course of the Tanitic.[120] It is possible that the Busiritic River came into existence as a result of the demise of the Mendesian and Tanitic branches.

Ptolemy also refers to a certain Buticus River which traversed the Nile Delta at an equal distance from the coast.[121] As this waterway, also known as the Butic Canal, ran parallel across the northern Nile Delta, it crossed and thereby joined all of the

[118] Cooper 2008, 32.

[119] Coutellier and Stanley 1987, 269.

[120] Coutellier and Stanley 1987, 33.

[121] For a translation of Ptolemy's geography see Stevenson 1932.

surviving Nile branches (fig. 3.10). By Ptolemy's day the Butic Canal appears to have been completed. A century earlier, when Josephus relates to us the journey of Titus across the Nile Delta in his *History of the Jewish War* (c. AD 75), the canal was seemingly still under construction.

> *Titus marched on foot as far as Nicopolis, which is distant twenty furlongs from Alexandria; there he put his army on board some long ships, and sailed upon the river along the Mendesian Nomus, as far as the city Tumuis; there he got out of the ships, and walked on foot, and lodged all night at a small city called Tanis. His second station was Heracleopolis, and his third Pelusium; he then refreshed his army at that place for two days, and on the third passed over the mouths of the Nile at Pelusium.*[122]

From Josephus' account it appears that during the first century C.E. the Butic Canal crossed the Nile Delta only as far as Thmuis (fig. 3.13). Thereafter, any eastward travel was either conducted on foot or confined to the primary Nile branches. This canal seems to have been maintained into the 10th century C.E. In 977 C.E., Arab geographer Muhammed Ibn Hawqal refers to a Za'faraniyyah canal that runs west from the Damietta branch to the Rosetta branch, roughly parallel to the coast.[123] According to Cooper (2008) there are several references to segments of this waterway by later authors. In the 16th century, cartographer Ortelius (Abraham Ortel, 1527-1598) completed two maps

[122] Joseph, IV.11.5 (Whiston 1737).

[123] Cooper 2008, 50.

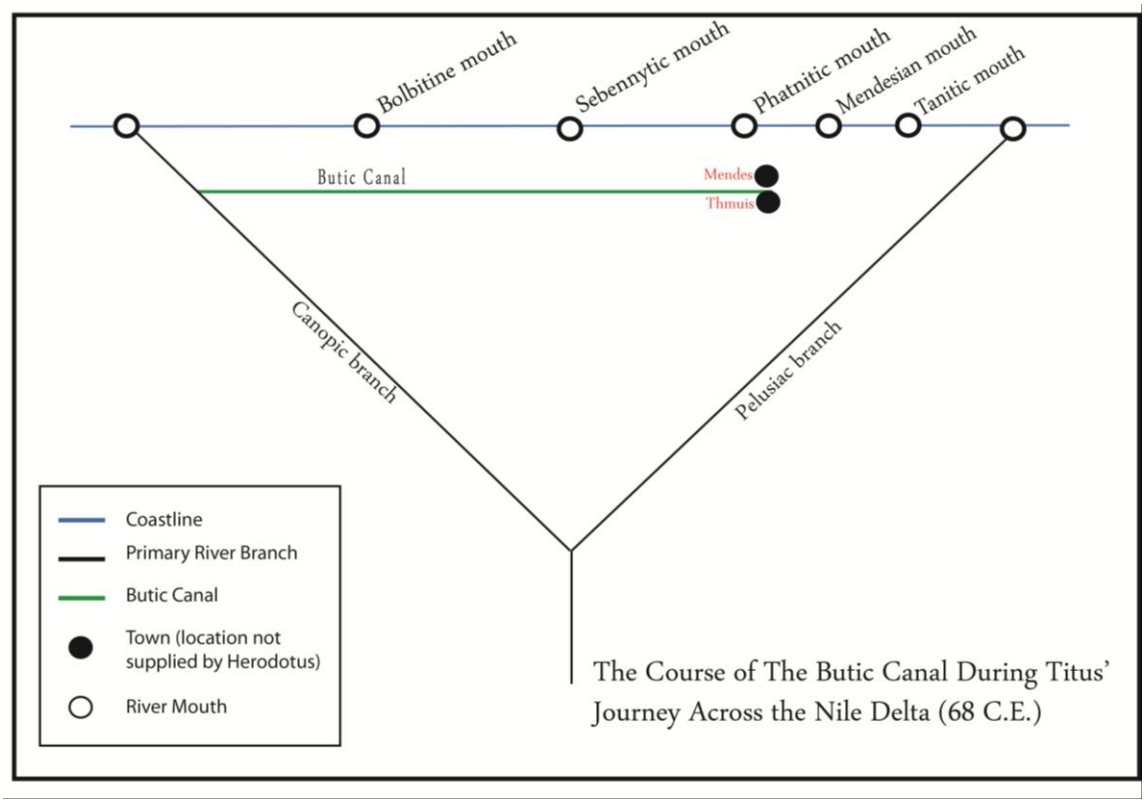

Fig. 3.13. The course of the Butic Canal in the mid-first century C.E.

depicting Thmuis. His original map (1565) shows Thmuis west of the Busiritic River and there is no trace of the Butic Canal. Two decades later, Orelius made a second map (1584) that is obviously largely copied from Ptolemy's geography. This time he depicts the Butic Canal running between Mendes (shown too far north) and Thmuis. Holtz (1980) finds the discrepancy between these two maps as evidence for the absence of the Butic Canal in the 16th century. He suggests that Ortelius' initial map was a far more accurate rendition of the Nile Delta than his later copy.[124] Nonetheless, Ptolemy's geography was copied for several centuries until, finally, in the 18th and 19th centuries Pere Claude Sicard and James Burton visited Mendes and Thmuis and completed the first accurate maps of the area. Unfortunately, by their day the former hydrology of the eastern Nile Delta was largely unrecognizable.

Recent Investigations

Over the last two decades several geophysical and geological studies have been completed in the northeastern Nile Delta.[125] Despite this research, the accurate configuration of the former Nile waterways is largely unknown. The handful of studies completed at Mendes and Thmuis have barely unveiled the complex network of waterways around the two sites. In 1998 Ayman Taha used several methods of geophysical survey around Mendes and Thmuis to delineate the paleo-branches of the

[124] Holtz 1980a, 5.

[125] See Tronchere et al. 2008; Bietak 2009; El-Qady et al. 2006; Taha 1998.

Nile. The results of his survey have raised several questions regarding the evolution of waterways around the two sites.

Taha located two branches of the Mendesian Nile: one flowed to the east of the cities, the other to the west (fig. 3.14).[126] Both branches are located quite a distance from the sites, often as far as a kilometer away. Due to the tells' appreciable distance from the river, Taha hypothesized a manmade canal along the western perimeters of Mendes and Thmuis, which connected both cities with the primary branch of the river. Curiously Taha's survey did not reveal this canal. In 2010, several cores were taken in transects along the western periphery of Tell el-Timai to determine the presence of this canal. Samples were collected from depths of up to 10 m and examined in the field by Mohammed Gabr. While the cores did, in fact, locate a waterway along the western flank of Thmuis, the breadth and the coarse fluvial sediments recorded in the auger samples suggest that it was not a manmade canal but a primary waterway (fig. 3.15).

In 2006 a geophysical survey was conducted at Mendes to locate the northern harbor.[127] The results from this survey suggest an east-west canal that must have accessed the harbor. Donald Redford interpreted this waterway as the Butic Canal.[128] While it is certainly possible that Ptolemy's Buticus River passed north of Mendes, given Josephus' account it is also plausible that the canal passed closer to Thmuis. Furthermore, Mendes' outer and inner harbors silted up by the end of the first century

[126] Taha 1998, 86.

[127] See El-Qady et al. 2006.

[128] Redford 2010, 107, 176.

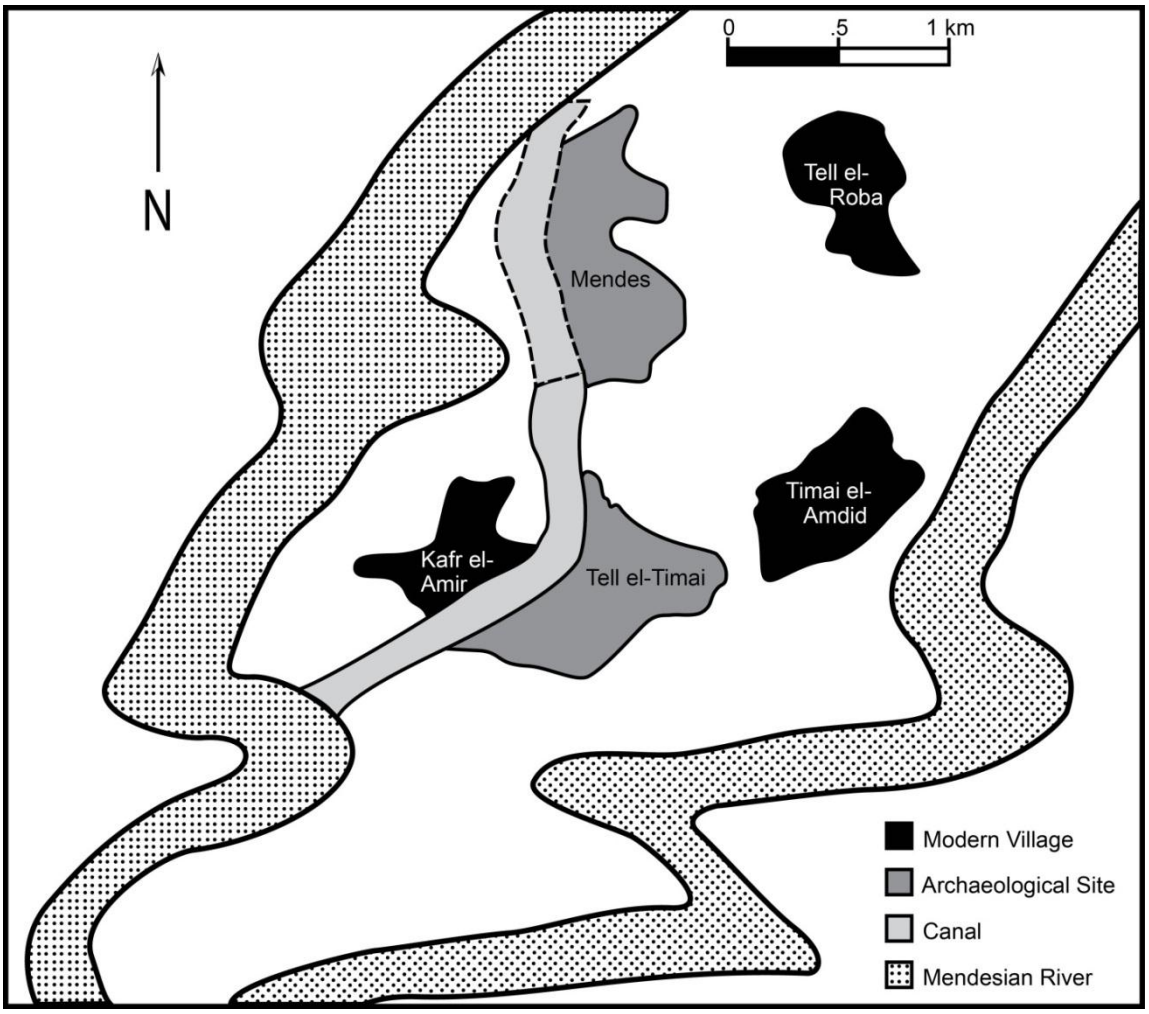

Fig. 3.14. The results of Taha's geophysical survey around Tell el-Roba and Tell el-Timai (adapted from Taha 1998, fig. 49).

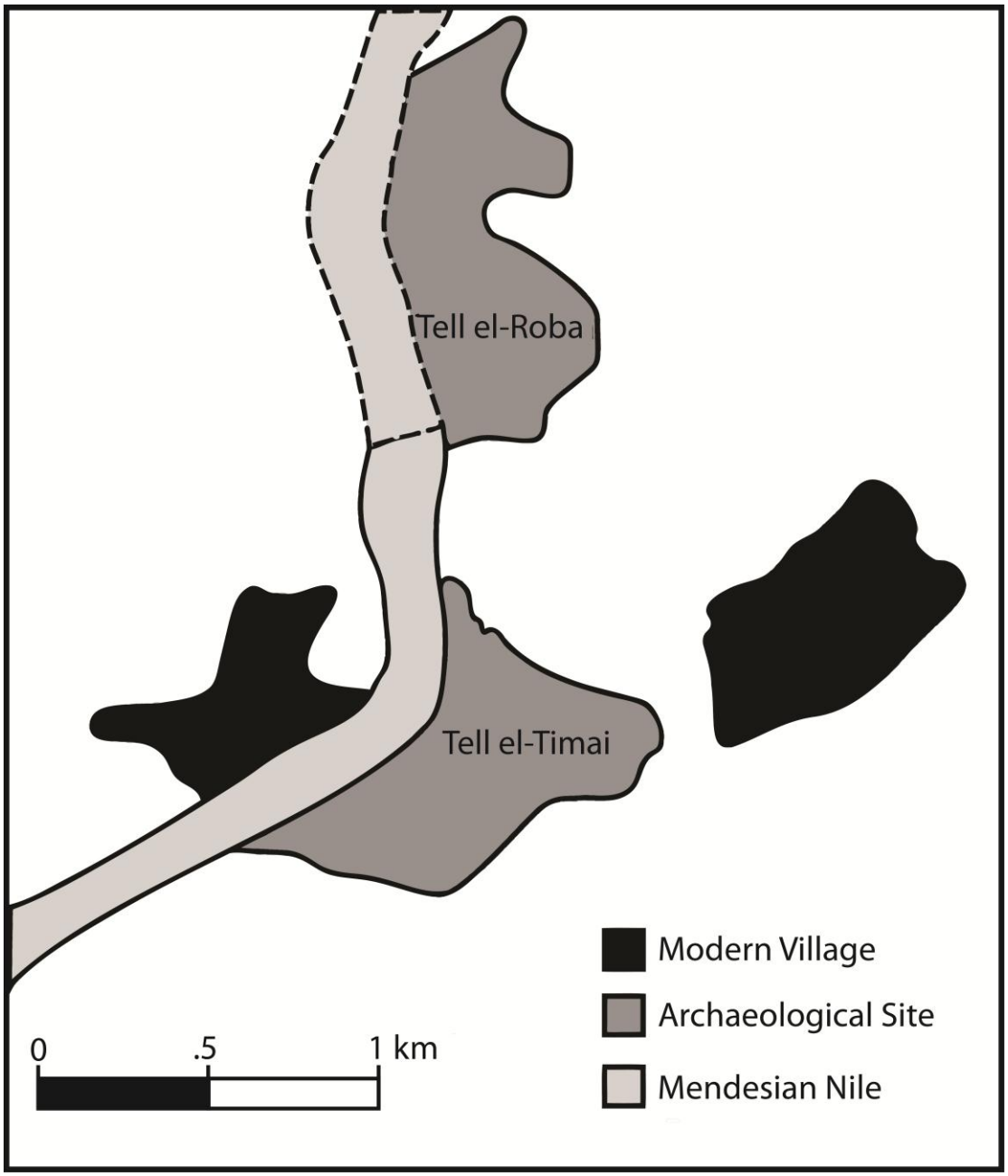

Fig. 3.15. A defunct channel of the Nile located during the 2010 Tell el-Timai coring season.

B.C.E., shifting focus to Thmuis. Although Mendes did not altogether disappear, Thmuis became the primary center of occupation. Given its new status, it seems more likely that the Butic Canal passed close to Thmuis. Josephus does relate that Titus "sailed upon the river along the Mendesian Nomus, as far as the city Tumuis; there he got out of the ships."[129]

An undated map by George Daressy (1864-1938) depicts a rather unusual linear ridge several miles east of Mendes (fig. 3.16).[130] In 1965, Robert Holtz and several members of the Mendes Expedition examined this ridge. He describes the anomaly as "a narrow ridge, twelve to twenty-five feet high, that extends from east to west for about four and one half miles."[131] Holtz believes this ridge to be the spoil pile from the excavation of the Butic Canal. The ridge would have likely bordered the canal along its southern bank, retaining the water much like a dyke would. The remains of this ridge are no longer visible around Mendes and Tell el-Timai, however, Holtz noted that at roughly three and a half miles east of Mendes, the ridge abruptly angles to the southwest. This would imply a course that ran between the modern tells of Mendes and Tell el-Timai. Holtz also remarks that the contour lines around the modern tells indicate that the topography here is markedly lower and, therefore, favorable for such a canal

[129] Joseph, IV.11.5 (Whiston 1737).

[130] Holtz 1980a, 12.

[131] Holtz 1980b, 22.

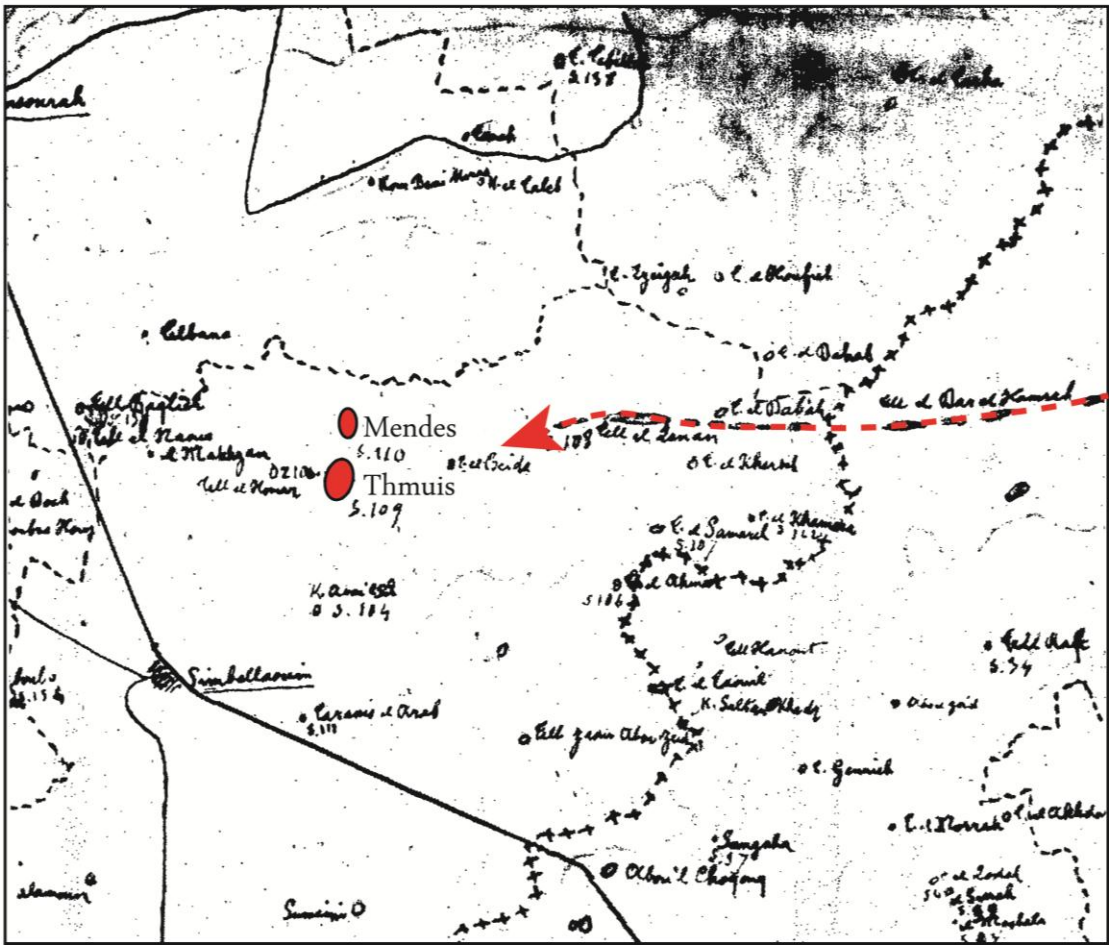

Fig. 3.16. The remains of the Butic Canal according to the *Atlas Archeologique de l'Egypte* (modified from Hall and Bothmer 1980, pl. 13a).

trajectory between the sites.[132] Given the evidence it seems probable that the Butic Canal traversed the Mendesian nome just north of Thmuis.

A Preliminary Reconstruction of the Hydrology Around Thmuis

Given the dynamic nature of the eastern Nile Delta and the relatively modest area that has been examined around Mendes and Thmuis at this stage, it is futile to provide an accurate reconstruction of the former hydrology. Nonetheless, a preliminary arrangement of the major waterways can be deduced from the available historical and archaeological evidence. Various models are discussed below.

Based on the location of the harbors at Mendes and their corresponding material evidence, it would seem that between the seventh and fourth centuries B.C.E., the northwest and eastern limits of Mendes were accessible to the river.[133] Tousson suggests that the Mendesian of the fifth century B.C.E. flowed west of Thmuis and then meandered between the sites to flow along the eastern side Mendes (fig. 3.9). One of the augers collected in 2009 near the suspected harbor at Thmuis (northern tip of the tell) included a rich sand horizon at a depth of 4-4.5 m. Adam Shahat, a local geologist from Mansoura University, believes this to be evidence of one of the following scenarios: a) a point bar at the concave side of a defunct channel formed when a river begins to meander (fig. 3.17); or b) a crevasse splay related to high floods (when the river

[132] Holtz 1980b, 22.

[133] Redford 2010.

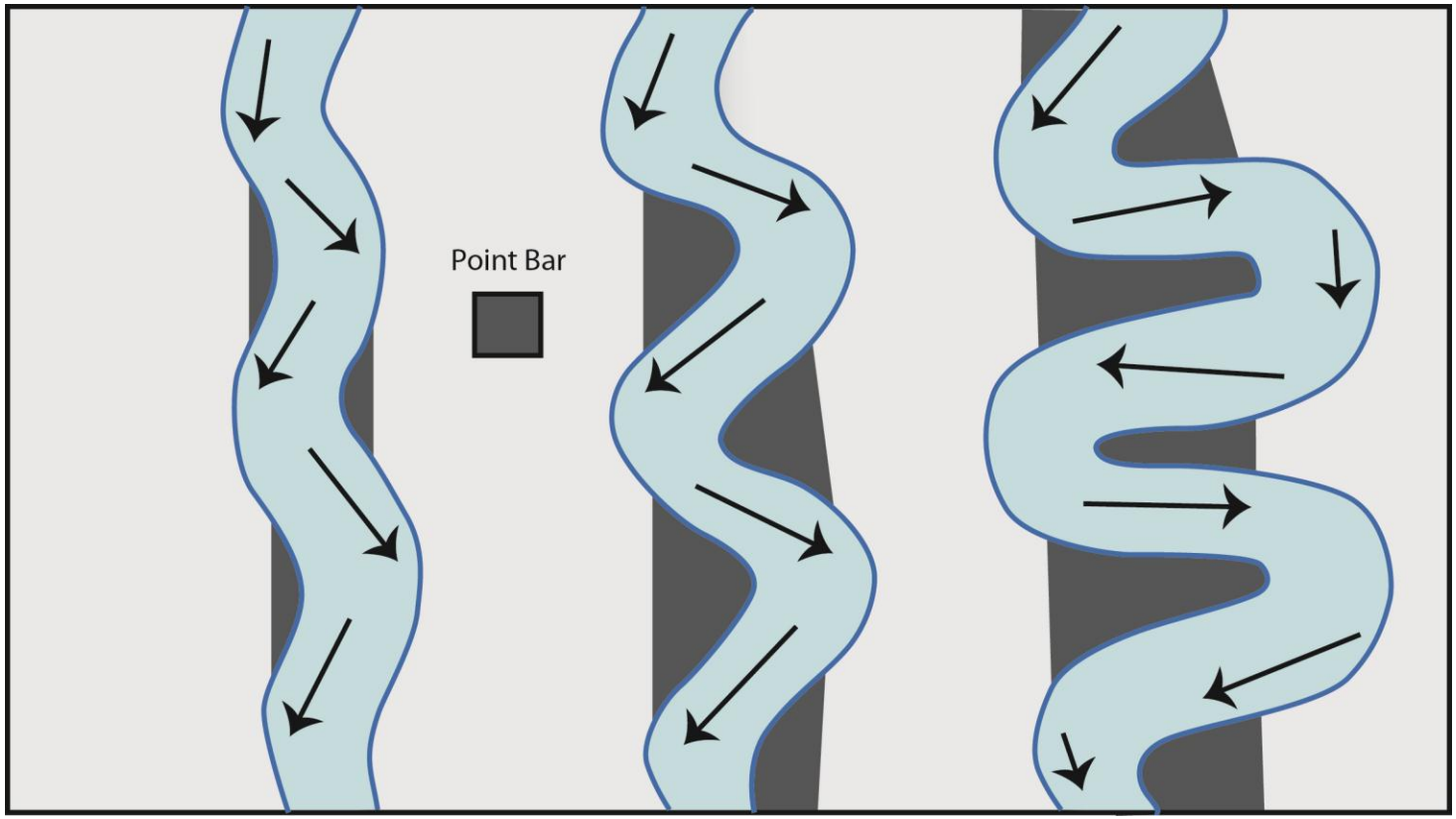

Fig. 3.17. The formation of a point bar.

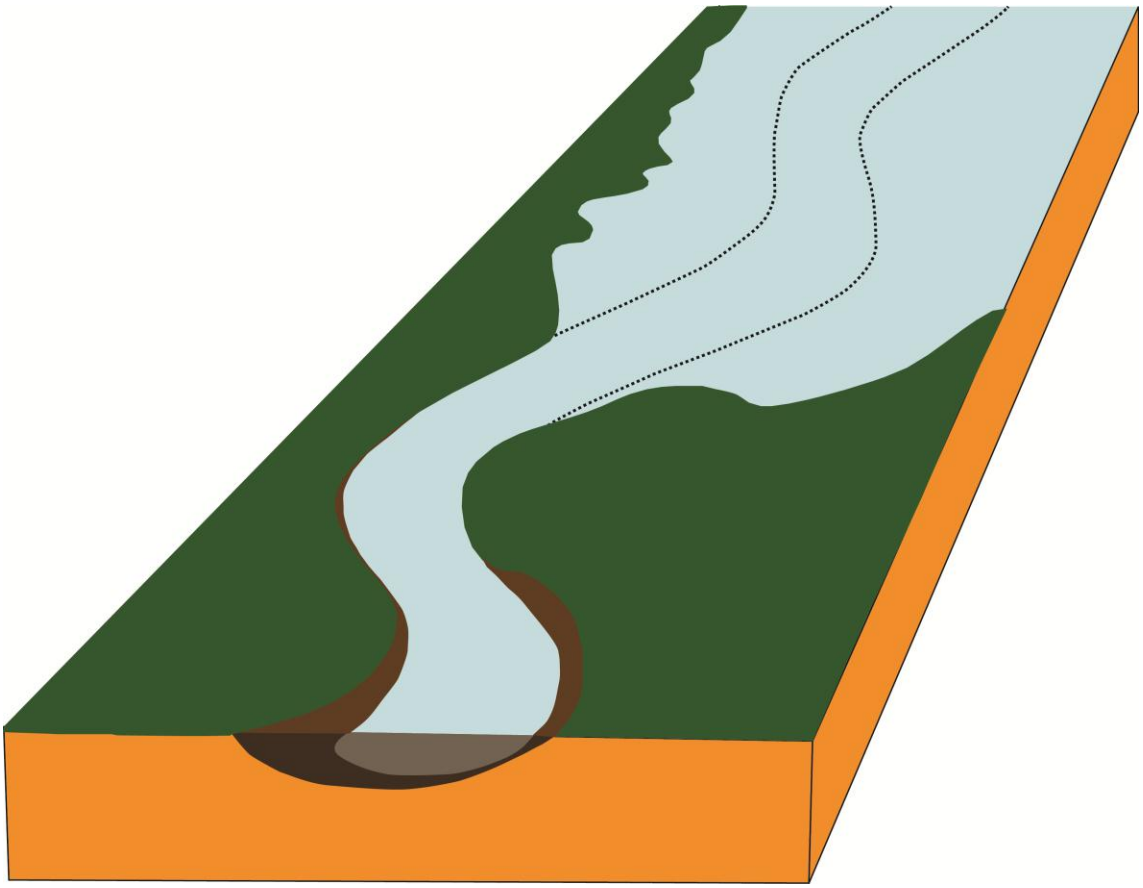

Fig. 3.18. The formation of a crevasse splay.

breaches its levee) (fig. 3.18).[134] Both scenarios indicate that a branch of the Nile flowed nearby. The cores from 2010 also indicate that at some point a branch of the Nile was located along the western flank of Thmuis.

The Mendesian River steadily declined, beginning perhaps in the second century B.C.E., but most certainly during the following century. The Mendesian mouth silted in and became a false-mouth that was no longer connected to the Nile. Taha's eastern branch likely represents a phase of the general eastward migration of the river during this time (fig. 3.14). Until dates of the river branches are obtained, however, this remains unclear. Sometime in the first century C.E., the Butic Canal was partially completed as far as Thmuis. It was probably upon this canal that Titus and his army sailed to the city. By the second century C.E., the Mendesian was replaced by a more easterly Busiritic River, and the Butic Canal now traversed all of the major sea-bound branches of the Nile.

Conclusion

The modern Nile Delta bears little resemblance to its ancient topography. Reconstructing the paleo-hydrology of the region is problematic due to the shifting courses of waterways throughout history. Scholars have been interested in the changing configuration of the Nile channels since antiquity. Ancient and medieval historians compiled various reconstructions of the waterways. Recent scholars, such as Ball and

[134] Personal communication with Adam Shahat.

Tousson, compiled their versions of Nile hydrology based upon the ancient sources. Examination of the various natural and anthropogenic factors that influenced the Nile Delta reveals a more complex hydrological evolution than what either Ball or Tousson postulated. When the river branches of the eastern Nile Delta were flowing strong, the prevailing west-east offshore currents of the Mediterranean supported a general eastward shift of the waterways. In the first century C.E., however, natural and anthropogenic factors caused the silting up of the Mendesian and Tanitic branches and a sudden westward tilt to the Nile Delta. The construction of the Butic Canal might have been either a response to the waning rivers or, among the several culprits that caused the rivers' decline. In the ninth century C.E., several unusually high floods ultimately changed the configuration of the Nile Delta waterways. The Pelusiac silted in and channel flow was suddenly directed west to the present Damietta branch. The former waterways largely disappeared, and the inhabitants of the eastern Nile Delta were forced to adapt to their changing landscape. Many, however, could not. Following the ninth century C.E., Thmuis does not appear in medieval accounts.

CHAPTER IV

COGNITIVE APPROACH

Although the Nile was a relatively predictable river regarding its annual inundation, life along its banks was not idyllic. Since the dawn of time, people were conscious of the consequences and threats imparted by the river. The earliest inhabitants along the Nile Valley employed various means of controlling and directing the river to suit their needs. Methods of irrigation, such as levees and dams, were employed as early as pre-dynastic times to divert and store the fruitful waters of the Nile.[135] Later, more advanced techniques, such as canals, reservoirs, and harbors provided the Egyptians with a more extensive means of utilizing their riverine environment for farming, shipping, and ways to manage the river's inherent risks.[136]

Due to man's close intercourse with his riverine environment, a unique terminology and ideology developed in Egypt concerning the maritime environment and its associated activities. The Egyptians' keen awareness of maritime space is reflected in their vocabulary. The purpose of this chapter is to examine the Egyptian's cognitive view of their maritime space and the system of beliefs which arose as a result of man's involvement with the maritime environment. Ideology was conveyed through the

[135] Van Lepp (1995) discusses the evidence for organized artificial irrigation during the Amratian Period; The Scorpion Macehead (Predynastic or first Dynasty) is a later example of organized irrigation works.

[136] For more on risk management within the Mendesian nome during the Roman period, see Blouin 2006.

mythology, literature, and iconography of Egypt. Although this was a universal ideology that was expressed throughout Egypt, it was also featured at a more personal level in the local city cults. This chapter will discuss how the inhabitants of Thmuis incorporated their local deities into this broader framework to assert divine control over the volatile environment in which they lived.

The Hazards of Life Along the Nile

Life along the Nile presented a variety of benefits and misfortunes for the Egyptians. While the river provided a means of sustenance and transportation, it often wreaked havoc upon those who settled along its banks and who sailed upon its waterways. Apart from the consequences of a low flood or the demise of a river branch, the Nile also presented a series of hazards to the Egyptian sailor. As John Cooper concluded in his 2008 dissertation on medieval navigation in Egypt, sailing along the Nile was not as idyllic as is often assumed.[137] Conditions on the Nile were generally felicitous for water transport; the currents flow in a northerly direction while the prevailing winds blow towards the south.[138] Nile navigation, however, was extremely dangerous and far from passive; it presented similar hazards, if not more, to those at sea. Unexpected gales, storms, and treacherous shallows were threats encountered by Nile boatman and seaman alike. Historical accounts of the Nile indicate that sudden storms

[137] Cooper 2008, 75.

[138] Cooper 2008, 74.

were a frequent cause of shipwreck along the river. When Florence Nightingale visited Egypt in 1849 she experienced one such occasion:

> *"I saw one of the dhahabiehs (boat) which had overtaken us in the afternoon, floating past up, bottom up."*[139]

The northerly Etesian winds felt in the summer provided steady propulsion for Nile vessels when the river was at its lowest. However, during the winter months a variety of wind patterns from the north and south, and gale-force gusts from the west were frequent and the likely culprit of many shipwrecks. On the other hand, periods of calm in which no winds blew were also problematic for ancient navigators who sailed along the interior waterways.

Navigating the waters of the Nile was an active, seasonal and hazardous endeavor that required precision, expertise, and adaptability to the fluctuating conditions of the riverine landscape. Through their continual interaction with the river the Egyptians developed a colorful understanding of the Nilotic landscape. Their perception of this fertile, dynamic, and ominous environment is reflected in the distinctions they used for this space, as well as in their religious ideology.

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[139] Nightingale 1854, 65.

Cognitive Terminology

The Egyptians interacted with their riverine environment since the Predynastic Period.[140] Iconography from Amratian pottery (4000-3500 BCE) and the Scorpion Macehead (c.3050-2890 BCE) provide early evidence for the use of watercraft and artificial irrigation. Although some scholars argue that the Egyptians did not sail the open sea, there is evidence to suggest seaborne trade since the Naqada IIc/d period (c. 3500-3200 B.C.E.)[141] This was the inevitable result of Egypt's proximity to the sea. Seagoing ships on the Fifth Dynasty temple causeways of kings Sahure and Unas, attest to an established network of seagoing activity.[142] For years scholars have debated the seafaring capabilities of the Egyptians. The crux of the dispute has been the questionable meaning behind the Egyptian terminology for specific bodies of water and whether stone anchors discovered within Egypt were used by river craft or seagoing vessels.[143] Regardless of the Egyptians' familiarity and close intercourse with the Nile and the sea, their terminology for these maritime spaces was often vague and variable. A consensus has yet to be made by scholars on the meanings of the various terms, such

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[140] Hollis 2009, 2. The Egyptians had been sailing on the Nile since Predynastic times and on the sea since the Old Kingdom.

[141] See Mark (1998) for more on Egypt's sea connections with northern Syria during the Predynastic period. A. Nibbi and C. Vandersleyen argue that the ancient Egyptians did not venture to sea. See Nibbi 1975; Nibbi 1979a; Nibbi 1981; Nibbi 1997; and Vandersleyen 1991. F or a synopsis of their work see Meeks 1997. For a critical review of Nibbi's work see Kitchen 1978; and Kitchen 1983.

[142] See Basch 1985, 456; Hassan 1955, 139 fig. 2; Hollis 2009, 2; Smith 1965, fig. 6.

[143] For more on the discussion of the function and use of Egyptian stone anchors, see Basch 1985; Basch 1994; Nibbi 1979b; Nibbi 1979c; Nibbi 1984; Nibbi 1992. Basch does not agree with Nibbi's assertion that stone anchors were employed on the Nile and are evidence that the Egyptians were not seafarers.

as *Wadj-wer, Haunebut, Ra-haout, Yam,* and *Nun,* which were employed by the Egyptians to define their maritime zones.

Despite the Egyptians' vast awareness of their maritime environs, they lacked a distinct terminology for these spaces. Various terms were employed and shared throughout the course of Egypt's history to define the maritime space of the Nile River, the Mediterranean Sea, and the Red Sea. Wadj-wer (literally, the 'great green') was a god associated with fertility and the sea. His often androgynous body and close association with water led earlier scholars to erroneously coin him a 'Nile god.'[144] He is depicted in, *The Book of Going Forth By Day*, as a fecundity figure protectively guarding two rectangular bodies of water identified as, "the lake of natron" and "the lake of maet". He is accompanied by the inscription, "Sea is his name," and the god, Heh (Chaos-god) is seated to his left. Wadj-wer became a personification of the sea and various other bodies of water, including lakes and regions of the Nile.[145]

The oldest and most common term for the sea was Wadj-wer ('great green'). It was used to identify a space in and outside of Egypt depending on the textual context and could identify several maritime realities.[146] During the Old Kingdom Wadj-wer was the general term for the sea, but it could also refer to branches of the Nile as well as

[144] Faulkner et al. 2008, 159.

[145] Fabre 2004-5, 12.

[146] Cline (2010, 822) explains that the Egyptian phrase, "islands in the midst of the Great Green" could refer to the Mediterranean sea but also the Aegean sea.

lakes in the Nile Delta and Fayoum.[147] The ambiguity of the term led several scholars to the radical conclusion that Egyptians were not aware of their maritime space, could not designate it, and therefore never navigated on it.[148] This view has since been largely discredited by scholars due to the iconographic, textual, and archaeological evidence for seafaring in ancient Egypt.[149] The recent discovery of evidence for seagoing vessels and trade at Mersa Gawasis further disproves the view that the Egyptians were not sailors.[150]

Another term that has prompted much discussion is Haunebut. It appears in the Old Kingdom alongside Wadj-wer and seems to designate the coastal fringe of the Nile Delta where freshwater and brackish water lagoons and swamps were prevalent.[151] The coastal cordon was a buffer zone between the Mediterranean and the Nile River and ships entering or leaving the Nile Delta would cross this region. The vagueness of these early terms is somewhat perplexing, yet the assumption that the Egyptians were not aware of the different maritime zones of their world is inaccurate.

During antiquity the inundated regions of the Nile Delta were connected to the Mediterranean Sea via the coastal cordon of river mouths, lakes, and lagoons. As Herodotus relates, when the Nile broke its banks, the country was converted into a sea

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[147] Meeks 1997, 175.

[148] For an overview of R.Herzog, A. Nibbi, C. Favard-Meeks, and V. Vandersleyen's opinions on the term Wadj-wer, see Meeks 1997.

[149] See Basch 1985; Kitchen 1978 and 1983.

[150] See Ward and Zazzaro 2010.

[151] Fabre (2004-5, 15) explains that the term Haunebut was originally reserved for a population living on the coastal margins of Egypt.

and nothing could be seen but the towns which looked like islands amidst the Aegean.[152] While the Egyptians were obviously aware of the underlying differences between the inland waterways of the Nile and the open ocean, assigning a fixed terminology for these zones was evidently not necessary. While it is not clear to what extent seagoing ships travelled along Egypt's inland waterways, they must have been capable of entering the Nile Delta through the river mouths.[153] The connectivity of the river and the sea is reflected in the amalgamation of meaning behind the terms for these environments. Furthermore, the enterprise of navigating the Nile presented similar hazards, if not more, to those of the sea. Unexpected gales, storms, and treacherous shallows were threats to the Nile boatman just as they were to the seaman. It is easy to surmise, then, that to the Egyptians the Nile River was in many ways a sea with its seasonal conditions, fluctuating winds and currents, and the imminent threat of shipwreck.

Beginning in the New Kingdom, when the Egyptian Empire held vast territories across the Levant, a shift in the Egyptians' cognitive view of maritime space occurs. Probably as a result of increased maritime trade, new terms appear that reflect a desire to distinguish the various inland and sea zones of Egypt. While Wadj-wer and Haunebut continue to be employed, Ra-haout, Yam, and Nun were used to distinguish new and known realities. Ra-haout probably referred to the mouths of the Nile while Nun was

[152] Hdt., II. 97 (Rawlinson 1928); Nibbi 1972, 12.

[153] The New Kingdom tomb of Kenamun (Davies and Faulkner 1947, 40-6, pl. 8) provides the best iconographic evidence of foreign seagoing ships travelling along the inland waterways of the Nile. Similarly, the tomb of Nebamun (New Kingdom) (Säve-Söderbergh 1957, pl. 23) depicts Syro-Canaanite ships, though a Nilotic context is not clear.

often used when referring to the Red Sea.[154] Following the 18th Dynasty the Semitic word, Yam, was used on several occasions to designate inland bodies of water, as well as the Mediterranean and Red Sea.[155] While new terms for maritime zones found their way into use, the overlap between terms that referred to the sea and inland waters prevailed.

Not until the Hellenistic Period, when the Ptolemaic thalassocracy extended across the Mediterranean, were the previously ambiguous terms for the sea finally clarified. Wadj-wer and Haunebut respectively denoted the Mediterranean, or the 'great sea of Syria,' and the Aegean.[156] Nonetheless, modern Egyptians have maintained, to some degree, the ambiguity of their ancient predecessors when defining their maritime space. The various branches and tributaries of the Nile River are still commonly referred to as "seas" (*el-Bahr*). The false assumption that the Egyptians could not define nor distinguish their maritime space due to their lack of awareness or involvement in these areas is unfounded. Egyptians were intimately involved with the marine environments at sea and along the Nile. As the network of interaction with the Mediterranean, Aegean and Red Seas expanded in the New Kingdom and reached an apex under the Ptolemies, new terms were needed to define these maritime zones. The maritime space of the Egyptians, specifically the waters of the Nile and the bordering seas, was an interconnected region; this is reflected in the terms which were employed to delineate it.

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[154] Nibbi 1972, 16.

[155] Nibbi 1972, 26-8.

[156] Fabre 2004-5, 19; Meeks 1997, 188.

Religion

For the Egyptians, the afterlife was essentially a reflection of daily life. What one did in life, one aspired to continue in the hereafter. By the Hellenistic period the general view of the afterlife was far more optimistic than other ancient religions.[157] If the deceased could overcome the ominous supernatural threats of the underworld and pass the final judgment of the gods, his soul was permitted to dwell in the paradisiacal realm of Osiris, god of the dead. Egyptian religion is a complex system of beliefs that went through several transformations over the course of history. While it is not within the scope of this thesis to provide a detailed discussion of Egyptian religion, several general observations are necessary prior to the examination of the Mendesian ideology.

From early in Egypt's history, the underworld (*Duat*) was viewed as a watery abyss of rivers, marshes, and islands.[158] This unearthly realm immediately calls to mind the inundated landscape of the Nile Delta described by Strabo; "the whole Delta becomes a lake and is underwater except for the settlements; these are situated on natural hills…which when viewed from afar resemble islands."[159] In the Duat, deities and spirits of the deceased sailed across the celestial landscape much as the living would on earth. Menacing forces that plagued the living were also present in the afterlife.

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[157] Hollis (2009, 2) states that one reason Egyptian cults were so widespread in the Greek and Roman worlds was because they promised 'ecstatic salvation' as opposed to the 'very cold, non-charismatic worship.'

[158] Geraldine 2004, 121.

[159] Strabo, XVII.4 (Jones 1932).

Crocodiles, snakes, submerged sandbanks, and a formidable ferryman were woes the deceased and the gods frequently encountered.[160] The Coffin Texts and the Book of the Dead provided a series of spells to deal with such encounters.

Considering the necessity of sailing in Egypt, the frequency of boats and navigation in Egyptian religion and mythology is understandable. Duties of the common sailor were sacred acts in the netherworld. The roles of the oarsman and helmsman were viewed as honorable positions that the deceased desired to fulfill.[161] Various components of the boat were animated forces in the afterlife which could aid the deceased in his final journey. Elements, such as the sail, planking, oars, steering rudders, and mooring equipment were allotted sacred names which, when appealed to, could impart magical power upon the deceased.[162] Similarly, boats and elements such as mooring stakes were often deified (fig. 4.1).[163] The act of mooring was a metaphor for dying and it was a goal of the deceased to "moor happily with Osiris."[164] Even gods and goddesses had their own sacred barques in which they travelled across the celestial sky. This was further reflected in cultic practices, such as the Opet Festival, where the sacred images of the gods were transported from their sanctuaries in boat-shaped palanquins.[165] Kings also had vessels to transport them through the Duat. During the Old Kingdom, the

[160] Geraldine 2004, 122.

[161] Doyle 1998, 78, 151.

[162] Doyle 1998, 79, 153, 219; Budge 2001, 295-302.

[163] Doyle 1998, 15, 219; Geraldine 2004, 122.

[164] Faulkner 1973-8, 261.

[165] Geraldine 2004, 122; Doyle 1998, 255.

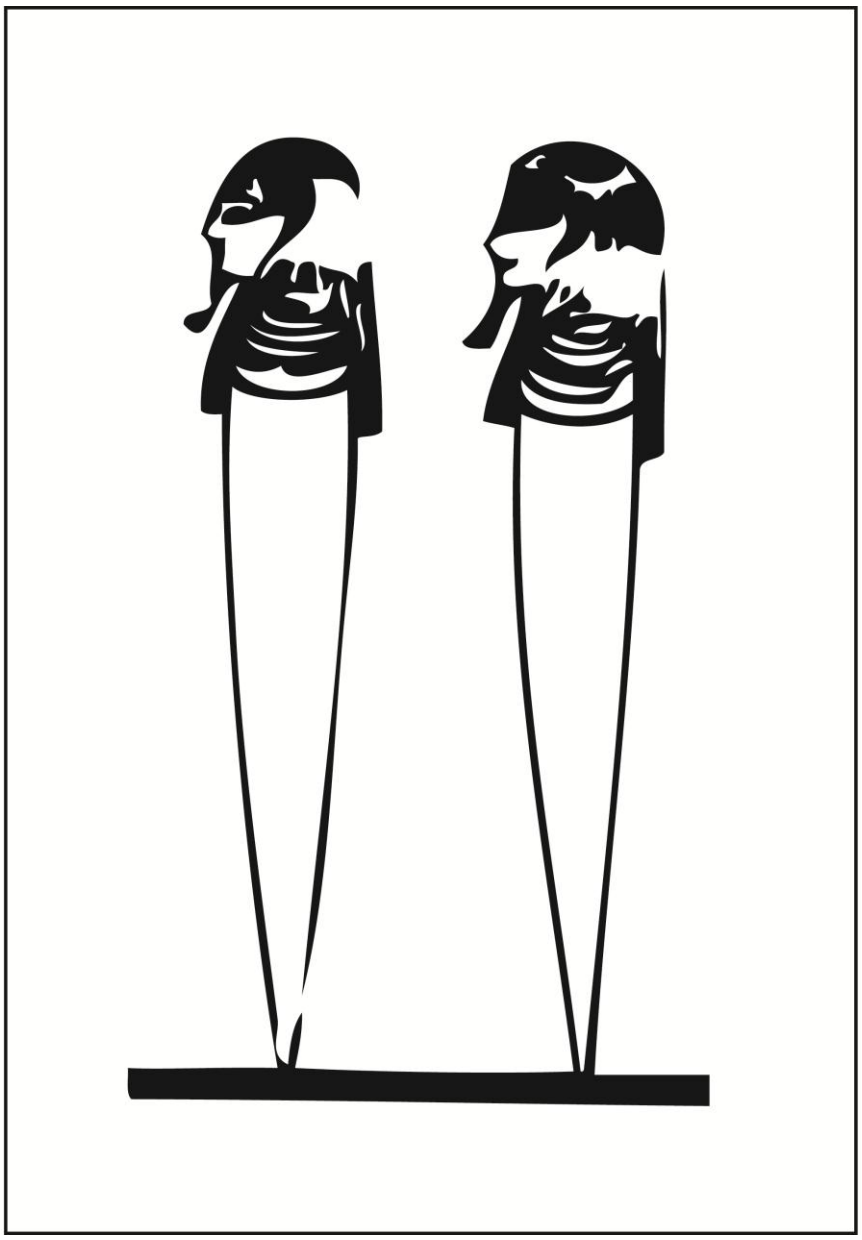

Fig. 4.1. Deified mooring stakes dated to the 18th Dynasty (adapted from Doyle 1998, fig. 8-1).

Pyramid Texts describe the voyage taken by the deceased king on a papyrus skiff, the seminal watercraft of ancient Egypt.[166]

Sailing at sea and along the inland waterways of the Nile was a dangerous enterprise and the divine were often invoked for protection. Goddesses were commonly appealed to for aid in navigation in both the divine and real worlds. Hathor, mistress of foreign lands, was commonly associated with elements of boats, such as the oars and the rudder.[167] Often depicted in human form with the ears and horns of a cow, Hathor was a deity closely associated with the living king and queen. Her origins date back to the Second Dynasty (2890-2686 B.C.E.) in Egypt and her cult first appears at Byblos (modern Gebal in Lebanon, known in antiquity as *Gubla* or *Keben/Kepen*) in the Sixth Dynasty (2345-2181 B.C.E.); "Hathor, Mistress of Dendera, who lives in Byblos."[168] In the Coffin Texts, which appear at the beginning of the Middle Kingdom (c.2055-1650 B.C.E.) the deceased is reassured that, "Hathor, Lady of Byblos, makes the steering oar of your barque."[169] The factors behind Hathor's early and prolonged association with Byblos remain uncertain, but they are presumably related to Byblos' function as primary port of exchange for quality wood. The cedar forests of northern Syria were exploited by Egypt since the beginning of the Old Kingdom (c.2686-2160 B.C.E.).[170]

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[166] Geraldine 2004, 122.

[167] Morenz and Keep 1992, 262.

[168] Hollis 2009, 1.

[169] Hollis 2009, 1.

[170] Hollis 2009, 2.

Iconographic evidence for this trade was found in the causeways of the Fifth Dynasty kings Sahure and Unas at Abusir and Saqqara.[171] These timber resources provided wood for boats, coffins, and various architectural items.[172] A fragmented literary text dating to the end of 20th Dynasty speaks of a voyage to Byblos by a certain priest named Wenamun to purchase cedar for the construction of a new barque for the god Amun.[173] The fruitful trade between Egypt and Byblos lasted millennia.

Hathor's role as "Mistress of Byblos" seems to be associated with these economic relations. A temple dedicated to the "Mistress of Byblos" was constructed at Byblos around 2800 B.C.E., and appears to be directly related to merchant activity.[174] In this respect, the "Mistress of Byblos" offered protection to the merchants and traders that frequented the port. Hathor, associated early-on with foreign lands, became a popular guardian for Egyptian sailors. On the walls of Deir el-Bahari, Hatshepsut's ships bring offerings for "Hathor of Punt" so "that she may bring wind."[175] Indeed, the goddess has several epithets that associate her with sailing, navigation, and foreign lands: "the beautiful wind of Hathor" (Old Kingdom), "beautiful are the oars of Hathor" (Middle Kingdom), "the Mistress of the Port," and "Hathor of Nubia."[176] By the New Kingdom,

[171] See Hassan 1955, 139 fig. 2; Smith 1965, fig. 6.

[172] Hollis 2009, 2.

[173] Egberts 2001, 495-6; see Pritchard (1969, 25-9) for a translation of the Wenamun text.

[174] Hollis 2009, 2.

[175] Naville 1898, Pl. LXXII (bottom left of plate); Sethe 1961, 323, II. 1-5.

[176] Hollis 2009, 3.

however, when the tale of Wenamun's voyage was composed, a new Egyptian deity had gained prominence.

Isis, a goddess widely known in the Hellenistic and Roman worlds, first appears in Egyptian texts in the Fifth Dynasty. Unlike Hathor who is firmly rooted in the living world, Isis was a popular deity associated with the afterlife. Her early representations in the *Pyramid Texts* portray her in a role as a mortuary goddess who nurtures and aides the deceased.[177] In the guise of mourning women, Isis and her sister Nephthys are occasionally depicted at the bow and stern of funerary barques.[178] Isis' relation with Osiris, god of the dead, as his sister and consort ultimately played a role in her rise to prominence. By the New Kingdom, Isis assimilated the aspects and symbols traditionally associated with Hathor.[179] One of these associations was shipping; Isis states, "I am the mistress of navigation."[180] However, it is not until the seventh century B.C.E. that evidence for the Isis cult appears at Byblos. When Isis made her appearance at Byblos, she remained closely associated with Hathor until the second century C.E. when she was finally given an independent role in Plutarch's, *De Iside et Osiride*, a twist on the earlier Isis and Osiris myth. In this tale, Osiris, who has been locked in a chest and thrown into the Tanitic branch of the Nile by his jealous brother Seth, is swept in the Mediterranean Sea and carried by the currents to a shore near Byblos. Isis is portrayed

[177] Hollis 2009, 1.

[178] Fischer 1976.

[179] Hollis 2009, 1.

[180] Hollis 2009, 4.

as a strong ruler who watches over Egypt in her husband's absence (probably a reflection of the Ptolemaic queens). As a devoted sister and wife, she finally journeys to Byblos to retrieve her dead husband who has been incorporated by the king of Byblos into a pillar of a building. After a brief stay at Byblos, in which she makes herself known to the queen there, Isis takes the body of Osiris and sails back to Egypt. By Plutarch's day, the Hellenized-Isis cult was widely-spread throughout the Roman Empire. Her assimilation of the major Egyptian and Greek goddesses transformed her into a universal goddess whose promise of "ecstatic salvation" attracted Egyptians, Greeks, and Romans alike.[181]

At the end of the fourth century B.C.E., two Hellenized deities were born in Egypt; Serapis and Isis. Serapis, a Greco-Egyptian god in whom the Egyptians saw the equivalent of Osiris, incorporated several aspects of the savior god Zeus, the underworld god Pluto, the fertility god Dionysus, and the healing god Asklepios.[182] Although the origin of this deity is somewhat obscure, he was quickly incorporated into the Ptolemaic regime.[183]

Ptolemy I appears to be the first king to associate Serapis with Osiris-Apis (the deified Apis Bull).[184] The new god was provided with a consort who also appealed to

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[181] Morenz and Keep 1992, 263; Hollis 2009, 1-2.

[182] Pfeiffer 2008, 391-2.

[183] According to Heyob (1975, 6), it remains unclear whether Serapis was developed by Alexander the Great or his successor, Ptolemy I.

[184] Pfeiffer (2008, 389) notes that the Apis Bull at Memphis was closely tied to Egyptian kingship since the Old Kingdom. Upon the sacred bull's death, he was thought to transform into the god Osiris-Apis.

Egyptian and Greek interests. The Hellenistic Isis was born in Alexandria around the same time as her consort, Serapis. Although she maintained many of the same aspects as her Egyptian counterpart, the Hellenized Isis assimilated several qualities and roles from Greece. For the Greeks, Isis fulfilled the role of Aphrodite; the foremost goddess of sea power, beauty, marriage, and sexual desire.[185]

At the end of the fourth century B.C.E., about the same time the Greco-Egyptian Isis appeared in Egypt and abroad, Aphrodite was a patron deity for royal women and courtesans in Greece.[186] Isis, therefore, became the goddess of many names and her all-encompassing attributes fulfilled the needs of the Egyptians, Greeks, and later the Romans. Her followers appealed to her for help in childbirth, illness, or navigation.[187] Isis' association with the sea flourished between late Ptolemaic times through the Roman period; she was the "mistress of the winds," "protector of sailors," and thought to be the "inventor of navigation and the sail."[188] Isis was sometimes provided with one of the following epithets; *Pharia*, *Pelagia*, or *Euploia*. The distinction between the three adjectives is unclear, but Pharia appears to be used as a synonym of the latter two terms.[189] Isis' power over the sea made her the foremost deity of fisherman and sailors:

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[185] Carney 2000, 35-9.

[186] Carney 2000, 34; Heyob 1975, 6. An inscription from Halicarnassus dated to the end of the 4th century BCE is the oldest reference to Serapis and Isis outside of Egypt.

[187] Versnel 1993, 45.

[188] Williams 1985, 111.

[189] Bricault (2000, 136) notes that the term Pharia is first attested in the late 1st century BCE and continues to be used into the fourth century CE. Bricault (137) also discusses the reference to the deity by Tibullus as Isis-Io (*iuvenca Pharos*).

"I soothe the sea and make it wave" and "I make the navigable unnavigable whenever it pleases me."[190]

During the third century B.C.E. the Isis cult spread along the coasts of Greece, and Delos became one of the important centers of worship for Isis and Serapis.[191] By the second and first centuries B.C.E., Isis was widely known throughout Greece, in Boeotia, Phocis, the Peloponnesus, Euboea, Epirus, Thessaly, Thrace and Macedonia, Rhodes, the islands of the Aegean, and as far as Asia Minor.[192] The cult spread along the coasts of Italy during the second century B.C.E., flourishing in the port cities and centers of trade.[193] Eventually, the cults of Isis and Serapis had gained such support among the lower classes that the Roman authorities began a period of persecution in the first century B.C.E. The annual festival of the Ploiaphesia, and the later version known as the Isidis Navigium, celebrated Isis' role in nautical matters and continued to do so well into the sixth century C.E.[194]

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[190] See Versnel 1993, 43.

[191] Heyob 1975, 7.

[192] Heyob 1975, 8.

[193] Heyob 1975, 10-13.

[194] Williams 1985, 111; see also Alföldi 1937.

The Mendesian Theology

Comparable to early Mesopotamian religion, the various roles and powers which the Egyptians attributed to their local gods were directly related to the economic and environmental conditions of the region in which the gods resided.[195] The allotment of certain deities for the protection of the economy was a result of the "numinous experience in situations connected with basic life-sustaining situations."[196] Thus, since its early inception the religious ideology of the Mendesian nome was highly focused on fertility and yield. The earliest deity associated with Mendes and found on the nome emblem, was the fish goddess *Hatmehit* ("foremost of the fishes").[197] Although Hatmehit was known elsewhere for her participation in the Osiris myth, and an epithet of hers was discovered in the temple of Dendera in Upper Egypt, she was not worshipped outside of the Mendesian nome.[198] As a fish goddess she was inherently related to the watery environs around Mendes and Thmuis. A temple near the port of Mendes, dedicated to her during the Ramesside period, perhaps reflects her association with water travel and commerce.[199] Her later syncretism (coalescence of one god with another) with Isis and Nephthys further emphasizes her relation to fertility and the regenerative

[195] See Silver (1995) for the economic role of gods.

[196] Quote taken from Silver (1995, 8).

[197] Geraldine 2004, 114; Meulenaere 1976d, 178.

[198] Meulenaere 1976d, 178.

[199] Blouin 2006, 274.

qualities of the Nile flood.[200] Isis would later assimilate the attributes and position of the fish-goddess in the Mendesian nome.

During the Greco-Roman period Hatmehit took on an additional role which seems to be related to the perfume industry at Mendes and Thmuis. The following inscription was found at the temple of Dendera in Upper Egypt: "Queen of Punt, Mistress of Myrrh, who produces all the…, whose perfume is diffused throughout the Two Lands."[201] This epithet calls to mind the earlier appellation of Hathor, chief deity of Dendera temple, "Mistress of Punt." Incense and myrrh were imported from Punt perhaps as early as the Old Kingdom, but certainly during Hatshepsut's reign in the New Kingdom.[202] Hathor's association with this trade, as protector and guardian of Egyptian sailors and ships, is clearly evident from her epithets. Her role in the incense trade would have made her an attractive deity for the perfume industry of Mendes and Thmuis. This would explain Hatmehit's assimilation of the title, "Queen of Punt, Mistress of Myrrh…" The fish deity's importance for fertility and commerce in the Mendesian nome extended into Roman times. Although eventually superseded by Isis in the Greco-Roman period, fish reliefs discovered at Thmuis indicate that Hatmehit was never fully abandoned.[203]

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[200] Blouin 2006, 273; According to Meulenaere (1976d, 178), and Morenz and Keep (1992, 140), Isis occupies the place of Hatmehit in the Mendesian triad.

[201] Meulenaere 1976d, 178.

[202] Phillips (1997, 426) notes that references to Punt and the import of myrrh date back to the Fifth Dynasty. The earliest reference is on the Palermo Stone.

[203] Blouin 2006, 274.

Despite her prominence within the nome, Hatmehit was quickly overshadowed by the ram god, *Banebjded*, perhaps as early as the Second Dynasty (2890-2686 B.C.E.).[204] Banebjded was considered the northern equivalent of the ram god, *Khnum*, and his association with Osiris ensured Mendes' place in Egyptian mythology.[205] According to two religious texts, the Book of the Heavenly Cow and the Coffin Texts, the "*ba* (soul) of Osiris is the ram of Mendes."[206] The ba of Osiris, therefore, was said to have resided at Mendes after he was killed by his brother Seth. The prevalence of pastoralism in the Nile Delta was no doubt reflected in the religious ideology of the region. A significant proportion of the local town standards in Lower Egypt incorporated images of cattle, and the cults of the Mnevis and Apis bulls in Heliopolis and Memphis attest to the significance of the cattle economy of the Nile Delta.[207]

Similarly, the cults of Hatmehit and Banebjded were certainly a reflection of the watery environs and pastoral economy of the Mendesian nome. Like the attributes of Hatmehit, the ram god's procreative abilities were also closely tied to fertility and the annual Nile flood. By Greek times, legends of Banebjded's sexual undertakings were widely known. Strabo relates a version of this tale: "Mendes, along the crag of the sea, farthermost horn of the Nile, where the goat-mounting he-goats have intercourse with

[204] Meulenaere 1976d, 178.

[205] Geraldine 2004, 114.

[206] Geraldine 2004, 114.

[207] Silver 1995, 8.

women."[208] Banebjded's regenerative abilities were closely associated with Osiris, whose phallus, according to Egyptian mythology, was at Mendes.[209] During the Ptolemaic period, according to the Mendes Stele, Ptolemy II and III visited Mendes to participate in the ritual worship of Banebjded.[210]

Harpocrates was a later addition to the Mendesian ideology. He is depicted as the child Horus and appears during the Third Intermediate Period (1069-664 B.C.E.).[211] The Mendesian Triad (Banebjded, Hatmehit, and Harpocrates) was often equated with the Osiris, Isis, and Horus triad, especially during the Hellenistic period.

Other minor deities, such as Ptah, Imhotep and Sobek make an appearance in the Mendesian nome.[212] Several libation tables from Thmuis, depicting crocodiles in a basin, are presumably related to the Sobek cult in the nome. Isis also appears to have an individual role in the Mendesian nome during the Roman period. A papyrus from the Delta city of Oxyrhynchus, dated between the beginning of the first century and the second century C.E., attests to the extent of the Isis cult in Lower Egypt and abroad.[213] The goddess' titles are listed in a total of 67 cities in the Nile Delta. Two or possibly

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[208] Strabo, XVII.19 (Jones 1932).

[209] Meulenaere 1976d, 179;Geraldine (2004, 114) finds evidence in the Coffin Texts that the soul of Osiris took refuge at Mendes.

[210] Redford 2010, 194.

[211] Redford 2010, 194.

[212] Meulenaere 1976d, 180.

[213] Blouin 2006, 324.

three of these centers (if Thmuis is included) are within the Mendesian nome, and indicate the strong presence of the Isis cult.[214]

Conclusion

The maritime space of Egypt was highly fluid and volatile. The Egyptians developed a keen awareness of this space through their close interaction with the river and the sea. In the past, several scholars erroneously attributed the Egyptians' imprecise terminology for these spaces to a lack of awareness. Such an argument, however, lacks credibility when weighed against the evidence of sailing found on Gerzean pottery, in the Old Kingdom tombs at Saqqara and Abusir, and at the Red Sea port of Mersa Gawasis. For the Egyptians the Nile Delta was not a series of lines on a map; it was a vast space. The mutability of terminology is a reflection of the mutability of the maritime environment. Conditions along the river were never stable and the maritime regions of the Nile Delta often overlapped. Accounts by ancient and modern historians describe the likeness of inundated Nile Delta to a sea. A precise terminology for an inconsistent landscape was not practical. Ideology also reflects the Egyptian perception of an uncertain landscape. The earliest Mendesian gods, Hatmehit and Banebjded, were tied to the fertility and economic yield of the river. When conditions were beyond control, the Egyptians appealed to these deities for divine assistance. In a sense, the Mendesian ideology was a method of risk management in response to the unstable

[214] Blouin 2006, 324.

conditions of the Nile Delta. The fates of Mendes and Thmuis were ultimately determined by the river.

CHAPTER V

THE THMUIS MOSAICS

In the early 20th century a group of eight mosaics were discovered at Tell el-Timai; four of these are Hellenistic and four are dated to the Roman period.[215] As a whole the collection testifies to the presence of a wealthy elite and, perhaps, a group of skilled artisans at Thmuis.[216] Four of these mosaics (*Alexandria 21739, 21736, 21641, and 20195)* are pertinent to this study because they represent the maritime cultural landscape of Thmuis. K. Blouin maintains the possibility that the mosaics were crafted at Thmuis.[217] Other scholars believe they were manufactured in Alexandria and later transported to Thmuis. The signature of a mosaic craftsman from Alexandria, *Sophilos epoiei*, is found on the upper corner of *Alexandria 21739.* W. A. Daszewski suggests this indicates that the mosaic was crafted after an original, or *paradeigma*, and later transported from a workshop to Thmuis. Also discovered at Tell el-Timai was a second, more idealized mosaic (*Alexandria 21736*) without Sophilos' signature. Although often considered of inferior quality, this mosaic shares the same features that make the

[215] Meulenaere and MacKay 1976, 211-12. According to Meulenaere and MacKay (1976, 211) the Sophilos mosaic was discovered at Tell el-Timai in 1918 and later transported to Alexandria in 1924. Daszewski (1985, 146) relates that three mosaics were discovered by Frank Rattigan in a Roman villa at Tell el-Timai. One of these was sent to Alexandria and the other two were 'reluctantly' sold after their discovery.

[216] Blouin 2006, 262.

[217] Blouin 2006, 262.

Sophilos mosaic unique and extraordinary. The other two mosaics that will be discussed in this study depict a Nile banquet and a scene from the Greek mythological tale of Alpheios and Arethousa. As a collection, these four mosaics represent both the environment and maritime role of Thmuis.

Alexandria 21739 and Alexandria 21736

Currently housed in the Greco-Roman Museum in Alexandria, *Alexandria 21739* and *Alexandria 21736* (figs. 5.1- 2) testify to the mastery achieved by the Hellenistic mosaic artists. Sophilos' mosaic, dated stylistically to around 200 B.C.E., is the earliest known example of the Greek style known as *opus vermiculatum*.[218] In this technique miniature tesserae are arranged around the outline of a feature in single or multiple rows. The tesserae are generally so minute that it is often difficult to discern them as individual pieces. The minute tesserae, ranging in size from 0.1-0.4 cm, and the broad color palette permit an astonishing degree of detail.[219] Discernible are folds of drapery, individual strands of hair, shadows and light which fall over the subject's face and neck, and the tiny details along the ship's hull. Thin strips of lead create a bold outline along the edge of the *stylis*, or flagstaff, in the Sophilos mosaic.[220] The overall effect of this technique creates a halo that accentuates the feature in contrast to the background, which is

[218] Waage 2011, 9. The dating of the Sophilos mosaic is uncertain but is generally placed around 200 B.C.E.

[219] Dunbabin 1999, 25.

[220] Dunbabin 1999, 25.

Fig. 5.1. Alexandria 21739. The Sophilos mosaic discovered at Tell el-Timai in 1918 (Eternal Egypt website; courtesy Graeco-Roman Museum in Alexandria).

Fig. 5.2. Alexandria 21736. The anonymous mosaic discovered at Tell el-Timai (Eternal Egypt website; courtesy Graeco-Roman Museum in Alexandria).

generally laid in a different pattern. This technique is generally reserved for the finest figure work. The scenes in both mosaics are strikingly similar; each incorporates the bust of a woman with the prow of a ship atop her head. What is especially unique about these mosaics is that, as of this time, there are no known parallels for a Hellenistic queen or a deity wearing a ship as a crown.[221] The women share the features of a full face, prominent eyes, a large and straight nose, and a small mouth. The hairstyles are equally similar with a coiffure that is parted down the middle and drawn back behind the neck. The fact that they are thematically identical is curious. K. Dunbabin believes the two mosaics to be replicas of an inferior painting.[222] The subject of the mosaics is widely contested. In the past the central figures have been identified as a personified Alexandria, Berenike II (c. 269-221 B.C.E.), or Arsinoe II (c. 316-270 B.C.E.). Although the women bear a resemblance to several portraits of Arsinoe II, the idealization of these pieces makes it risky to associate them based on her appearance alone. A thorough examination of each mosaic reveals clues to the identification of the women and the intended theme that each portrays. The elements and features of each mosaic are critically examined in detail below.

The Sophilos mosaic (fig. 5.1) displays a fine level of craftsmanship in both detail and perspective. The design of the ship, although highly distorted, is more realistic than the ship featured in the anonymous mosaic (fig. 5.2). Immediately evident

[221] This is based on an examination of available literature and the *Lexicon Iconographicum Mythologiae Classicae*. There is a later parallel in Cornelis van Yk's 1697 Dutch treatise, *De Nederlandsche Scheeps-bouw-konst Open Gestelt*, where a maritime goddess wears a crown of ship prows and holds a rudder. The goddess is probably a later rendition of Isis Euploia-Pharia-Pelagia.

[222] Dunbabin 1979, 267; Dunbabin 1999, 25.

are an upward-curving stempost, elements of the ram including an *embolos* and a *proembolion* supported by a pair of heavy wales that extend through the port side of the hull, an *ophthalmos* (decorative eye), and a beribboned *stylis* (flagstaff).[223] In order to display what he must have felt were the key elements of the ship, Sophilos depicted the prow in an amalgam of two views, joining a frontal body view with a sheer view of the port side. While the starboard side does not disappear as one might expect if Sophilos had used true perspective, the second ophthalmos which would be visible if viewing the prow straight on, is hidden. The distortion of the ship calls to mind the 'aspective' technique in Egyptian art described by E. Brunner-Traut, where an object is rendered "part for part as it really and ideally is, always, everywhere, and for everybody."[224] However, unlike the traditional two-dimensional aspective style, Sophilos employed a degree of perspective to show the projecting sides of the ship where the *parexeiresia* (outrigger) begins. The parexeiresia expands the sides of the hull and allows for a third bank of oars without increasing the oar length or the angle of immersion. This design is a distinguishing feature of the trireme; the primary naval weapon of the Ptolemies.

The symbols on the ship are barely discernible due the poor state of the mosaic's preservation. Sea creatures (a snake or a dolphin) and a laurel wreath are visible on the port and starboard sides. Daszewski identifies a single cornucopia on the port side of the

[223] As described by Casson (1971) the embolos is the primary ram, the proembolion is the subsidiary or fore-ram, the ophthalmoi are the decorative eyes on the prow, and the stylis is the identification device carried at the stern.

[224] Brunner-Traut 1986, 424.

prow.[225] The figure holds a stylis in her left arm, and the two ribbons which appear to be secured to the top of the stylis flutter behind the woman to her right. The stylis, a pole set up at the stern and usually fitted with a crosspiece, appears on Greek galleys after the fifth century B.C.E.[226] Its purpose was to carry a device, symbol, or name of the ship's chief deity.[227] The two ribbons do not bear specific symbols or writings but they appear strikingly similar to the ribbons associated with the *dikeras*, or double cornucopia; a symbol which Ptolemy Philadelphus created to represent the deified Arsinoe.[228] The dikeras is often filled with garlands, sprouts of grain and bunches of grapes and is thought to have been devised by the king to represent the fruitfulness of Arsinoe II. The single cornucopia, or horn, was a symbol of Isis and appears quite frequently on Hellenistic coins. It is possible that Ptolemy Philadelphus merely adapted this motif for his queen. The dikeras is always associated with Arsinoe II and on the reverse of her posthumous coins it is depicted with fluttering ribbons.[229] The beribboned stylis might indicate that the deified Arsinoe II was the protector of this particular ship.

The figure (figs. 5.1-2) is dressed in male military garb perhaps to reflect her authority or to commemorate a naval battle. There are no other parallels in Hellenistic royal portraits of a queen wearing this style of dress. Her cuirass (breastplate) is

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[225] Daszewski 1985, 145.

[226] Casson 1971, 346; see also Svoronos 1914.

[227] Casson 1971, 346.

[228] Thompson 1955, 204.

[229] Moore 1997, 57. Later the dikeras is sometimes depicted on coins of Cleopatra VII.

reminiscent of the one worn by Alexander the Great in the famous first century B.C.E. Alexander Mosaic from Pompeii (Fig. 5.3). She wears a white and purple *chlamys* or mantle which is fixed on her right shoulder with a golden anchor-shaped fibula. Visible behind her left shoulder is a red shield decorated with a wave-crest design (a series of scrolls forming a stylized wave pattern). The wave-crest, also known as the *kymation*, calls to mind the breaking waves along the Mediterranean Sea. This particular motif appears on only four other Hellenistic and Roman mosaics in Egypt.[230] Although the motif frequently appears on mosaics outside of Egypt, its use on the shield is presumably related to the maritime theme of the mosaics.

The figure is bordered by two frames, each with elaborate patterning. The outermost frame is composed of the Greek meander or key pattern which is thought to represent either the flow of a river or a labyrinth.[231] The meander pattern is found throughout Egypt and the Mediterranean world; in Egypt it appears on six Hellenistic and three Roman pavements.[232] The ornamental design can be made flat or with perspective. Sophilos preferred the later and created an isometric double meander, together with a guilloche design, to frame the *emblema* (central panel with figurative representation).[233] A dozen libation tables from Thmuis display a similar meander pattern bordering their central basin (fig. 5.4); it is probable that these represent a harbor

[230] Daszewski 1985, 36.

[231] Wilson 1999, 12.

[232] Daszewski 1985, 45.

[233] Daszewski 1985, 45.

Fig. 5.3. Alexander Mosaic from Pompeii, Italy dated to 100 B.C.E. (courtesy Museo Archeologico Nazionale, Italy).

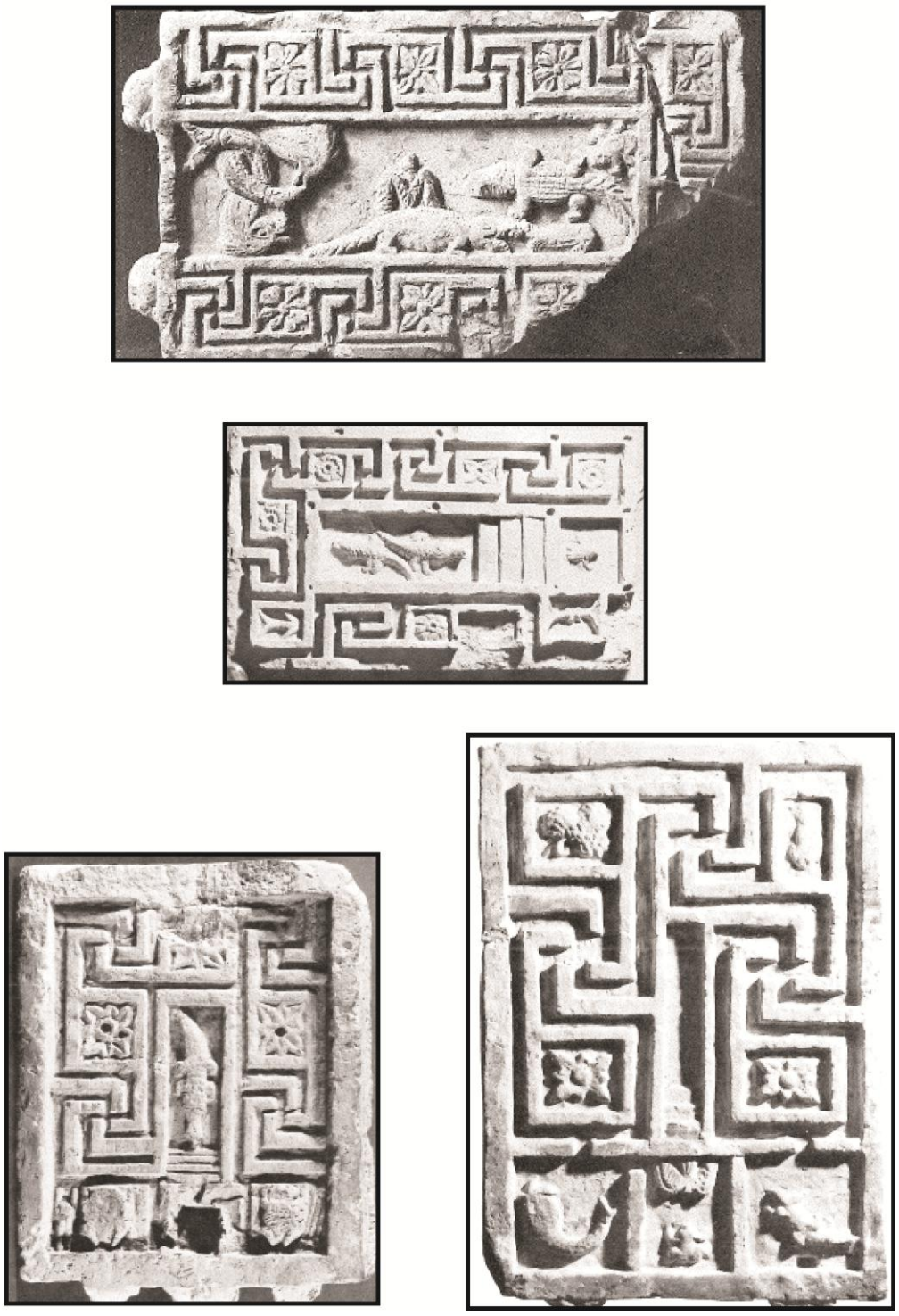

Fig. 5.4. Libation tables discovered at Tell el-Timai (Meulenaere and Mackay 1976, pls. 32e, 34e, 35c, 35f).

or sacred lake, as they are often filled with crocodiles and aquatic animals and contain a stairway.[234] The meander is common in mosaics and art, but usually has no symbolic connotation. The frequency of the motif at Thmuis suggests, however, that it might have held a symbolic connection to the riverine environment for the inhabitants of Thmuis. The water landscape around Thmuis was a complex system of canals and waterways reminiscent of a maze or labyrinth. The use of the meander in the border of the Sophilos mosaic may have been intended to reflect the meandering course of the waterways around Thmuis.

The anonymous mosaic (fig. 5.2) appears to be a somewhat inferior copy of either a painting or the Sophilos mosaic (fig. 5.1).[235] Its preservation, however, allows for a more detailed inspection of the elements. The same features are discernible: the prow of a ship (trireme), with its embolos and proembolion, and upward-curving stem. Also evident is the military clothing from the Sophilos example, and traces of a shield behind the central figure's back. The mosaic is entirely two-dimensional and lacks the perspective achieved by Sophilos. As a result, two ophthalmoi are shown and the parexeiresia is difficult to discern. The markings on the ship, however, are recognizable. A winged caduceus is displayed on each side of the bow. The starboard caduceus incorporates a disk also seen in the Sophilos mosaic, which might represent the *shen* sign (an Egyptian symbol for eternity and protection), a stylized double-uraeus disk, or a

[234] See the catalogue of libation tables in Meulenaere and MacKay 1976.

[235] National Gallery of Art (1999, 112) suggests the mosaics are a copy of an earlier painting which could date to 246/245 B.C.E. or 241 B.C.E.

laurel wreath (an emblem of victory or distinction). Daszewski believes the motif is a wreath.[236] A sea creature (possibly a dolphin or snake) is evident on the starboard side of the vessel, as in the Sophilos mosaic. These markings might be the *episemon* or *parasemon* (name-device) that was commonly carved, painted or incorporated on a bronze plaque at the bow of warships.[237] Similarly, on the forward part of the cowl of the Athlit Ram (late third or early second century B.C.E.) a caduceus is depicted.[238] The caduceus is frequently minted on coins throughout the Mediterranean and is associated largely with Hermes, the messenger of gods and the guide and protector of sailors and merchants, but also with Isis in the *Navigium Isidis*.[239] The cult of Isis was prevalent in the Mediterranean during the Hellenistic and Roman periods, and motifs referring to the Navigium Isidis are frequently shown on the reverses of coins. One such motif is the god Anubis (Egyptian equivalent of Hermes) holding a caduceus.[240] Ships named after the goddess Isis were common during the Roman period, so it is entirely possible that the caducei in the Thmuis mosaic represent the parasemon of the ship, and reflect a connection with the Isis cult.[241]

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[236] Daszewski 1985, 144.

[237] Casson 1971, 344-345. According to Casson (1971, 344), the parasemon was the standard identification feature of boats in Greco-Roman Egypt.

[238] Murray 1991; Casson et al. 1991, 61.

[239] McCabe 2008, 9.

[240] Brady 1938, 90.

[241] See Helms 1980.

Several scholars have discussed the theme of the Thmuis mosaics and the identity of the women portrayed in them.[242] E. Breccia was the first to regard the mosaics as a personification of the maritime city of Alexandria. This view was largely adopted until Daszewski presented evidence to suggest that the mosaics were portraits of a Ptolemaic queen. Daszewski concluded that: a) the women do not share similarities to any known personifications of Alexandria or other towns/provinces, b) the military dress has parallels in other representations of Hellenistic rulers and the purple chlamys indicates royalty, c) the shield is common on early Ptolemaic coins, and d) the figures share features with queens Arsinoe II, Berenike II, and Arsinoe III (c. 235-204 B.C.E.).[243] Daszewski finally concludes that while Arsinoe II would be the most likely candidate among the three proposed queens, portraits of Berenike II bear the most resemblance to the women in the Thmuis mosaics.[244] However, as Blouin (2006) points out, Ptolemaic royal portraits are heavily idealized and it is easy to find similarities in the appearance of Arsinoe II, Berenike II and the women in the mosaics. According to Blouin, the woman featured in both mosaics is Arsinoe II (282-270 B.C.E.), predecessor of Berenike II and wife of Ptolemy II Philadelphus.[245] While the royal portraits of Arsinoe II yield uncanny similarities to the subjects of the Thmuis mosaics, the most

[242] Adriani 1972; Blouin 2006; Breccia 1924 and 1932; Brown 1957; Bruneau 1972; Daszewski 1985; Foucher 1960; Fuhrmann 1931; Rizzo 1929.

[243] Daszewski 1985, 150-1.

[244] Daszewski 1985, 151.

[245] Blouin 2006, 266.

conclusive piece of evidence for Blouin's (2006) argument is found on a stele discovered at Mendes.

On the great Mendes Stele erected by Ptolemy Philadelphus (c. 280 B.C.E.) in the Temple of the Ram, Ptolemy Philadelphus, his wife Arsinoe II, and their son present offerings to the ram god Banebjded.[246] Opposite this scene are Harpocrates, Banebjded, Hatmehit, and the deified Queen Arsinoe.[247] While the practice of the ruler-cult was not unknown, Ptolemy Philadelphus was essentially the first pharaoh to establish for himself and his queen a divine cult by royal decree.[248] The Egyptians had a long tradition of divinizing individuals based on extraordinary merit, as well as associating the king's wife with Hathor and Isis; this divine status was generally allocated posthumously; the cults of Ptolemy II and Arsinoe II, however, were possibly established during their lifetimes.[249]

Queen Arsinoe II is not as widely known as other Ptolemaic queens, such as Cleopatra VII, yet her boldness and military prowess created a high standard for those who followed her. Daughter of Berenike and Ptolemy I Soter, founder of the Ptolemaic dynasty, Arsinoe II was first queen of Thrace before her marriage to Ptolemy II of

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[246] Redford (2010, 194) provides the date of Ptolemy II's visit to Mendes.

[247] Quack 2008, 276.

[248] Pfeiffer 2008, 388.

[249] Carney 2000, 35; Quack 2008, 277. The cult associated with the *God's Wife of Amun* might be an exception, though very different. During the New Kingdom up through the Saite Period, the royal women with this title were thought to be the consorts of the god Amun. This title transformed the king, who was previously not deified until death, into a demigod during his lifetime.; Lloyd 2000b, 403; Pfeiffer 2008, 388.

Egypt. After two failed marriages and the brutal murder of her two potential heirs, Arsinoe II fled to Alexandria where she used her charm and guile to persuade her full brother Ptolemy Philadelphus to divorce his wife (Arsinoe I).[250] Their marriage in 276/5 B.C.E. began an incestuous trend in the Macedonian bloodline.[251] As queen, Arsinoe II Philadelphoi ('brother-loving') displayed her cunning ability to rule. She reorganized the Ptolemaic army, joined in its campaigns abroad, and secured the Seleucid defeat during the First Syrian War (274-271 B.C.E.).[252] For Ptolemy Philadelphus, this marriage was a politically-sound move. The power Arsinoe wielded as queen brought forth a line of powerful and dangerous Ptolemaic women whose murderous plotting and scheming created the instability for which the Macedonian kingship would later become notorious. During her life, however, Arsinoe Philadelphus achieved wide acclaim among the Greeks and Egyptians at home and abroad. Cities and ports in Greece were named after her, as were several towns, nomes, harbors and streets in Egypt.[253] Arsinoe II's death is one of the most widely contested dates in Ptolemaic chronology.[254] Depending on the scholar, Arsinoe II died in either 270 or 268 B.C.E.[255] This chronological inconsistency has caused a debate over whether Arsinoe II was deified

[250] Thompson 1955, 199.

[251] Thompson 1955, 199.

[252] Thompson 1955, 200.

[253] Quaegebeur 1971, 242-3.

[254] Ogden 2008, 382.

[255] Cadell (1998) believes Arsinoe II's death was in 270 B.C.E., while Grzybek (1990, 103-12) provides a date of 268 B.C.E.

posthumously or during her lifetime. Supposing that the date of 268 B.C.E. is correct, Arsinoe Philadelphus would have had an established cult while she was alive.[256]

Following her deification, the queen was incorporated into the local cults at Alexandria, Mendes, Memphis, Pithom, Phacousa, Tanis, Pharbaitos, Karnak, Philae, and according to the Pithom Stele at a northern Red Sea port.[257] As with many later queens, Arsinoe Philadelphus was identified with Aphrodite and Isis.[258] Although Aphrodite and Isis were often syncretized during the Hellenistic period, Arsinoe Philadelphus' connection to both goddesses allowed her appeal to extend to both Greek and Egyptian subjects. Greek tradition likened royal women to Aphrodite, while the pharaohs identified their royal women with Isis.[259] Thus, *Arsinoe thea Philadelphus Isis* and *Arsinoe Aphrodite* were one and the same, yet each reserved qualities that served the needs of the multi-ethnic Ptolemaic empire.[260] The attributes shared by Isis and Aphrodite made them attractive benefactors and protectors of Ptolemaic royal women; both goddesses maintained strong ties to naval power and navigation, their beauty equated to power, and their sexual desire and maternal qualities made them good wives and mothers. These divine traits became characteristic of Ptolemaic queens; they were

[256] Gutzwiller 1992, 365.

[257] Quaegebeur 1971, 242-3, 263.

[258] Carney 2000, 33.

[259] Carney 2000, 33.

[260] For Arsinoe II's identification with Isis and Aphrodite see Quaegebeur (1971, 247) and Carney (2000, 38-9).

powerful, cunning, alluring beauties whose decisive qualities could rule or destroy an empire.

For Arsinoe Philadelphus it was easy to assume the syncretized role of Isis-Aphrodite. At Cape Zephyrion (near Alexandria) Arsinoe Philadelphus was worshipped as *Aphrodite Euploia*, protector of seafarers.[261] Meanwhile, at the Nile Delta cities of Sais and Mascara she was identified with the goddess Isis.[262] According to the Mendes Stele (ca. 264 B.C.E.), a cult statue of the deified Arsinoe Philadelphus was to be set up in all the temples of Egypt. The stele also mentions on this occasion, the abolition of a compulsory navigation toll and bread tax in the Mendesian nome.[263] The divination of Arsinoe Philadelphus, the incorporation of the royal family into the Mendesian pantheon, and the elimination of the navigation and bread taxes recorded on the Mendes Stele, according to K. Blouin, "highlights the special bond that united the Mendesian nome and its water, commercial and religious environment to Arsinoe II."[264]

Arsinoe Philadelphus' connection to navigation and sailing is pronounced in comparison with later Ptolemaic queens. Between 270 and 260 B.C.E. Ptolemaic sea power was at its peak; the Ptolemaic fleet controlled both the Mediterranean and the Aegean and was maintained by a network of harbors throughout the region.[265] Like

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[261] A statue of Aphrodite Euploia also decorated the fourth century B.C.E. temple at Knidos in Turkey.

[262] Quaegebeur 1971, 242-3; Carney 2000, 38; Quack (2008, 284) discusses the erection of a statue of Isis-Arsinoe at Sais.

[263] Quack 2008, 278.

[264] Blouin 2006, 268.

[265] Marquaille 2008, 49.

Ptolemy II's thalassocracy, Arsinoe Philadelphus' influence in the Mediterranean world was extensive. Votive plaques dedicated to Arsinoe Philadelphus in her role as Aphrodite Euploia were discovered at coastal cities in Cyprus, Lesbos, Delos, Paros, Ios, Amorgos, Samos, Thera, Miletus and Eretria.[266] Furthermore, at least 11 coastal cities in the Mediterranean and the Aegean, and one along the Red Sea were named after her.[267]

Arsinoe Philadelphus' association with Isis and Aphrodite in Egypt and abroad, and her deification and connection with the navigation and bread tax at Mendes, attest to the queen's role and concern in maritime matters along the Nile and at sea.[268] Arsinoe Philadelphus was the ultimate symbol of Ptolemaic naval power. Her role as a maritime divinity extended beyond Egypt into the Mediterranean and the Aegean, where she represented both a queen and a goddess. As Arsinoe-Isis-Aphrodite she represented sea power, fertility, and security and as the wife of Ptolemy II she legitimized the Ptolemaic dynasty.[269]

Consideration of this evidence suggests the woman in both Thmuis mosaics is Arsinoe II, portrayed in the guise of Isis-Arsinoe. The subjects' obvious connection with maritime and naval matters and the symbolic features of the ship that are associated with the Isis cult support this hypothesis. Bearing in mind the roles of Thmuis and Mendes as

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[266] Marquaille (2008, 59) suggests Arsinoe II was worshipped in both private and public cults in these coastal cities.

[267] Marquaille 2008, 50, 59.

[268] Arsinoe was given the epithets Euploia, Pharia, and Pelagia which are associated with both Isis and Aphrodite.

[269] Marquaille 2008, 59, 60.

prominent centers of maritime activity and trade in the third century B.C.E., the discovery of these mosaics in the elite suburb of Thmuis is not unusual. Ptolemy II Philadelphus' visit to Mendes and his deification there of Arsinoe II implies at the very least an imperial awareness of the cities. If the mosaics do represent the deified Isis-Arsinoe, it is probable that an associated cult was located at Thmuis. The prevalence of Isis in the Mendesian nome during Roman times might bear a connection to the earlier cult of Arsinoe II Philadelphus.

Alexandria 21641 and 20195

The final mosaics that deserve mention are two Roman pavements. *Alexandria 21641* was discovered at Tell el-Timai in 1912. Like all of the Thmuis mosaics, it too is now housed in the Greco-Roman Museum in Alexandria. The mosaic depicts a Nilotic scene and is datable to the third century C.E. Although Nilotic mosaics are frequently unearthed at sites throughout the Mediterranean, in Egypt they are rare; *Alexandria 21641* is the only one of its kind discovered in Egypt.

Nilotic mosaics form a group of artwork that date from the second century B.C.E. throughout the Byzantine period in the eighth century C.E. They are named for their pervasive themes of Nilotic imagery, including flowers, water plants, birds, hippopotami, and crocodiles. Watercraft are also often included in these Nilotic scenes. The prevalence and portrayal of various types of boats, as seen in the Nile Mosaic from Palestrina (fig. 3.2), reflects the importance of water transport in Egypt, particularly in

the Nile Delta region. The similarity in detail of these elements, however, might also suggest on the part of the artist, the use of models or pattern books. Such was found to be the case in the Casa del Fauno Nilotic mosaic (90-80 B.C.E.) (fig. 5.5), which includes motifs that appear to have been copied from pattern books either inspired or employed by the artists of the earlier Nile Mosaic from Palestrina.[270] The continuity and use of pattern or copy books in the mosaic industry is exhibited in many of the early Byzantine (4th-7th century C.E.) mosaics from the Levant.[271]

While many Nilotic mosaics include motifs perhaps inspired by pattern books, every scene is ultimately unique. Mosaics that fall into this class often depict elements that are unmistakably Nilotic, or they reflect general river landscapes that bear no recollection of Egypt apart from their profusion of water and Egyptian flora and fauna.[272] Pathologic dwarfs and pygmies are frequently depicted in these Nilotic landscapes. Although this category of mosaics was known in the Roman world at least by the second century B.C.E., it did not reach its zenith until after the Augustan period (40 B.C.E.- 14 C.E.) when Egypt was finally incorporated into the Empire (30 B.C.E.) as an Imperial property.[273] The discovery of Nilotic mosaics in a variety of locations, including baths, houses, and churches, suggests their popularity throughout the different phases of Rome's history.

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[270] Meyboom 1995, 17-8.

[271] See Dauphin 1978; Turnheim 2002, 29.

[272] Meyboom 1995, 83.

[273] Meyboom 1995, 83.

Fig. 5.5. Nilotic mosaic from the Casa del Fauno at Pompeii, Italy dated to 80-90 B.C.E. Museo Archeologico Nazionale, Italy, Inv. no. 10323 (Meyboom 1995, fig. 28).

The earliest Nilotic mosaics, those which were produced during the late Hellenistic and early Roman periods, commonly exhibit episodic and literal landscape scenes of the Nile Delta.[274] The mosaic (fig. 3.2) from Palestrina, Italy, dated to 120-110 B.C.E., is an example of the Hellenistic tradition of picture mosaics.[275] Like the two Hellenistic mosaics discussed above, this was probably directly inspired by painted originals.[276] The scene depicts a panoramic view of a naturalistic Nilotic landscape. The upper portion of the mosaic portrays Upper Egypt or Nubia as a land of black people, pygmy hunters, and exotic beasts, while the lower half provides a colorful view of Lower Egypt with its flora and fauna, watercraft, and the rituals and celebrations associated with the inundation.[277] The Palestrina mosaic is arguably one of the most colorful and elaborate Nilotic scenes ever discovered, providing a picturesque glimpse of life on the Nile during the late Ptolemaic period. Additionally, the abundance of watercraft in this piece reflects the importance to the Egyptians of riverine travel. Herodotus offers a similar picture with his description of the Nile Delta during inundation:

> *When the Nile has flooded the land, the cities alone appear above the water, creating rather the same make as islands in the Aegean; the rest of Egypt*

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[274] Turnheim 2002, 29.

[275] For a discussion on the dating of the Nile Mosaic from Palestrina, see Meyboom 1995, 16-9.

[276] Meyboom (1995, 93, n. 13) suggests that several models or compositions were at the disposal of the artists who created the Palestrina mosaics and the Alexander mosaic from the Casa del Fauno in Pompeii. These may have been painted or sketched copies of an original; Dunbabin 1999, 51.

[277] Turnheim 2002, 25.

becomes a sea, only the towns emerge. In this case, people no longer travel by boat along the river's branches, but cut right across the plain.[278]

The end of the Hellenistic period began a transitional phase in mosaic artwork. These transitional mosaics depict elaborate landscapes with buildings, boats, and, for the first time, pygmies who are shown in hilarious situations, such as defending themselves from hippopotami and crocodiles.[279] Following the first century B.C.E., pygmies and dwarfs meant to represent the Egyptian populace frequent Nilotic scenes.[280] Although ancient artists often confused the distinction between the pygmy and the dwarf, they have underlying differences. The pygmies represent the black population of southern Egypt, or the interior of Africa.[281] They are often depicted with a reduced physique. Meanwhile, dwarfs exhibit certain pathological characteristics of *achondroplasia*, such as disproportionate limbs, large heads, and projecting buttocks.[282] Pathological cases of dwarfism were likely caused by inbreeding which was common in ancient Egypt.[283] Dwarfs also had a connection with the Egyptian gods Ptah and Bes.[284] Ptah provided certain apotropaic powers, while Bes, who was himself a pathological dwarf, was a

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[278] Hdt. II.37 (Rawlinson 1928).

[279] Dawson 1938, 185; Meyboom 1995, 82.

[280] Meyboom 1995, 83.

[281] Meyboom 1995, 150.

[282] Achondroplasia is a bone growth disorder that causes the most common type of dwarfism; Meyboom 1995, 150; Dawson 1938, 186.

[283] Meyboom 1995, 150; Dawson 1938, 185.

[284] Meyboom 1995, 151.

powerful fertility figure. This makes sense as dwarfs were also believed to have a strong sexual potency.[285] These factors made them attractive symbols for fertility and the Nile inundation. While often viewed as grotesque creatures, dwarfs emphasized the idyllic state of Egypt created by the Nile flood. For the patrons who lived outside of Egypt, the Hellenistic and early Roman mosaics (second century B.C.E. to the first century C.E.) reflected the exotic appeal of life along the Nile and perhaps a salvation more powerful than their own gods.

With the beginning of the Augustan period (40 B.C.E. - 14 C.E.), Nilotic mosaics became popular throughout the Roman Empire. These took on the form of political propaganda meant to unhinge the popularity of Egypt and its associated mystical cults. Unlike the earlier Hellenistic mosaics, the Augustan period examples share a particular lampooning and allegorical air. The former exotic appeal of Egypt is abruptly replaced by the apparent licentious nature of Alexandria and the Egyptians. Pygmies and dwarfs, which are seen in art as early as the second century B.C.E., no longer perform normal everyday activities, but are portrayed in ludicrous sex acts and drinking scenes reminiscent of the Nilotic festivals. Furthermore, the women who are involved in these provocative scenes are fair-skinned and frequently don coiffures typical of the last court

[285] Meyboom 1995, 152.

of Ptolemaic Egypt.[286] These caricatures were perhaps a reminder of the immoral behavior of the Egyptians under the Ptolemies.[287]

In several of these orgiastic scenes pygmies and dwarfs assume an identity similar to that of the earlier Greek satyrs and maenads who are generally lascivious in nature.[288] These particular images, as well as the scenes in which pygmies are shown performing acrobatic feats over crocodiles and hippopotami, appear to be mocking the celebrations associated with the Nile flood. One such festival is depicted in the lower portion of the Palestrina mosaic (fig. 5.6).[289] Here a banquet scene is taking place underneath a pergola. Such banquet scenes beneath pergolas or *vela* were common during the time of inundation; they are frequently depicted in Nilotic scenes.[290] A similar scene was discovered at Thmuis (fig. 3.3). In addition to eating and drinking, dancing and lovemaking were activities that were publically performed during these inundation feasts. It was this type of carousing that Strabo described in the canal of Canopus:

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[286] Mathews and Roemer 2003, 201.

[287] Herodotus frequently recounts the bizarre customs of the Egyptians. His description (Rawlinson 1928, II.60) of the festival of Bubastis, where naked women drunkenly danced along the Nile, is one such account.

[288] Mathews and Roemer 2003, 197; Meyboom (1995, 151-2) notes that dwarfs were also equated with Dionysus during the classical world.

[289] The Palestrina mosaic depicts the celebrations of the Khoiak festival and the inundation of the Nile. For more on these festivals, see Meyboom 1995, 71-5.

[290] Meyboom 1995, 70. Vela is the Latin term for a sail or a covering.

Fig. 5.6. Rendition of the festival scene in the Nilotic mosaic from Palestrina. The Royal Collection, Inv. no 19219 (© Her Majesty Queen Elizabeth II).

> *For every day and every night is crowded with people on the boats who play the flute and dance without restraint and with extreme licentiousness, both men and women, and also with the people of Canobus itself, who have resorts situated close to the canal and adapted to relaxation and merry-making of this kind.*[291]

The Thmuis banquet scene which exists in a larger Nilotic landscape, dated to the third century C.E., exhibits several allegorical elements typical of later Roman mosaics. In *Alexandria 21641* (fig. 3.3) a variety of flora decorate the scene, including lotus, grasses, and reeds which are clumped horizontally throughout the piece. Nilotic fauna are also shown, with aquatic birds, a cobra, a hippopotamus, and crocodiles scattered throughout. Ground-lines create the effect of registers in some of the scenes. In the upper left, a pygmy flees from a large bird while opposite another pygmy appears to have fallen on his back and a third chases a bird. Meanwhile a fourth pygmy above hunts a hippopotamus. These characters are reminiscent of those found in other Nilotic scenes in which they represent the underprivileged native population of Egypt and Nubia.[292] In the bottom register three figures, shaded by a canopy or vela, enjoy a banquet on a papyrus boat. Their disproportionate bodies and bulbous heads suggest they are dwarfs. Given their attire and their role in the banquet they probably represent the Hellenized or Greek population of Ptolemaic Egypt. Considering this scene decorated an elite Roman household at Thmuis, this mosaic corresponds to the political propagandistic themes of mosaic work typical of this period, in which the populations of

[291] Strabo, XVII.17 (Jones 1932).

[292] Meyboom 1995, 151.

Egypt are demeaned. On the shore a naked female dancer, also a dwarf, entertains the group while a male figure appears in the scene to her left. A peacock and a palm branch are evident and two unidentified objects are under the canopy to the woman's right. The elements in the lower register, including the dancer, the peacock and the palm branch, may be an allusion to a river festival.[293] If this is so, the banquet is likely related to one of the Nilotic festivals described by both Strabo and Herodotus. During one of these festivals at the city of Busiris Herodotus relates:

> *They sail men and women together, and a great multitude of each sex in every boat; and some of the women have rattles and rattle with them, while some of the men play the flute during the whole time of the voyage, and the rest, both women and men, sing and clap their hands; and when as they sail they come opposite to any city on the way they bring the boat to land, and some of the women continue to do as I have said, others cry aloud and jeer at the women in that city, some dance, and some stand up and pull up their garments. This they do by every city along the river-bank; and when they come to Bubastis they hold festival celebrating great sacrifices, and more wine of grapes is consumed upon that festival than during the whole of the rest of the year.*[294]

Based on Herodotus' account it is tempting to draw a parallel between the Nilotic festival and the banquet scene in the Thmuis mosaic. The pygmies and the dwarfs

[293] The peacock and the palm are both symbols associated with the Isis cult.

[294] Hdt., II.60 (Rawlinson 1928).

emphasize the Nile's abundance and fertility, while at the same time embodying the exotic appeal of Egypt found in earlier Hellenistic mosaics. The piece also reflects a certain satirizing by the Romans of the native and Hellenized Egyptian populace of the earlier Ptolemaic period, a theme common after the Roman conquest in 30 B.C.E. The pygmies are engaged in various acts of bird-hunting which might be viewed as amusing. Meanwhile, the figures in the foreground participate in one of the indulgent Nile festivals described by both Herodotus and Strabo.

The emblema is framed by two patterned borders. In the lower right corner of the mosaic, a geometric pattern extends into the central scene. The motif appears to be a meander similar to those portrayed on the Sophilos mosaic and the Thmuis libation tables. Curiously, the overall design is T-shaped and is reminiscent of the typical Egyptian harbor motif (fig. 5.7). The underlying theme of abundance, the possible connotation to a riverine harbor, and the allusion to a Nilotic festival provides a unique glimpse of the Egyptians' cognitive view of the maritime landscape around Thmuis. At the same time, the theme conforms to the Roman propaganda of the time by portraying the Hellenized and native populace in a disdainful light. While it is impossible to determine if the piece was crafted by an artisan from Thmuis, its place in an elite household there implies that it held a certain symbolic purpose for the inhabitants of the city. While the majority of Nilotic mosaics from this period served as political propaganda outside of Egypt, the Thmuis mosaic does not appear to fall entirely into this category given its local context. The festive banquet, which is juxtaposed by lurking

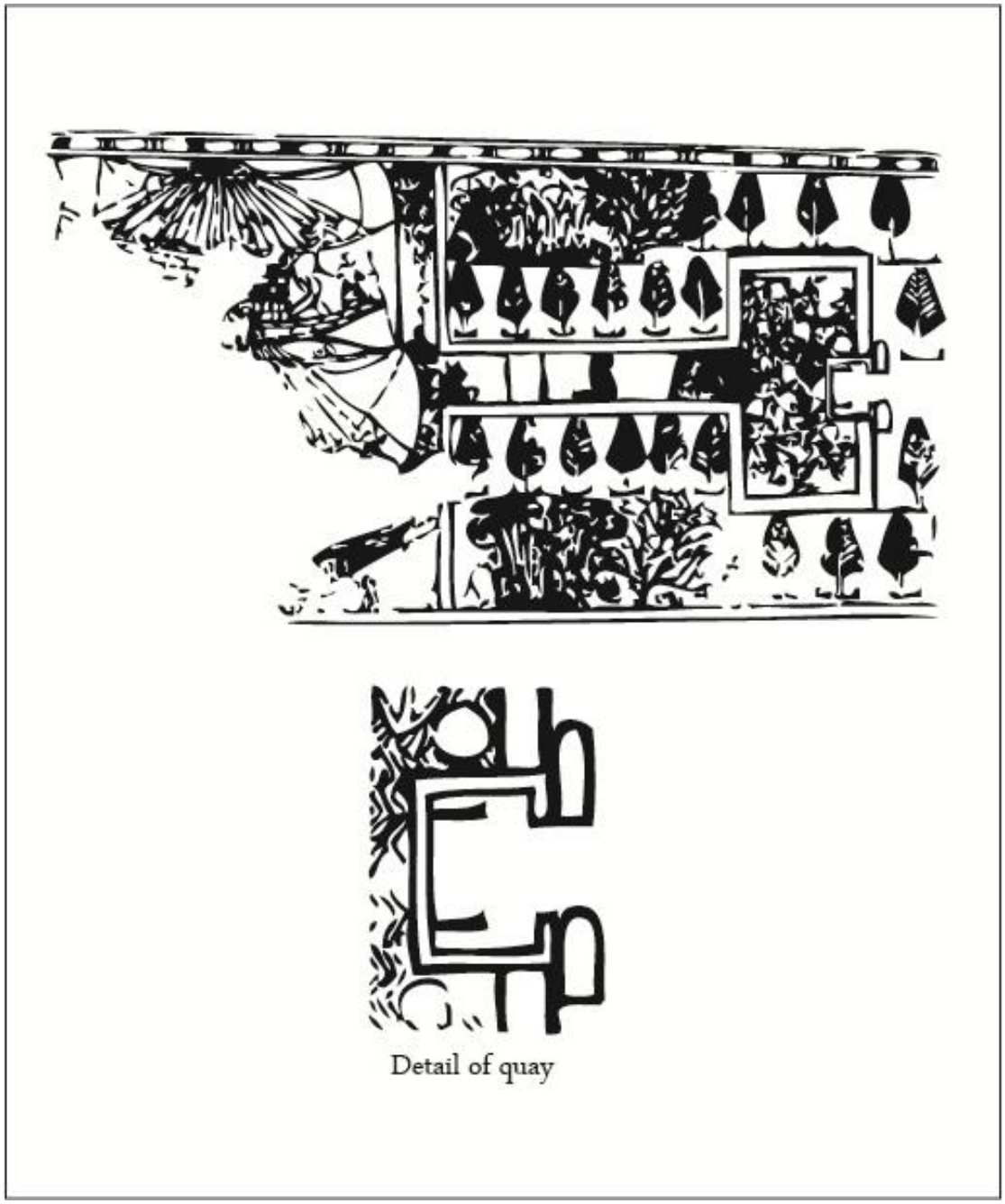

Fig. 5.7. T-shaped harbor with quay at the Temple of Amun at Karnak. Inset at bottom: detail of quay (adapted from Doyle 1998, fig. 8-8).

crocodiles, a hippopotamus, and ominous birds, simultaneously exhibits the fruitful and dangerous qualities of Thmuis' riverine environs.

The final mosaic to be discussed in the collection, *Alexandria 20195*, is unique (fig. 5.8). Like the other mosaics it provides a cognitive glance of the ancient landscape. It testifies to the multi-ethnic character of Thmuis during the Roman Period. The mosaic alludes to the Greek myth of Alpheios and Arethousa, in which Alpheios the river god falls in love and pursues the nymph Arethousa. Although portions of the mosaic are missing, the names of both individuals are inscribed above the figures. The nude god chases Arethousa who, while looking backwards, flees. Apart from an occasional plant, there is little flora to categorize this as a Nilotic scene. The inhabitants of Thmuis must have been familiar with this legend and probably related such divine forces to their own riverine environment.[295]

Conclusion

The discovery of the Thmuis mosaics provides evidence for the existence of a wealthy elite, and possibly a class of skilled artisans in the city during the Hellenistic and Roman periods. The four mosaics discussed above share a common feature: importance of the maritime environment around Thmuis. Based on several elements in the Sophilos and anonymous mosaics, the woman portrayed in each represents Isis-

[295] Blouin 2006, 322.

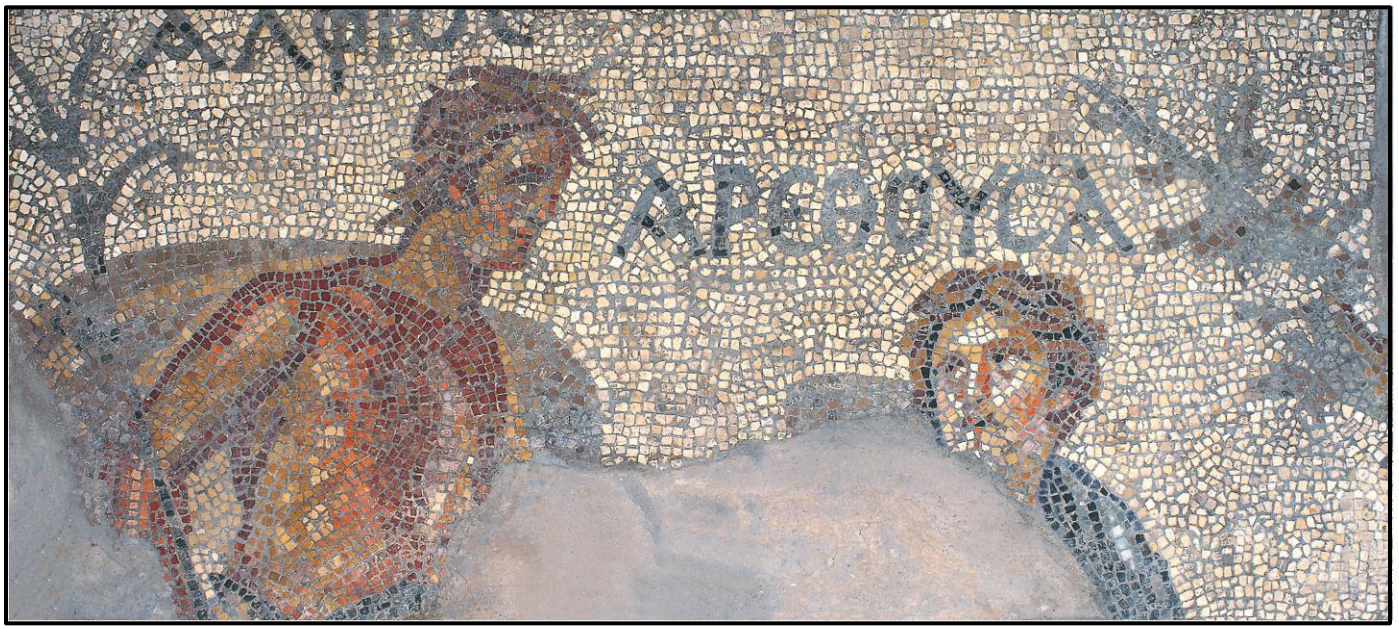

Fig. 5.8. Alexandria 20195. A Roman mosaic discovered at Tell el-Timai. The scene depicts Alpheios and Arethousa (Eternal Egypt website; courtesy Graeco-Roman Museum in Alexandria).

Arsinoe. Arsinoe II's deification at Mendes, her strong naval ties, and her association with the maritime goddess Isis makes her the most likely candidate among Ptolemaic queens. The presence of these two mosaics at Thmuis represents the city's connection to maritime activity and to the Isis cult. The Thmuis banquet, as a Nilotic landscape, provides and alluring depiction of life along the Nile; fertility, abundance, and bliss are among the attributes exuded from this mosaic. Additionally, it reflects several popular themes of Roman period mosaics. The disparaging view of Ptolemaic Egypt is expressed through the high living, gluttony, intemperance, and lasciviousness of the upper class Egyptians, while pygmies perform ridiculous acts in the background. At the same time, the mosaic exhibits the exotic and fertile qualities of the Nile Delta. Thmuis was a multi-ethnic city as evidenced by the Alpheios and Arethousa mosaic. The Egyptians developed an ideology centered on the dynamic maritime space of the Nile Delta. The Alpheios and Arethousa piece might represent Greek mythology being transplanted onto the Nilotic landscape. As a whole these mosaics reflect Thmuis' close intercourse with the region's watery environment.

CHAPTER VI

PHYSICAL INTERACTION WITH MARITIME SPACE

The inhabitants of Thmuis maintained a complex relationship with their natural environment. Their perception of the fertile, yet highly volatile, Nile Delta was expressed in their local theology, toponyms, and iconography. Evidence of human interaction with the physical landscape of the Nile dates back to at least the Amratian Period (4100-3600 B.C.E.) when motifs of watercraft decorate Gerzean pottery. During this period, methods of directing and storing water were employed to levy control over the natural environment. Despite a seemingly vague terminology for the maritime zones along the Nile and the coasts, the Egyptians maintained an extensive knowledge of the conditions and variability of these waterways; their familiarity with the physical environment allowed them to exploit this space for commercial, military, and religious purposes.

This chapter will focus on the manner in which the inhabitants of Thmuis interacted with their maritime environment. Textual and material evidence points to the utilization of natural and artificial waterways for food, profit, and risk management, as well as for purposes of shipping, trade, and transportation. Harbors played an integral role in the interplay between man and river. The physical remains of these facilities, however, are rare and difficult to discern in the archaeological record. The harbors at

Thmuis and Mendes will be compared to other known examples to elucidate the function, design, and role of the typical Nilotic harbor.

Economic/Commercial

Although records from papyri and ostraca frequently describe taxes, tolls, and imperial monopolies on shipped goods, it is rare to find textual evidence for the specifics of shipping and navigation in Egypt. Countless Greek and Roman papyri allude to a lively economy of shipping and trade along the Nile, but few offer details. The discovery of the Ahiqar customs account (475 B.C.E.) and the Naucratis Stele (380 B.C.E.) have yielded unprecedented information on the sailing season, the import of foreign cargoes, and the customs exacted on merchant vessels entering Egypt.[296] Papyrus generally does not withstand the damp conditions and high water table in the Nile Delta, so the discovery of two collections of papyri at Philadelphia (Fayoum) and Thmuis was remarkable.

The Zenon Archive, discovered in 1915, includes some of the most valuable texts from the early Ptolemaic period. This collection of nearly 1,000 documents deals with the private estate of Apollonius, who was the finance minister (*dioiketos*) of Ptolemy II Philadelphus.[297] Apollonius' estate was situated in the city of Philadelphia in the

[296] For more on the Ahiqar Scroll, see Yardeni 1994; for a translation of the Naucratis Stele, see Lichtheim 1973, 88.

[297] Hain 1966, 699.

Fayoum region. The accounts, which span a period of 30 years during the mid-third century B.C.E., yield insight into the Ptolemaic economy and accounting system. More importantly, several of these texts document the arrival of foreign ships in the Nile Delta, the customs paid on particular cargoes, and the operation of private and imperial trade.

Evidence of trade in the Zenon Archive corresponds to the archaeological record. Following the Persian destruction of Mendes in the fourth century B.C.E., the Mendesian nome witnessed a brief return to normalcy.[298] Despite a decline in flow of the river, coins and Aegean amphora fragments from the harbors of Mendes and Thmuis indicate that they were active between the third and mid-second centuries B.C.E.[299] Ptolemy II Philadelphus' visit to Mendes in 280 B.C.E. and the discovery at Thmuis of several finely crafted mosaics dated to ca. 200 B.C.E., further indicate the prestigious position held by the cities during this time. The Zenon Archive is the primary source of information for trade and commerce in the Mendesian nom during the Hellenistic period.

Zenon was a Carian Greek who became Apollonius' private secretary in 260 B.C.E.[300] His meticulous records indicate that Mendes was a key redistribution center for goods going and coming from various regions of the Nile Valley and the Nile

[298] Redford 2010: 185, 199.

[299] For more on Mendes, see Redford 2010, 199; the ceramics from Thmuis were unearthed during the 2010-11 field seasons.

[300] Grier 1932, 222.

Delta.[301] Flax, linen, and perfume were among the Mendesian nome's chief exports.[302] According to Pliny the Elder, Egyptian flax, which was primarily produced in the northern Delta, was the finest in the ancient world.[303] Several of Zenon's letters indicate that the Mendesian nome exported a quantity of its flax seeds to Apollonius' estate in the Fayoum.[304] Once cultivated, Apollonius' agents sold this flax at the Mendesian market. In one instance, an agent informs Zenon that he would easily be able to dispose of 10,000 bundles of flax at the market of Mendes.[305] A portion of the flax products (i.e. seeds, oil, perfume) were probably also shipped abroad to various centers in the Mediterranean. The production and trade of flax, and perhaps also linen and rope, within the Mendesian nome continued well into the Roman period. A record from the Upper Egyptian town of Oxyrhynchus from the fourth century C.E., notes the sale of Mendesian flax.[306] In Medieval times, long after the cities of Thmuis and Mendes had diminished in importance, the flax industry thrived in the northern regions of modern Lake Manzaleh.[307]

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[301] Blouin 2006, 309.

[302] For a discussion on the Zenon papyri which document this trade, see Blouin 2006, 249-261.

[303] Plin. *HN*. XIX.2 (Bostock and Riley 1855).

[304] P.Cair.Zen.II. 59292; Blouin 2006, 252-3. Blouin also discusses the Zenon record, P.Lond.VII 1995.

[305] P.Cair.Zen.III. 59470.

[306] Blouin 2006, 310.

[307] For more on the economy of Tinnis, the chief port of Lake Manzaleh during the Islamic period, see Cooper 2008, 159.

Mendesian myrrh was one of the nome's most sought after products. The origin of the perfume industry dates back to at least the Late Period (ca. 664-323 B.C.E.). Pliny describes the unguent of Mendes as one of the finest and most popular essences in the ancient world.[308] Correspondence between Zenon and one of his agents regarding the purchase of several lead vessels of Mendesian myrrh (257 B.C.E.) suggests its popularity in Egypt during the Ptolemaic period.[309] Ptolemaic *unguentaria* found in and around the harbors at Mendes and Thmuis are presumably remnants of this perfume trade.[310] Mendes and Thmuis' strategic location along the primary eastern artery of the Nile at the intersection between the northern lakes and the Mediterranean Sea provided easy access to the merchants elsewhere in Egypt and abroad.

Our knowledge of foreign trade in Egypt dates largely from the Hellenistic period. Late first millennium B.C.E. sources on Egyptian shipping (i.e. Ahiqar Scroll, Naucratis Stele, Zenon Archive, and Revenue Laws Papyrus) indicate that domestic and foreign trade was a complex enterprise that was carefully monitored by the pharaoh. Imperial control over imports and exports dates back to the Old Kingdom when land and sea routes were strictly supervised.[311] Cargoes that arrived at the mouths of the Nile were checked and valued by a customs authority before they could pass into the interior. Under the Ptolemies, customs and various taxes were exacted on particular cargoes

[308] Plin. *HN*. XIII.2 (Bostock and Riley 1855).

[309] P.Cair.Zen.I. 59089.

[310] Blouin 2006, 259; Several unguentaria were discovered during the University of Hawaii's 2009-11 excavations at Tell el-Timai.

[311] Preaux 1939, 371.

depending on their value in Egypt: oil and fine wine (50% tax), figs and wine from Chios and Thasos (33.33% tax), honey, cheese, pickled fish and meat, nuts, sponges, etc. (25 % tax), and wool (20% tax).[312] Other items such as wood, iron, and horses which were not readily available in Egypt presumably had lower duties.[313] Despite the seemingly high import fees on luxury items, foreign merchants could still profit from the import of such commodities due to their relatively low cost abroad. For instance oil, which was the most heavily taxed, was still profitable to sell in Egypt because it was considerably cheaper in the Aegean.[314]

Although the available sources document only Pelusium and Alexandria as ports of entry for foreign ships, other Delta ports surely existed. For Mendes and later Thmuis, the coastal cordon of lagoons, marshes, and lakes in the region of modern Lake Manzaleh afforded entrance to the Nile for seagoing vessels during antiquity and medieval times.[315] The city of *Ro-nefer* ('beautiful mouth'), located 12 km north of Mendes, was situated along the Mendesian Nile and the southern edge of the coastal marshland (fig. 6.1). The city's toponym suggests that it was probably located near the mouth of the river.[316] From the Old Kingdom on, its strategic location along the coast

[312] This fragment of the Zenon Archive was published by Edgar (1923, 75) as 'No. 73 Valuation by the Customs of a Consignment of Goods from Syria.'

[313] Preaux 1939, 376.

[314] Edgar 1923, 91.

[315] During the medieval period, the island of Tinnis in Lake Manzaleh was one of the most important ports of Egypt. For more on Tinnis, see Cooper 2008.

[316] Verreth 1998, 466. Pernouphis is the Greek transcription of pa-ro-nefer ('the beautiful mouth').

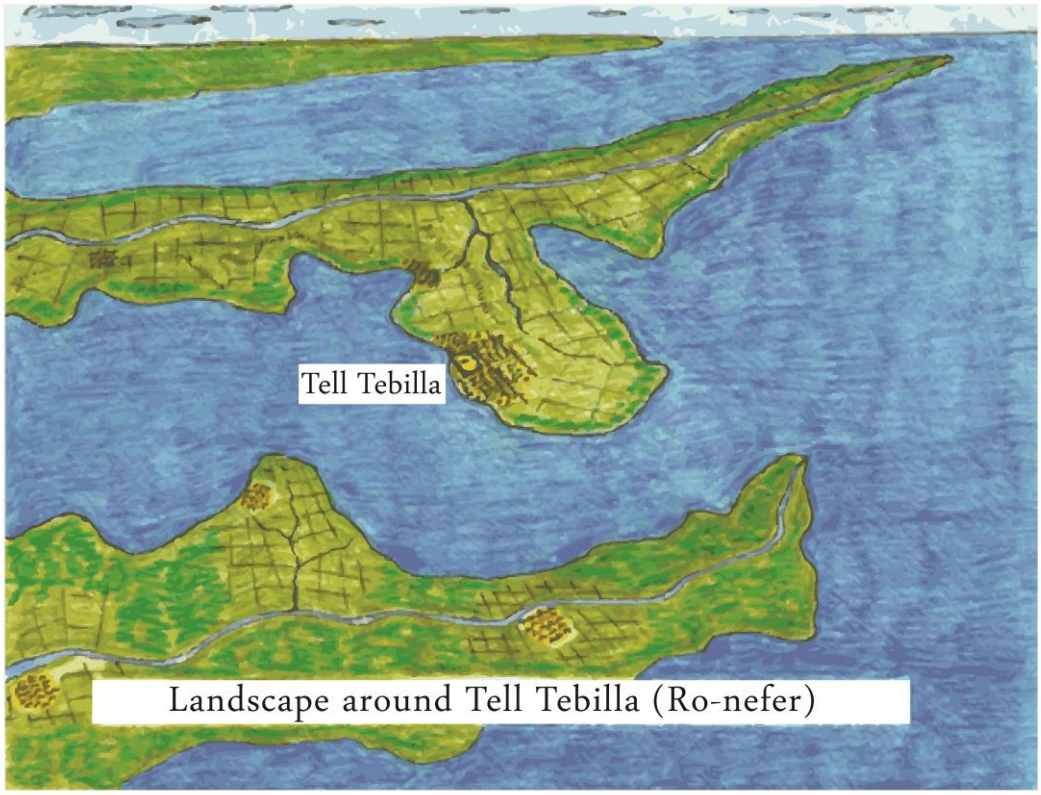

Fig. 6.1. The district of Ro-nefer (modified from Mumford 1999-2004, Tell Tebilla 1).

made it the chief maritime port for Mendes and later Thmuis.[317] Foreign vessels that arrived at the Mendesian mouth would have presumably passed a customs facility at Ro-nefer (modern Tell Tebilla) before sailing or transshipping their cargoes to Mendes and Thmuis for redistribution. The ports of Pelusium, and probably Mendes and Thmuis, were favorable points of entry for small trading vessels from the Levant which might sail up river to Memphis and on to Alexandria.[318] While vessels could sail upstream to various centers of trade, they might also hire porters for transshipping. On one occasion in May-June 259 B.C.E., when the Nile was at its lowest, cargoes imported from Syria to Pelusium for Apollonius were transshipped by river to Alexandria.[319] This account from the Zenon Archive indicates that river traffic and shipping were possible throughout the year. Certain bulk cargoes, such as stone or grain, would have been restricted to the season of high Nile.[320] Contrary to the common supposition that the sailing season was limited in antiquity, the Ahiqar Customs Account suggests that navigation was conducted for 10 or 11 months of the year, although it tapered off during the winter months.[321] The relatively varying durations of stay by the Greek and Phoenician ships listed in the Ahiqar Customs Account (between 7-20 days) supports the notion that merchants either sailed their cargoes up the river to market centers, or delivered them to porters who would subsequently transship them.

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[317] Mumford 2011.

[318] Edgar 1923, 88.

[319] A fragment of the Zenon Archive referred to by Edgar (1923, 74) as 'No. 73 Valuation by the Customs of a Consignment of Goods from Syria.'

[320] Doyle 1998, 240.

[321] Lipinski 1994, 66.

Prior to entering Egypt via the coastal ports, merchants had to pay various minor taxes. These were not always assessed at fixed rates and often depended on the discretion of the customs official. In the Zenon Papyri three taxes are evident: a harbor tax, an oil tax (for provisioning the navy), and an inland toll on goods passing from one district to another.[322] On items that were controlled by state monopoly, such as oil, merchants were restricted from transporting these goods freely into the interior. After paying the hefty duty at customs, merchants could transport a small quantity of oil to the interior for private use but had to pay a second tax on it.[323] The state's watchful eye on the cargoes that passed into Egypt protected the domestic market.

Transshipment along the Nile and its canals was the primary *modus operandi* of Egypt's redistribution system. The waterways around Mendes and Thmuis (i.e. the Mendesian Nile, the secondary waterways, and the Butic Canal) created an interconnected communication system between the various towns and settlements in the nome and around the Nile Delta. Meanwhile, the construction of the Butic Canal sometime before the first century C.E. created an east-west corridor through the northern Nile Delta.[324] While the primary river branches remained the chief avenues of water transport, the Butic Canal enhanced the network of communication between east and west for purposes of commerce and security.

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[322] Edgar 1923, 76.

[323] Edgar 1923, 90.

[324] The precise date of the canal's construction is uncertain. In Josephus' day the canal went as far east as Thmuis. Later, it continued all the way to Pelusium.

When Titus (39-81 C.E.) commanded his fleet of ships across the Nile Delta it was probably along the Butic Canal. Given the ships sailed only as far east as Thmuis, it is likely that the Butic Canal was not completed in the mid-first century C.E. By Ptolemy Claudius' day (90-168 C.E.), the Butic Canal continued eastward and joined the Pelusiac branch of the Nile.[325] The completion of the Butic Canal had lasting effects, not only on the economy and security of the Nile Delta, but also on the local hydrology of the Mendesian nome. Thmuis' central location along this canal incorporated the Mendesian nome into the east-west communication network and enhanced the city's domestic and foreign redistribution capabilities. Foreign cargoes reached Thmuis and Mendes via two routes, either by way of the Mendesian mouth or along the network of inland waterways (i.e. transshipment from other river mouths). The nome's strategic location near the sea coast, along a major artery of the Nile, and a short distance from the eastern frontier furnished trade and communication (fig. 6.2). The far reaching trade network of the Mendesian nome is apparent from the discovery of imported items from southern Egypt (limestone, granite, flint, marl pottery, natron, carnelian, copper, etc.), the Red Sea (turquoise, pearls, cowrie shells, incense), the Levant (bitumen, Cypro-Phoenician vessels, Phoenician amphoras), West Africa (oil), Eastern and Southern Greece (Samian and Chian amphoras, Attic ware), Italy (Gnathian ware), Turkey (Koan-Knidian ware), and Afghanistan (lapis lazuli).[326]

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[325] Stevenson 1932, 102-3.

[326] This list is based on the findings of imports at Mendes (Redford 2010), Tell el-Timai (2009 and 2010 field seasons), and at Tell Tebilla (Mumford 1999-2004, Tell Tebilla 8).

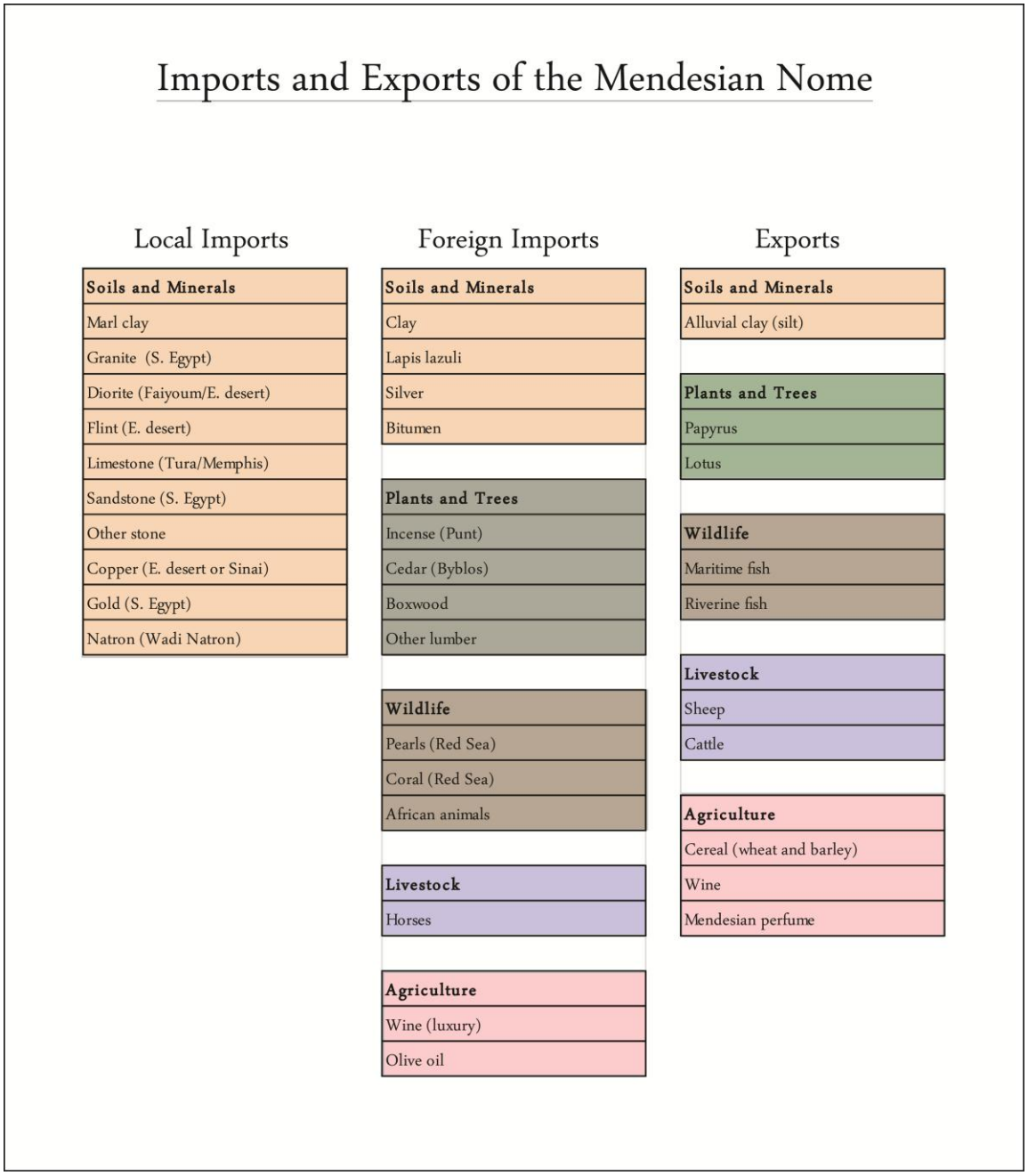

Fig. 6.2. A summary of local and foreign commerce in the Mendesian nome (adapted from Mumford 1999-2004, Tell Tebilla 8).

At the same time, the proximity to the coast and the river made the settlements around Thmuis and Mendes vulnerable to attack. Amidst the Persian conquest of Egypt, one such attempt to infiltrate Egypt by river was prevented. In 454 B.C.E. a fleet of 50 Athenian warships entered the Mendesian Nile:

> *The Athenians moreover had sent fifty galleys more into Egypt for a supply of those that were there already, which putting in at Mendesium, one of the mouths of Nilus, knew nothing of what had happened to the rest, and being assaulted from the land by the army and from the sea by the Phoenician fleet, lost the greatest part of their galleys and escaped home again with the lesser part.*[327]

The threat of sea invasion via the river mouths was constant. Nearly a century after the Athenians, Artaxerxes managed to sail 600 ships up the Mendesian Nile in a futile attempt to conquer Memphis.[328] As a precaution the river outlets were probably fortified.[329]

Economic Role of Thmuis

Thmuis played an integral role in the redistribution network of the Mendesian nome. During the Late Period, when the settlement first appeared, it probably functioned alongside Mendes in matters of trade and production. Initially Thmuis

[327] Thuc. 1.110 (Hobbes and Grene 1989).

[328] Redford (2010, 144 and 181) references both occasions.

[329] Lloyd (2000a, 380) describes the fortifications of the river mouths in the fourth century B.C.E.

operated as a suburb of Mendes. Its harbors assisted in the commercial activity that flourished throughout the fourth and third centuries B.C.E. Like Mendes, Thmuis survived several periods of instability and continued as a production center of luxury items, namely perfume and linen. The construction of the Butic Canal and the increased canalization during the Roman Period contributed to the decline and disappearance of the Mendesian Nile.[330] As a result of changing hydrology under the first centuries of Roman rule, Thmuis assumed Mendes' former role as chief *emporium*. For a time, Thmuis prospered and was home to a wealthy elite and a class of skilled artisans. The heavy yoke of Roman rule, however, eventually created demands which the people and the environment could not meet. By the sixth century C.E., the status of both Thmuis and Mendes had fallen.

The Thmuis Archive, discovered in the southwest extremity of Tell el-Timai following the excavations in 1892/3 and 1906, provides evidence of the economy of Thmuis during the early Roman period.[331] The majority of the carbonized papyri were either destroyed in antiquity by a fire or by modern mishandling. Those documents that survived are financial records from the late second to third centuries C.E.[332] Unlike the Zenon Archive these papyri offer no specifics regarding sailing and water transport; they do inform us, however, about land management, irrigation, and agriculture within the

[330] Blouin 2006, 65, 74.

[331] Daressy 1914, 184; Bagnall and Rathbone 2004, 84.

[332] Bagnall and Rathbone 2004, 84.

Mendesian nome.[333] Together these documents give more clues to the involvement of Thmuis with its maritime space in matters of commerce and economy.

Under Roman rule, the Nile Delta witnessed increased pressure from the state to expand cultivated land. In hopes of increasing production and profitability, the hydrology of the Mendesian nome was expanded. The construction of canals and irrigation works put serious pressure on the already failing Mendesian and Tanitic branches. The Thmuis Archive documents the existence of several artificial waterways and reservoirs for retaining water.[334] Four types of waterways are listed: *diôrux*, *hydragôgos*, *hydrêgos*, and *potistra*. These appear to be artificial canals or secondary waterways used for directing, storing, and draining flood waters to agricultural fields to ensure an effective deposit of silt.[335] The Thmuis Archive also provides evidence of three methods for the storage of floodwater during the Roman period: the *chôma*, the *limnè*, and the *périchôma*.[336] The chôma was the equivalent of a dike. It was used to direct and keep water in various canals, basins, or reservoirs. The limnè referred to several inundated regions, including lakes, ponds, marshes, or retaining ponds. The périchôma, on the other hand, corresponded to an area of an irrigation basin that was surrounded by dikes and retained water.[337] The inhabitants of Thmuis relied on these

[333] Blouin (2006) discusses the Roman papyri from Thmuis in detail.

[334] Blouin 2006, 157-67.

[335] Blouin 2006, 157-60.

[336] Blouin 2006, 163.

[337] Blouin 2006, 165, 167.

irrigation features for the nome's agricultural productivity and livelihood. Unfortunately, the modifications made to control the natural landscape had a negative impact on the local hydrology of the Mendesian nome. Between the first centuries B.C.E. and C.E. the Mendesian branch no longer reached the sea.[338]

While monuments and texts provide important clues about the nature of navigation and shipping along the inland waterways of Egypt, there is limited archaeological evidence for the installations that maintained this commercial activity. Ports and harbors were the chief receivers of trade. Scholars, nonetheless, know little about the facilities that supported the Nile's extensive trade network. While harbors were integral to commercial, military, and ceremonial activities, the design and function of the Nilotic harbor is shrouded in mystery.

Nilotic Harbors

Egyptians realized the benefit of artificial mooring long before the construction of the coastal port of Alexandria.[339] Beaching and mooring along the natural riverbank was practical in the Nilotic environment and is still practiced even today along the Nile. For most stretches along the Nile, simply securing a vessel to a mooring stake driven into the bank was sufficient (fig. 6.3). At capitals and large towns artificial anchorages

[338] According to the conclusions drawn in chapter III regarding the local hydrology around Thmuis.

[339] According to Kees (1961, 210), Alexandria was the first seaport constructed on the open coast of Egypt. Kemp and O'Connor (1974, 103), related that the first major seaport was developed in c.1320 B.C.E. at Tanis, in the eastern Nile Delta.

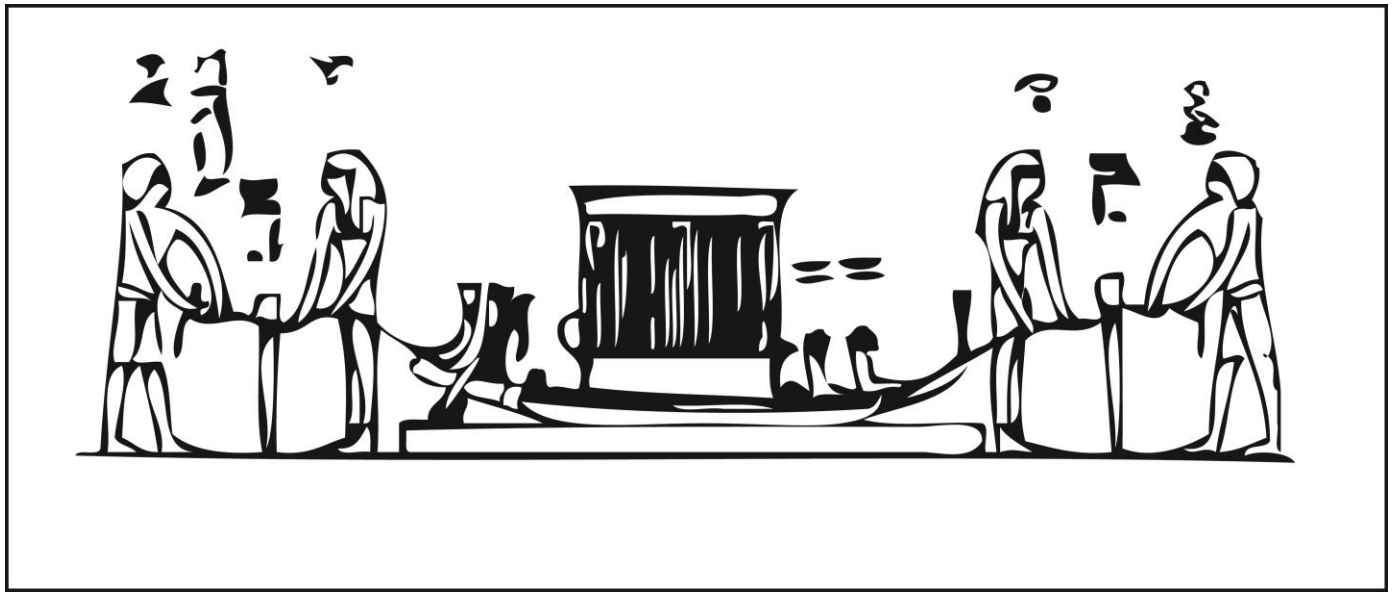

Fig. 6.3. A ritual mooring scene dated to the 18th Dynasty in which the mooring stakes are emphasized (adapted from Doyle 1998, fig. 8-5).

were necessary for economic and defensive purposes. Important centers might be provided with quays that jutted out from the riverbank, or with harbors that were excavated from the alluvial plain.[340] The origin of Nilotic harbor facilities dates back to the Old Kingdom.[341]

A precise definition of a Nilotic harbor has yet to be established. Although evidence of such facilities is threefold (i.e. archaeological, iconographic, and textual), it is certainly limited. Studies at Alexandria, Myos Hormos, and Berenike have amplified our understanding of Egyptian coastal portages, but few examples of Nilotic harbors have been discovered, nor thoroughly examined. The locations of several harbors in Upper and Lower Egypt are discernible, but apart from the Birket Habu at Malkata (Upper Egypt), and the harbor at Serra East in south Egypt, none has been decisively studied.[342] Despite the relative abundance of Egyptian iconography, representations of harbors and waterfronts are rare. Such depictions are also nonexistent prior to the New Kingdom.[343] Those that are available often represent ceremonial harbors used by temple staff.[344] In a few instances, vessels are shown moored along a quay or waterfront facility (Fig. 6.4).

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[340] Kemp and O'Connor 1974, 103.

[341] Doyle 1998, 240.

[342] See Bietak 2009; Tronchere et al. 2008; Redford 2010; Blue and Khalil 2010; Kemp and O'Connor 1974; and Knudstad 1966.

[343] Doyle 1998, 241; Kemp and O'Connor 1974, 106.

[344] Kemp and O'Connor 1974, 106.

Fig. 6.4. A harbor scene from the 18th Dynasty. Syrian merchants unload and sell their cargo at a waterfront (Daressy 1895, pl. XV).

Textual evidence for harbors comes from biographical accounts inscribed on tomb walls or stelai, or from administrative accounts, such as the Zenon Archive. In such instances the references to harbors are often vague and cursory. Furthermore, the ambiguity of the terms used for harbors and their facilities (i.e. quays, dockyards) can cause confusion.[345] For instance, the word *mryt* may be translated as: a riverbank, irrigation dyke, or harbor.[346] Despite the scanty remains of Nilotic harbors, the available evidence allows for certain conclusions regarding their design and function.

A harbor is a safe haven for watercraft to moor in, and load and unload their cargoes using dock facilities such as quays or wharves. 'Anchorage' is often used to describe inland facilities which lack the monolithic and permanent berthing structures that are featured at ports and harbors along the seacoast. To imply, however, that the riverine facilities of the Nile Delta were merely areas where ships were permitted to moor would be unjust.[347] Delta cities that became capitols with naval fleets or emporia of bustling trade were certainly equipped with what are considered typical harbor installations (i.e. quays, shipyards, warehouses, customs facilities, etc.).[348] These were places at which tolls and duties were collected, imports and exports were exchanged, watercraft were repaired and maintained, and imperial fleets were stationed. The wealth

[345] Kemp and O'Connor 1974, 104.

[346] Kemp and O'Connor 1974, 104.

[347] Basch (1985, 1994) does not believe that stone anchors were used on the Nile. He explains that the stone anchors discovered in Egypt were from seagoing ships. Nibbi (1979b, 1979c, 1984, 1992, 1993), however, disagrees and argues that these were used only on the Nile by riverine craft. This argument further supports her misguided theory that Egyptians were not seafarers.

[348] The harbor works at Memphis included granaries, timber yards, carpenters' workshops, and a shipyard (see Jeffreys 1985, 48.)

of activities that took place at these riverine installations are far too numerous to be embraced under the term 'anchorage.' Therefore, for the purpose of this study the term 'harbor' will be employed.

The designs of Nilotic harbors in Upper and Lower Egypt were adapted to the dynamic fluvial landscape. Iconographic representations reveal a T-shaped design. A T-shaped harbor at the Temple of Amun in Karnak is depicted (fig. 5.7) in the Theban tomb of Neferhotep. In this particular representation there is a quay with two forked mooring posts in the harbor. Mooring posts of many varieties were used for berthing vessels along the riverbank, but were probably also permanent fixtures at the quayside (fig. 6.5).[349] The enormous harbor of Amenhotep III, known today as the Birket Habu at Malkata in Upper Egypt, is one of a few extant examples of a T-shaped harbor.[350] In fact, its plan is nearly identical to the renditions of harbors in iconography and hieroglyphs.[351] There is a striking disparity between the number of t-shaped harbors depicted in iconography and the number of surviving T-shaped harbors. Of the nearly two-dozen existing ancient harbors, why is Birket Habu one of the only instances of a T-shaped design? What was the significance of this particular design?

In the Nilotic environment water levels fluctuated throughout the year. The annual flood carried with it tons of suspended sediment that was deposited into the

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[349] Doyle 1998, 241.

[350] Redford (2010, 149) includes a T-shaped harbor in his map. It is connected to the great eastern harbor at Mendes.

[351] For more on the Birket Habu, see Kemp and O'Connor 1974.

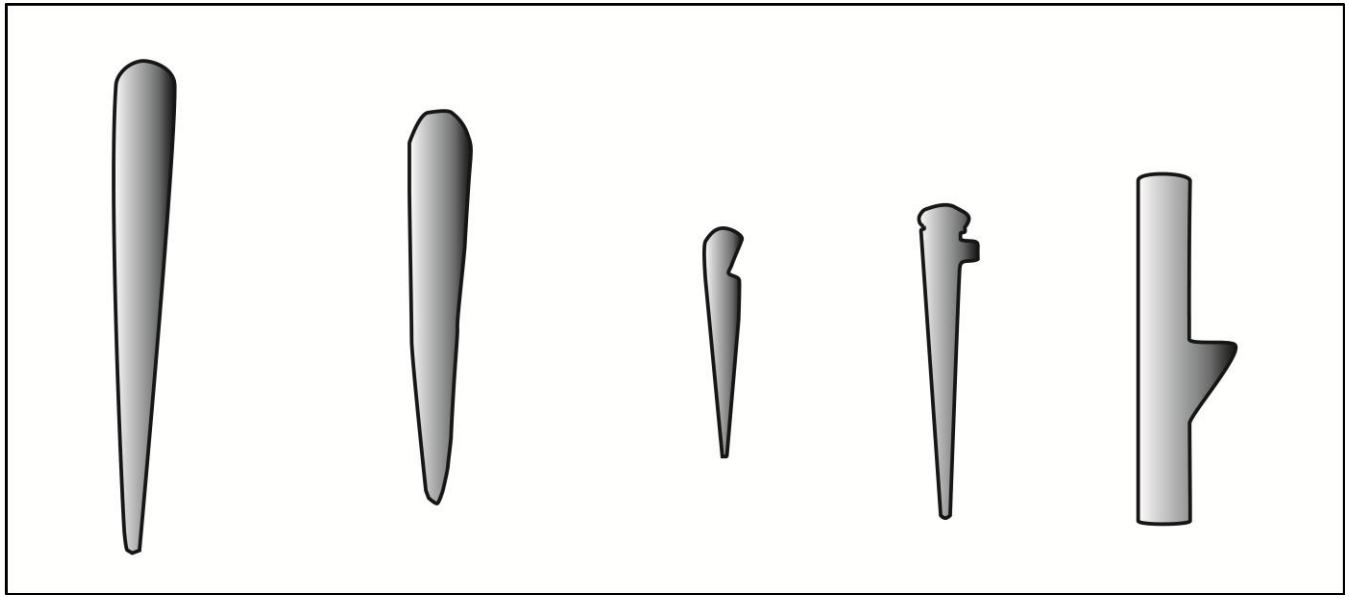

Fig. 6.5. Various styles of mooring stakes (adapted from Doyle 1998, 8-4).

waterways, basins, and across the fields. Occasionally, a high flood would carve an entirely new river path across the landscape. Each year the inhabitants of the Nile Valley were required to perform *corvee* labor which entailed, among other activities, the dredging of the canals and waterways.[352] The seasonality and variability of the river required a unique harbor design that was adaptable to these shifting conditions. Generally speaking, this design is simple and consists of a basin separated from but accessible to the primary branch of the river via canal(s). In this regard, the upper horizontal section of the T represents the basin, while the lower perpendicular section recalls the canal that joins to the river. It was necessary for river harbors to be independent of the primary river. This not only prevented erosion of harbor facilities by the Nile flood, but also provided protection for watercraft from currents, unexpected gale-force winds, high tides, or aggressors.[353]

The excavation of a harbor basin was an enormous feat. At Birket Habu an estimated 11 million meters^3 of earth were removed.[354] Meanwhile, the harbor at Serra East in Sudan was entirely cut out of bedrock.[355] Whenever possible, the Egyptians made use of natural features in the landscape when determining the location of a harbor. For instance, one of the harbors at ancient Avaris (Tell el-Dabȧ) was constructed within

[352] Hurst 1957, 49; Thompson 2008, 29.

[353] Bietak 2009, 15.

[354] Kemp and O'Connor 1974, 126.

[355] Knudstad 1966, 177; For more on the excavation at Serra East, see Hughes 1963.

a seasonal lake created by a defunct Nile channel.[356] The inhabitants of Thmuis may have also taken advantage of a crevasse-splay (fig. 3.16) formed when the river broke its banks and followed a new course.[357] Such areas would be ideal locations for harbors; they were naturally inundated, protected from the river but close enough to access it with a canal. Harbors could be located outside of a city's defensive walls (i.e. the northern and eastern harbors at Mendes) or integrated within the settlement (i.e. the harbors at Avaris, Serra East, and Memphis). Harbors may have been placed for strategic purposes (i.e. commerce, defense) or determined by the surrounding landscape. Textual accounts indicate that naval fleets were berthed and launched from Nilotic harbors, and that enemies often gained access to cities via their harbors.[358]

Quays and stone revetments are depicted in iconography and several physical examples are known. These stone berthing structures were particularly useful for the loading and unloading of stone cargoes. At Lake Moeris in the northwest Fayoum, a 311 m long and 19 m wide quay was constructed near the basalt quarries at Wadi el-Faras.[359] Quays were integral to the water transport of stone for the construction of the Old Kingdom pyramids and temple complexes at Memphis and Abusir. At the temple complex of Unas at Abusir, a basin 140 m long was constructed for the shipment of

[356] Bietak 2009, 16.

[357] According to Adam Shahat (pers. com.), the cores from the suspected northern harbor at Tell el-Timai suggest the area might have been a crevasse-splay at one point in history.

[358] On Thutmose III's naval campaigns to the Levant from Peru-nefer (Avaris) see, Gabriel 2009, 139-42; Regarding the account of Piankhi's conquest of Memphis during the eighth century B.C.E., see Jeffreys and Smith 1988.

[359] Harrell and Brown 1995, 85-7.

stone.[360] The basin was flanked by two stone piers, 70 m long and 3 m wide, and provided with a ramp for beaching vessels.[361] An equivalent design was employed at the pyramid complex of Pepi II.[362] Several similar quays, however, have recently been discovered in the northern lakes below Alexandria. [363] They are associated with the Hellenistic and Roman harbors (Taposiris Magna and Marea/Philoxenite) in Lake Mareotis. Based on the available archaeological and textual evidence, these harbors were used primarily for commercial purposes unlike the quarry harbor at Wadi el-Faras.

Stone berthing facilities are not always found at Nilotic harbors. Often harbors were simply a place to beach vessels upon a firm shore or *hard*.[364] In a harbor basin excavated from alluvium, the rise and fall of the water level can pose serious problems. If the sides of the basin are cut vertically, the water level will undermine the sediment and the sides will not remain stable. Therefore, Nilotic harbors that lacked stone, fired brick, or plastered revetments were engineered in a manner that would withstand the surges in the river. To do so, the edges of the basin were given a slope similar to modern canals.[365] The sloping banks protected the basin edges from erosion and allowed vessels to be beached and unloaded. Lucy Blue's investigations at the Roman/Islamic lagoon-port of Myos Hormos along the Red Sea coast revealed a hard consisting of an amphora

[360] Goyon 1971, 143.

[361] Goyon 1971, 143.

[362] Goyon 1971, 144.

[363] Khalil 2010.

[364] A hard is solid beach or slope used for hauling vessels from the water.

[365] Kemp and O'Connor 1974, 123.

foundation covered with packed sediment.[366] This created a solid landing for watercraft in the lagoonal environment. Similarly, recent work at the eastern harbor at Mendes suggests the presence of a hard where vessels were beached and unloaded.[367] Such rudimentary installations were both practical and efficient in the riverine and lagoonal environments of the Nile Delta. At the smaller eastern harbor of Mendes, formerly known as 'the sacred lake,' a hard is not immediately evident. Instead, the harbor appears to have been bordered by a substantial mudbrick casemate structure that was once covered with a limestone veneer.[368] This technique may have been another method for protecting harbor basins from the destructive effects of the rise and fall of the Nile.

Nilotic harbors come in a variety of sizes. The Birket Habu measures 2.4 x 1 km and its depth is estimated to be nearly 6 m.[369] The function of the harbor, given its enormous size, is still speculative. No stone revetment walls or quays are evident in its construction and it was connected to the Nile by a canal. It may reflect a combination of practical, ceremonial, or symbolic uses.[370] Two harbors recently discovered at Tell el-Dabȧ (Avaris) using geomagnetic survey, could have accommodated hundreds of ships.[371] Based on approximate measurements from Bietak's (2009) map, harbor 1 is about 425 m long and between 300-400 m in width (Fig. 6.6). Birket Habu and the

[366] Blue 2007, 271-3.

[367] Redford 2010, 151.

[368] Redford 1992b, 64.

[369] Kemp and O'Connor 1974, 108, 126.

[370] Kemp and O'Connor 1974, 130.

[371] Bietak 2009, 15-6.

Fig. 6.6. Map of Avaris showing several recently discovered harbors (Bietak 2009, 17).

harbors at Tell el-Dabȧ are examples of some of the larger harbors that operated for commercial and military purposes. On a less grand scale are the harbors at Serra East in Sudan and at Mendes. The fortress at Serra East boasts one of the only excavated non-temple harbors.[372] Although small in dimension, a mere 20 x 10 m, it could accommodate modest cargo and fishing vessels.[373] The northern and inner harbors at Mendes were also relatively small compared to those at Malkata and Tell el-Daba'. They roughly measure 100 x 100 m in dimension.[374] Function, it seems, did not necessarily regulate the dimensions of Nilotic harbors.

During the New Kingdom (18th and 19th Dynasties) iconographic representations of temple harbors become more prevalent.[375] Temple complexes generally included a small harbor and quay to facilitate the unloading of temple endowments, religious ceremonies, and the activities of the temple officials. These stood in front of the temple and were connected by canal to the Nile.[376] Each temple owned a fleet of boats which could be utilized by the priests or officials for purposes of the cult or for enterprise. While temple harbors were primarily ceremonial in function, they probably also accommodated commercial activity on a smaller scale. For instance, the late Ramesside Amiens papyrus documents the transport of grain by a 21-ship fleet belonging to the

[372] Kemp and O'Connor 1974, 107.

[373] Knudstad 1966; Doyle 1998, 241.

[374] Estimate based on Redford's (2010, 149) map.

[375] Kemp and O'Connor 1974, 106.

[376] Kemp and O'Connor 1974, 106.

Temple of Amun at Karnak.[377] The ships were transporting grain collected from the temple's estates in the Nile Delta.[378] Other textual sources indicate that the temples of Abydos and Medinet Habu maintained substantial fleets of ships.[379] Furthermore, the ships belonging to the temples were often engaged in foreign trading enterprises, and on occasion employed foreign traders.[380] While temple harbors were generally small, they might be enlarged if they were engaged in large scale trading operations, such as the second harbor of Soleb Temple. Built by Amenhotep III, the larger harbor at Soleb Temple is enormous relative to other examples of temple harbors.[381] It occupied an estimated area of 7500 m^2 and was constructed to facilitate trade associated with the temple.[382] Harbors, therefore, were vital to the ceremonial and economic livelihood of Egyptian temples.

Thmuis

Excavations at Tell-el Timai revealed that Thmuis' suspected northern harbor, perhaps accessible to the Mendesian Nile by a canal, was associated with the nearby

[377] Castle 1992, 240; Janssen 2004.

[378] Castle 1992, 240.

[379] Castle 1992, 240.

[380] Castle 1992, 243.

[381] Kemp and O'Connor 1974, 107.

[382] Kemp and O'Connor 1974, 107.

industrial quarter that flourished during the fourth century B.C.E.[383] A number of unguentaria discovered in the area may indicate the production and trade of the Mendesian perfume at Thmuis during this time. Hellenistic ceramics and Rhodian amphoras dated to the second half of the third century B.C.E. were discovered in fill deposits around the suspected harbor basin. Several Aegean amphora fragments were also discovered within the basin. These deposits are dated to the period following the final Persian Occupation of Egypt. They provide evidence that the maritime economy at Thmuis was active during this period.

In the beginning of the second century B.C.E., this activity came to an abrupt halt and Thmuis appears to have been involved in the unrest which plagued the Nile Delta around the end of the third century B.C.E. Extensive destruction deposits are evident in the industrial quarter and the facilities surrounding the suspected harbor at Thmuis. Following this tumultuous event, the northern industrial areas and harbor basin were filled and leveled with debris for a later building foundation.

Donald Redford drew similar conclusions after examining archaeological material from the harbor at Mendes. These deposits included coins dated to the periods between Alexander the Great (332 B.C.E.) and Ptolemy IV (died 204 B.C.E.). Vast quantities of early Ptolemaic pottery were also discovered across the tell.[384] Historical evidence attests to the fame of Mendes following Ptolemy II's visit to the city (ca. 280

[383] Preliminary dating phases were established according to the ceramic assemblages from the University of Hawaii's 2010-11 Tell el-Timai field seasons.

[384] Redford 2010, 199.

B.C.E.), and a Greek population was established in the city during this period.[385] At the beginning of the second century B.C.E., activity at the harbor of Mendes ceased and some of the storage facilities were abandoned.[386] This corresponds to the destruction deposits discovered around Thmuis' suspected harbor.

Historical accounts indicate that, beginning in the first century B.C.E. major hydrological changes were underway in the Nile Delta. The Mendesian River began to ebb. The eastern harbors at Mendes, and perhaps the northern harbor at Thmuis, slowly silted up. The northern basin at Thmuis was filled with a mix of cultural debris, including dozens of Ptolemaic figurines of Bes, Isis, and Harpocrates. Further examples of these were discovered nearby.[387] Due to the enormity of votive figurines, particularly in the suspected harbor basin, it has been suggested that these deposits came from a *bothros* (temple/shrine clearing). Similar deposits, however, were discovered in the smaller eastern harbor at Mendes. Hundreds of figurines of Bes, women on beds, and musicians were deposited along the western bank of the harbor. Redford (2010) has interpreted the Mendes harbor deposits as a final votive attempt to bring back the disappearing waters. The figurines from Thmuis might represent a similar event.

Despite these futile acts, the eastern harbors at Mendes, and probably the northern harbor at Thmuis, were completely silted up by end of the first century

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[385] The Thmuis mosaics which depict Arsinoe II also attest to a Greek presence at Thmuis during the 3rd century B.C.E.

[386] Redford 2010, 199.

[387] Nearly two dozen figurines were discovered in and around the suspected harbor basin during the 2010-11 University of Hawaii excavations.

B.C.E.[388] The river migrated eastward and the majority of Mendes' inhabitants moved south to Thmuis.

Conclusion

Nilotic harbors had commercial, military, and ceremonial functions. They played an integral part in the redistribution system along the Nile and ancillary canals. During times of political unrest, the riverine harbors assisted in the transport and stationing of troops and ships. Nilotic harbors may have, therefore, represented wealth and luxury, as well as authority and security to the Egyptians. At the same time, the harbors along the Nile took on a sacred function. For the Egyptians mooring was a metaphor for dying. The afterlife was a dangerous place, so sailing across the heavenly realm and mooring happily with Osiris was a paramount concern for the deceased. Considering this ideology, the Nilotic harbor provided a safe abode from dangerous currents, unfavorable winds, and shallow sandbars. Neferhotep's Theban tomb provides an alluring depiction of a Nilotic harbor (fig. 5.6). Papyrus thickets, lotus, and various kinds of trees line the sacred harbor and create an overall feeling of fertility and tranquility.

When the Mendesian River declined and the harbors at Mendes finally silted up, the inhabitants of the city enlisted divine assistance. Hundreds of votive figurines were tossed into the receding waters of the great eastern harbor of Mendes, perhaps in an

[388] Redford 2010, 201.

attempt to save the city's primary port of trade. Unfortunately, the gods were silent; the harbors of Mendes became salt pans.

CHAPTER VII

CONCLUSION

The waters of the ancient Nile comprised a complex and dynamic maritime space. Each year the flood reshaped the landscape, erasing boundaries, dykes, and even settlements. When the waters peaked, the Nile Delta was transformed into an inland sea, and navigation routes along the canals and primary channels of the river were largely obscured. Local knowledge of these transformations was necessary for survival. The ancient Egyptians employed various measures to harness this environment: irrigation optimized floodwaters for agriculture and animal husbandry, artificial canals and harbor facilities maintained Egypt's domestic and international commercial network, and religious ideology provided a foundation for understanding and controlling the ominous forces of nature. The river's changing conditions ultimately shaped the infrastructure, politics, history, and religion of the Nile Delta.

The Nile was Egypt's primary source of wealth and power, but it was a mutable system which was difficult to control. While the annual inundation rejuvenated the landscape and facilitated water transport along the river's waterways, it also carried with it the potential to engulf settlements and reroute the course of the river. Despite the dangers associated with the Nilotic environment, the abundance and fertility of the Delta's alluvial plains made Egypt one of the most agriculturally-efficient civilizations.

Excess produce was traded at the local level and sometimes exported by the state. During the Hellenistic and Roman periods, the Nile Delta became the 'bread-basket' of the Mediterranean. The Ptolemies supplied much of the Mediterranean with Egyptian grain while the Romans later exported such quantities that the Egyptian countryside was left barren.[389] Naturally, the primary and secondary waterways of the Nile supported a communication network that fostered commerce. As a result, Delta cities were often centers of local and foreign trade. Those near the coast and along the primary river branches functioned as both seaports and river ports.

Like other Delta cities, the bustling markets of Mendes and Thmuis depended on the Nile. Cargoes from the Aegean and the Levant arrived via the Mendesian mouth and were subsequently redistributed to the various centers of the Mendesian nome. Meanwhile, luxury items from the Red Sea, including pearls, coral, and incense were carried to the nome along the river's secondary waterways. Local commodities were also imported to and exported from the Delta cities. Both local and foreign merchants travelled to the markets of Mendes and Thmuis to sell their wares and to fetch the best price on Mendesian perfume and linen.

In response to the changing river, the Nile Delta underwent several historical geo-political adaptations. Cities' survival depended on their ability to accommodate and adapt to the seasonal and climatic fluctuations of the riverine landscape. These conditions were both highly variable and unpredictable. Seasonal floods were the source

[389] Casson 1954, 171-4, 183.

of bounty, but if too low or too high, they could bring disaster. When the river did not overflow its banks into the surrounding agricultural lands, fields were not watered and crops failed. Alternatively, when the waters rose too high, river branches often broke their levees and settlements were swept away. For these reasons the Egyptian economy was dependent upon the flood level for food, taxation, and exchange. The river waters were measured each year to calculate the annual land tax. If they were low, taxes were adjusted accordingly.

Over the centuries, floods caused the branches of the Nile to wander. Geological and seismic pressures in the northeastern Nile Delta pushed the primary river branches eastward until the ninth century C.E., when the situation reversed. The Egyptians adapted their infrastructure to the changing Nile. Harbor design reflects these adaptations and hards, such as the one discovered at the lagoonal seaport of Myos Hormos, provided erosion resistant areas to beach vessels. T-shaped harbors were also the product of riverine context. These harbors, like Birket Habu, were protected by a long canal from the surges of the Nile. Ultimately, the natural environment was the most decisive factor when determining the size, layout, and location of a harbor. Despite the advanced environmental planning apparent in their design, harbors could not always be prevented from silting up and were abandoned as the river branches migrated.

The profound changes in river hydrology that occurred in the first century C.E. had severe consequences. The river shifted, resulting in Mendes' abandonment and Thmuis' assent to regional power. In response to hydrological pressure, the Butic Canal

was built to connect the vast maritime space of the northern Nile Delta; its appearance in literary sources corresponds to the decline of the Mendesian and Tanitic Nile tributaries. The canal's expansion and continued maintenance in the following centuries reflects its importance as a primary transit corridor for commerce and militaristic ventures. Thmuis survived amidst this changing landscape due to its location along the Butic communication network. At the end of the first millennium C.E., seismic activity in the northeastern Nile Delta caused a westward shift in the landscape. Several high floods instigated the final stage of river evolution. The former eastern Nile tributaries disappeared and the Nile Delta took on its present configuration.

While the dynamic character of the Nile had a profound effect on local economy and infrastructure, it also shaped Egyptian culture. Egyptian religious ideology reflects several cognitive adaptations to the river. Though the Egyptians interacted with and utilized their maritime space through shipping, irrigation, and farming, they must have felt that the only way to maintain order within it was through divine assistance. Votive offerings were cast into harbors to ensure the abundance of the Nile, while deities such as Isis were called upon by weary sailors for protection on the high seas.

The celestial realm mirrored the physical world in many aspects. Gods and goddesses were the intermediaries between the dead and the abysmal domain of the afterlife. Sailing and its attending duties, such as rowing and mooring, took on a divine character in the netherworld. While seemingly minor activities in the physical world, the deceased hoped to perform these duties on the voyage through the afterlife. Elements of

the boat, including the mooring posts, were given magical names. The risks associated with the river and navigation, were also encountered in the heavenly landscape. Spells assisted the deceased in overcoming the danger of the crocodile, while invocations to various deities assured favorable conditions for sailing.

The worship of gods imparted a degree of protection from the natural environment. The Mendesian pantheon was enlisted to assist both the living and the deceased in the perils associated with life along the Nile. Hatmehit's and Banebjded's association with the fertile and abundant qualities of the riverine landscape, exhibit the importance of agriculture and animal husbandry within the Mendesian nome. These guardian deities were called upon as a form of risk management. In later times, Hatmehit became the patron of the Mendesian perfume industry. Other deities, such as Hathor, Isis, and Isis-Arsinoe were protectors of sailors who assisted with navigation. The discovery of two mosaics at Thmuis, which bear an apparent connection to Isis-Arsinoe, might reflect the city's maritime heritage as a coastal port and redistribution center.

Contrary to the opinion of many modern scholars, the Egyptians were keenly aware of their maritime space. The variety of watercraft specialized for the open ocean, the inland waterways of the Nile, and the coastal marshes all testify that the Egyptians were in touch with these unique maritime realities. The Nile was a shifting sea, not a static network of lines. The people who were familiar with this environment did not necessarily document it. Fisherman and local pilots kept their own language of the river

that was probably inaccessible to scribes and historical commenters. As such, the terms that have survived in literary, religious, and economic texts do not reveal the wealth of designations probably employed for the various regions along the Nile. Delta place names are a further reflection of spatial awareness. The names of settlements, such as Ta-mawt ('new land') and Ro-nefer ('beautiful mouth'), were frequently related to features of the landscape, and could identify several maritime realities. While the terminology for the maritime Mediterranean (Wadj-wer) and Aegean (Haunebut) spaces became more precise under the Ptolemies, the use of Wadj-wer for the inland seas persisted.

These seemingly vague maritime terms for the zones of the Nile Delta, however, were not the product of a limited perception. The complex nature of the inland waterways required detailed insider knowledge because the topography was constantly changing. Navigation along the river was a dangerous enterprise and Egyptian pilots were often hired to guide foreign cargoes through the labyrinthine waterways of the Nile Delta. The fluidity of the inland seas defied a fixed spatial terminology. The Egyptians developed a profound understanding of the elements within this space after millennia of physical interaction with it. This deep cognitive knowledge is still found amongst the inhabitants of the modern Nile.

Mendes and Thmuis were islands in the Nile Sea. The maritime environment of the eastern Nile Delta shaped their history, development, and ideology. To survive, both cities had to adapt and conform to the fluid conditions of the landscape. Dykes, artificial

canals, reservoirs, and harbors were employed to harness their control over the shifting river, while deities were invoked to protect the inhabitants from the volatility of the Nile. After three thousand years of interaction, the cities of Mendes and Thmuis were finally cut off from their lifeline. Despite their attempts to control the river, the forces of nature prevailed; the maritime space of the Nile Delta was ultimately untamable.

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