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**Barbara J. Sivertsen: The Parting of the Sea**

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## CHAPTER ONE

# Dating the Exodus



Actor Charlton Heston began his film career in 1950 on the steps of Chicago's Field Museum of Natural History playing Marc Antony in an adaptation of Shakespeare's *Julius Caesar*, the impressive pillars and white marble steps of the museum providing a highly effective stand-in for the Roman Senate.<sup>1</sup> Later he would go on to his most famous role, that of Moses in Cecil B. DeMille's epic film, *The Ten Commandments*. In this movie the biblical Exodus takes place during the reign of the pharaoh Ramesses II, of Egypt's Nineteenth Dynasty. In the year 2000, Field Museum Egyptologist Frank Yurco included this film in his class, "Exodus: The Egyptian Evidence."

### EVIDENCE FOR THE EXODUS IN EGYPT

Frank Yurco (who died in 2003) was among a minority of Egyptologists who hold to the view that the Exodus actually occurred. Like many biblical scholars for the past several centuries, he cited what he believed was the most reliable part of the scriptural narrative: the names of the store-cities Pithom and Rameses in Exodus 1:11. This, Yurco asserted, pointed to the pharaoh Ramesses II, who reigned from 1279 to 1209 B.C.E.<sup>2</sup> Ramesses II's capital was at Pi-Ramesses, a close approximation of the biblical name. Pi-Ramesses was located in Egypt's eastern Delta region, thought to be the biblical "land of Goshen." Earlier pharaohs, those of the Eighteenth Dynasty, had their capital farther south, at Thebes or Amarna. Later pharaohs moved the capital to the city of Tanis. After this move the name Pi-Ramesses disappeared from common usage, as shown in the Bible where the name Tanis appears several times.

Yurco cited texts from the reign of Ramesses II to show that "Apiru" (a term many scholars think relates to the biblical Hebrews) did indeed labor

on the monuments of Pi-Ramesses. Most of the buildings of this and other Egyptian cities, he noted, were made of mud bricks such as those mentioned in Exodus 5. Unlike the earlier kings, Ramesses II did indeed build cities in the Nile Delta for storing his military supplies. The Pharaoh was also resident in his capital of Pi-Ramesses, and thus could have been physically accessible to Moses and Aaron, as the Bible account describes. Even the Red Sea crossing makes sense in terms of the city of Pi-Ramesses if the term Red Sea refers in fact to the Reed Sea (see chapters 4 and 10), since several marshy freshwater lakes filled with reeds were immediately to the east and northeast of that city. And, finally, Egyptian names in the Exodus account—Moses, Phineas, Hophni, Shiprah, and Puah—are “characteristic of the Ramesside era, less so in Dynasty XVIII and least of all in Dynasty XXVI.”<sup>3</sup>

Other eminent scholars at a 1992 Brown University conference on the Egyptian evidence for the Exodus expressed their doubts about Yurco’s position. Although archaeologist William Dever did agree that Egyptian historical evidence pointed to a thirteenth century B.C.E. date for the Exodus, he wondered how the newly escaped slaves could so quickly establish themselves in Canaan—for they appear as a distinct people, “Israel,” on the famous Victory Stele of Merneptah of about 1207 B.C.E. Furthermore, the biblical account mentions the Israelites passing through the kingdoms of Ammon, Moab, and Edom. Ammon, Dever noted, was sparsely occupied in the thirteenth century B.C.E. while Edom and Moab were not yet established kingdoms.<sup>4</sup> Dever concluded that oral tradition may have preserved the memory of Canaanite groups in Egypt during the Hyksos period (seventeenth and sixteenth centuries B.C.E.) and their expulsion by the first pharaoh of the Eighteenth Dynasty, Ahmose, but that the true settling of Canaan by the early Israelites had nothing to do with the biblical Exodus or with the supposed wanderings in the wilderness and the subsequent conquest under Joshua, none of which fit any of the archaeological evidence.

Noted Canadian Egyptologist Donald Redford was even more pessimistic. Thirty years before he had pointed out that the Biblical names Pithom (*pr-’Itm* in Egyptian) and Rameses or Raamses were known only in the Saite period, that is, during the seventh and sixth centuries B.C.E.<sup>5</sup> Other concrete aspects of the Sojourn in Egypt and Exodus stories were likewise recent. As for an Exodus in the time of the Nineteenth Dynasty, he noted the total lack of any Egyptian evidence for a large population of Asiatics (that is, people from southwest Asia) in Egypt living in large

measure unto itself during the entire New Kingdom (Eighteenth to Twentieth Dynasties).<sup>6</sup> Redford thought that the stories of the Sojourn in Egypt and the Exodus had their origin in the Canaanite (not Israelite) folkloric memory of the occupation of Egypt by the Hyksos, a people originally from southwest Asia.<sup>7</sup>

Another apparent nail in the coffin of a thirteenth century B.C.E. Exodus was provided by James Weinstein, who reviewed the archeological evidence from early twelfth century B.C.E. Israelite settlements and found hardly any evidence of Egyptian contact. Such contact would be expected from a people fresh out of Egypt. The only question that *really* mattered, Weinstein wrote, “is whether any (nonbiblical) textual or archaeological materials indicate a major outflow of Asiatics from Egypt to Canaan at any point in the XIXth or even early XXth Dynasty. And so far the answer to that question is no.”<sup>8</sup>

Abraham Malamat of the Hebrew University in Jerusalem did discover an account of Asiatics leaving Egypt at the beginning of the Twentieth Dynasty. This group, in the first or second decade of the twelfth century B.C.E., was driven out of Egypt by the pharaoh Sethnakht after having been bribed with silver and gold to assist a rival political faction.<sup>9</sup> More than any of the other scholars at the conference, Malamat viewed the Exodus as the compression of a chain of historical or “durative” events telescoped into one “punctual” event.<sup>10</sup>

Both Dever and Weinstein pointed out the lack of archeological evidence for a thirteenth or twelfth century B.C.E. conquest of Canaan by Joshua.<sup>11</sup> William A. Ward summed up the consensus of the conference, and the mainstream of scholarly opinion, by noting that the Exodus could not be separated from the conquest under Joshua, and that “if there was no conquest, there is no need of an Exodus.”<sup>12</sup> The archeological evidence is indeed unequivocal. Although there is much archeological evidence for the destruction of a number of Canaanite cities at the end of the Middle Bronze Age (starting about 1550 B.C.E.), there is little or none for their destruction when the conquest of Joshua would have occurred, if the Exodus had taken place during the Nineteenth Dynasty.<sup>13</sup>

#### DATING THE EXODUS FROM BIBLICAL AND OTHER ANCIENT TEXTS

More than twenty-five years ago a British scholar, John Bimson, attempted to solve this problem. First, he used the statement in 1 Kings 6:1 that the beginning of Solomon’s temple (about 965–967 B.C.E. by modern calculation)

took place 480 years after the flight from Egypt as a rough approximation of the actual Exodus date. Then he tried to move the dates for the end of the Middle Bronze Age forward more than one hundred years.<sup>14</sup> New archeological finds, however, as well as radiocarbon dates for the destruction layer of the walled city of Jericho, have shown this approach to be “fatally flawed.”<sup>15</sup>

Earlier writers took a different approach to estimate the date of the Exodus, summing up the chronological information in the book of Judges and working backward from the reigns of kings David and Solomon. Using this method, in 1925 J. W. Jack estimated 609 years between the Exodus and the building of the first Israelite temple.<sup>16</sup> The most recent approach to determine the date of the Exodus involved computers. Using computer software to correlate the priestly cycles (taken from the Talmud), the lunar and solar cycles, and the jubilee years, E. W. Faulstich arrived at a date of July 31, 588 B.C.E. for the destruction of the Solomonic temple. Using the same method, he arrived at a date of 1421 B.C.E. for the conquest of Jericho, and by adding forty years to this figure, a date of 1461 B.C.E. for the Exodus.<sup>17</sup>

A much earlier writer, a first century C.E. Jew named Flavius Josephus, offered two dates for the Exodus. To counter the anti-Semitic claims of a writer named Apion, Josephus wrote a work entitled *Against Apion*, in which he quoted the third century B.C.E. Egyptian historian Manetho about the Hyksos, an Asiatic people who invaded and conquered Egypt in the first half of the second millennium B.C.E. Josephus equated the Hyksos to the Israelites to prove his own people’s antiquity and stated that the Exodus had occurred 612 years before King Solomon built the temple.<sup>18</sup> In another work, *Antiquities of the Jews*, Josephus again used the 612-year figure along with a 466-year figure for the length of the temple’s existence. But elsewhere in *Antiquities* Josephus stated that the temple was started on the second month, 592 years after the Exodus, and also that the temple was destroyed 470 years, six months, and ten days after it was built. Combining the 592 years with the 470 years he went on to write that the temple was destroyed 1,062 years, six months, and ten days after the Exodus (and further that the Flood occurred 1957 years, six months, and ten days before the temple’s destruction, and 3,513 years, six months, and ten days from Adam to the destruction).<sup>19</sup>

These sets of numbers apparently were from an ancient year-counting source, now lost.<sup>20</sup> This ancient source had at some point acquired the

beginning of February as the starting point for each new year. Combining Josephus' year count of 1,062 years, six months, and ten days with the accepted date for the destruction of the first temple, the seventh or tenth of Ab, 586 B.C.E., produces an Exodus date of 1648 B.C.E., in early February.<sup>21</sup> However, if Josephus had actually made a twenty-year error *in the wrong direction* when he wrote 612 instead of 592 years, then the resulting figure—572 years between the Exodus and the break in the year count—would produce an Exodus date of 1628 B.C.E. As we shall see in chapter 3, this date is arguably the year of the Minoan eruption of Santorini/Thera. Josephus's time of year agrees with Egyptian harvest times as well (see chapter 4). The break designated as the start of the building of the temple is nearly a century too early for this event but would accord nicely with the destruction of the principal Israelite cult center at Shiloh, known to have occurred in the mid-eleventh century B.C.E.<sup>22</sup>

#### ORAL HISTORY, NATURAL EVENTS, AND THE STORY OF THE EXODUS

The modern-day oral historian would approach the Exodus story far differently than the literary scholar. First, the oral historian would give little weight to the fact that many people in the story don't have proper names, including Pharaoh—proper names often fall by the wayside in oral transmission. In the same vein, the names Pithom and Rameses, so important to literary scholars, would be treated with caution as possible later additions—*anachronisms*, a common feature of oral traditions. Second, the oral historian would give little weight to the number of years mentioned in 1 Kings 6:1, since numbers are likewise subject to great distortion. Moreover, this particular number is a multiple of forty and twelve, two ritual numbers for the early Israelites. An oral historian might pay a little more attention to the diverse numbers of years given for the rule of the judges, but some of them are recognizably ritual numbers as well. There is also the possibility of overlap for various judges in different parts or tribes of Israel, or missing periods, or other uncountable stretches of time.

Oral historians have often tried to use natural events to date traditional stories. But they have discovered that such events do not always stay attached to their original time and place.<sup>23</sup> A way to detect this problem is to look at the story as a whole. If an oral tradition does contain an extraordinary natural event (or a series of them), how intrinsic is the event to the

story? Could the extraordinary event be moved or removed without changing the basic structure of the story? To put it another way, is it likely, in the context of the story, that the extraordinary event was added or moved?

The story of the Exodus contains a whole series of extraordinary natural or supernatural events. There is the burning bush, the ten plagues, and the parting of the waters. Certainly the plagues and some sort of miraculous event involving the drowning of the Egyptians are intrinsic to the story—without them there is no story, nor any reason to have such a story in the first place. It is worth noting that, in the ancient world, both the normal and abnormal occurrences of nature were held to be the works of the gods and goddesses. If something unusual had indeed happened, the people of the time, both Egyptian and Israelite, would have credited it to the working of divine authority.

#### NATURAL PHENOMENA AS EXPLANATIONS FOR THE EXODUS

With this in mind, in 1957 one ecologically minded scholar, Greta Hort, saw the plagues as disturbances in the ecology of the Nile, triggered by exceptionally strong July and August Nile flooding that brought down blood-red flagellates from the mountain lakes of Ethiopia, along with larger than normal quantities of the reddish sediments from the Abyssinian Plateau.<sup>24</sup> These flagellates, *Euglena sanguinea*, took oxygen from the river water, which killed the fish and brought on flies. This drove the frogs from the river not long before the high flood levels produced a lot of mosquitoes. Unfortunately, the frogs had contracted anthrax and spread it to animals and people, producing more of the plagues. Hail, coming in early February just before the barley harvest in the Egyptian Delta, destroyed the flax and barley, locusts blew in from Arabia, and a dust storm produced the exceptional darkness of the ninth plague.<sup>25</sup> Hort didn't explain the pillar of cloud and fire, however. In fact, large amounts of sediment from Ethiopia show up during low Nile floods, not high ones.<sup>26</sup> More importantly, the vicissitudes of the Nile floods and their effects would have occurred in other years and would thus have been regarded as ordinary events, whereas the Exodus portrays the water turning to blood as an extraordinary, one-time-only event. Moreover, how did such reasonably ordinary events get so closely connected in the minds of people (they supposedly happened over the course of most of a year) or come to be considered so extraordinary that they were remembered for centuries?

In a similar vein, archaeologists J. B. E. Garstang and his son John had earlier (in 1940) come up with the idea that the plagues were manifestations of a volcanic eruption that took place in the Rift Valley of central Africa. The Garstangs theorized that the central African lakes that are the sources of the White Nile were poisoned by Rift volcanoes, and the Nile brought the toxins north to Egypt, killing the fish and causing the earlier plagues. Another volcano, Mount Horeb, erupted in the land of Midian east of the Red Sea, and prevailing winds blew dust, steam, and ash over to Egypt, causing the hail and darkness plagues. An earthquake related to all this volcanic activity caused the sea to part and later to return and drown the Egyptians.<sup>27</sup>

Modern geological knowledge dispenses with this scenario, however. The volcanoes in central Africa are still active today, their effusive eruptions sending lava south into Lake Kivu, not northward to Lake Edward, which connects to Lake Albert, the source of the White Nile. The greatest danger humans and animals face from these basaltic shield volcanoes is through direct contact with the molten lava, or through asphyxiation from inhaling local pockets of carbon dioxide gas that form close to the ground. Only in the immediate vicinity of where the lava flows into Lake Kivu are fish parboiled, a bonanza to local fishermen.<sup>28</sup> Across the Red Sea, the effects of the volcanoes of Midian would only be felt locally, not as far away as Egypt.<sup>29</sup>

In 1964 a better candidate for the volcanic origin of the Exodus plagues emerged when A. G. Galanopoulos suggested that the Minoan eruption of the Santorini (Thera) volcano in the Aegean Sea was responsible for the plagues of the Exodus and the destruction of the Egyptian army in the Sirbonis lagoon on the northeastern coast of Egypt.<sup>30</sup> Despite being roundly criticized (but not usually by geologists and volcanologists), this idea became quite popular, although in fact archaeological remains indicate that the land spit over which the Israelites were said to have passed did not exist before the mid-first millennium B.C.E., well after any possible Exodus.<sup>31</sup> The connection between the Exodus and the Santorini eruption was discussed in Dorothy Vitaliano's 1973 *Legends of the Earth: Their Geologic Origins*, in Ian Wilson's 1985 book, *Exodus: The True Story Behind the Biblical Account*, and most recently in Elizabeth and Paul Barber's *When They Severed Earth from Sky: How the Human Mind Shapes Myth*.<sup>32</sup> Barber and Barber point out that parts of the Exodus story are quite characteristic of an ash cloud (their Group D) account of an eruption. In his book Wilson put the Exodus in the reign of the female



pharaoh Hatshepsut, in accord with the theory of renowned Egyptologist Hans Goedicke.

#### THE EXODUS AND THE ERUPTION OF THE THERA VOLCANO

Goedicke made headlines in 1981 when he announced that the Exodus had occurred in 1477 and that the pursuing Egyptians had been drowned by a tsunami caused by the eruption of the Thera volcano.<sup>33</sup> In support of his theory he offered a new translation of Hatshepsut's Speos Artemidos inscription: "I annulled the former privileges [that existed] since [the time] the Asiatics were in the region of Avaris of Lower Egypt! . . . And when I allowed the abominations of the gods [i.e., these immigrants] to depart, the earth swallowed their footsteps! This was the directive of the Primeval Father [literally the father of fathers, Nun the primeval water] who came one day unexpectedly."<sup>34</sup>

This is a difficult text, and two other translators, Alan Gardiner and Donald Redford, have different endings. Gardiner's is: "Such has been the guiding rule of the father of [my fathers] who came at his [appointed] times, even Re"<sup>35</sup> and Redford's: "that was (?) the instruction of the father of the father[s] who comes at his regular times, viz. Re."<sup>36</sup> Redford does mention that the term "father of the father[s]" could mean a god, but an even more contentious item is whether the god, or the primeval water, came expectedly or unexpectedly. An unexpected appearance could refer to a tsunami, but an expected one certainly couldn't.

In 1992 Goedicke published a paper on the Thera/Santorini eruption which was in part a reaction to the scientific date for the Minoan eruption suggested at the Third International Congress on Thera and the Aegean World.<sup>37</sup> Like many other Egyptologists, he rejected this scientifically derived date of 1628 B.C.E. for the eruption and opted instead for a two-tiered Thera eruption, the first in the reign of Ahmose, first pharaoh of the Eighteenth Dynasty, and the second during the reign of Hatshepsut. Although there is no geological evidence for a two-tiered Thera eruption, Goedicke cited a mid to late first millennium B.C.E. *naos* from Saft el-Henna as support for a volcanic disaster in Hatshepsut's time. The *naos* is an inscribed rectangular block of granite, pointed at the top, with a large niche carved out of its front that once held the figurine of a god. Goedicke believes that the inscription on the *naos* is a mythologized history of the Eighteenth Dynasty from the time of Tuthmosis I to the beginning of Tuthmosis III's sole rule. This text describes an intense

darkness that lasted for nine days; during this time the sea intruded inland.<sup>38</sup>

#### THE EXODUS FROM EGYPT AND THE CONQUEST IN JOSHUA

If Goedicke's reconstructions and attestations are correct, this event certainly has a good many similarities to the biblical Exodus. But there are also significant differences. The Eighteenth Dynasty pharaohs, and certainly Hatshepsut, lived much farther south in Egypt, in Thebes, not in the Delta. Moses and Aaron couldn't shuttle back and forth between Pharaoh and the Israelites living in the land of Goshen (undeniably located in the Delta) as they negotiated for the release of their people. Also, this Pharaoh had no sons, firstborn or otherwise, to die during the Passover; nor did she lead a pursuing army and drown in the sea of reeds. And lastly, and most tellingly, had the Exodus occurred in Hatshepsut's reign, it was not and could not have been followed forty years later by the conquest described in the book of Joshua.

In a very real way, the Exodus is connected to this conquest—as William Ward concluded at the 1992 conference, “if there was no conquest, there is no need of an Exodus.” There are now radiocarbon dates on charred seeds from the only destruction level at Jericho that plausibly could have been associated with the Israelite destruction under Joshua. The average of these dates is  $3311 \pm 13$  radiocarbon years BP (Before Present). Wiggle-matched to either the 1993 or 1998 tree ring calibration curve, this date falls in the middle sixteenth century B.C.E.<sup>39</sup> This is well before Hatshepsut's reign, before or at the very start of the Eighteenth Dynasty. If an Exodus from Egypt took place earlier, it would have occurred when the Nile Delta region was dominated by the people mentioned by Manetho, a Semitic-speaking people originally from southwest Asia, known to history as the Hyksos.