
The Population of Exodus in Question

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The Book of Exodus has intrigued churchgoers, academics, and everyday readers. The approach to its content varies. An apologetic approach includes a literal interpretation of the Bible. On the contrary, a minimalist approach suggests the stories in the Bible are not entirely factual. This study embraces the middle ground between the apologetic and minimalist approach from a secular military standpoint. The focus of this article is on the mass Hebrew exodus. The author does not dispute the fact that the Hebrew people left Egypt—the amount that fled is in question. Using an alternate interpretation of *eleph*, the Hebrew word for “thousand,” combined with the known nutrition and medical practices of the Hebrews, provides an alternative population number than what is recorded in scripture.

To determine whether the Hebrew people in Egypt were slaves that grew tired of their masters or freemen abused by their employers, the author relied upon the Bible together with the works of biblical scholars George E. Mendenhall, Abraham R. Besdin, and military historian Richard A. Gabriel. Gabriel, author of the *Military History of Ancient Israel*, made a statement that is often overlooked: “The Hebrew term used to describe the Israelites at their labors is *avadim* which in an obscure and irregular usage can connote slaves but which more commonly translates as ‘workmen’ or ‘workers’ or even ‘servants.’ The linguistic argument is interesting but is not definitive.”¹ Furthermore, the Books of Exodus and Numbers suggest something other than outright slavery. In the Book of Exodus, the Hebrews grumble at Moses after he led them out of Egypt, stating, “We wish Adonai had used his own hand to kill us off in Egypt! There we used to sit around the pots with the meat boiling, and we had as much food as we wanted. But you have taken us out into this desert to let this whole assembly starve to death!”² In the Book of Numbers, the Hebrews state, “We remember the fish we used to eat in Egypt—it cost us nothing! — and the cucumbers, the melons, the leeks, the onions, the garlic! But now we’re withering away, we have nothing to look at but this man.”³ The term *avadim* along with how the Hebrews felt after leaving Egypt speaks volumes and raises many questions concerning their true status among the Egyptians.⁴ The real issue is whether slavery was an institution in Egypt.

There are two ways to look at slavery when it comes to the inhabitants of ancient Egypt. Were the Hebrews slaves in Egypt? The Hebrews were not subservient to the Egyptians but to the state, i.e. the pharaoh. Therefore, the nature of slavery in Egypt, according to Besdin, “operated like a technological machine, with all people reduced to useful cogs.”⁵ At the time of the Exodus, Egypt possibly had a population of useful cogs between seven to nine million people. Such a population could easily staff the military and governmental jobs needed to secure the kingdom and work the pharaonic projects without hindrance. There was no shortage of manpower, and the need for a system totally dependent on slavery was for the most part unheard of. In other words, Egypt was not totally slave dependent. Moreover, with the exception of defeated armies, Egyptian religion and law forbade outright slavery.⁶ During wars of conquest and occupation, the Egyptians enslaved defeated armies along with their civilian noncombatant counterparts. However, slaves in Egypt, such as Hebrews, were not devoid of rights. They could own property, marry free women, have children, and if they reached a certain level of prosperity, they could employ their own servants. Nevertheless, their privileges did not include free movement.⁷

Historians recognize the Greeks as the first to introduce house slaves to the region when they occupied Egypt between the third and first century BCE.⁸ However, the Biblical story of Joseph being a slave of Potiphar's house suggests otherwise.⁹ During the time of the pharaohs, the institution of slavery varied. Viewed as a god, the pharaoh considered every resource and human in his kingdom his property. In this way, all those within the borders of Egypt were slaves, including the Israelites inhabiting Egyptian Goshen near the Sinai Peninsula. However, depending on his or her status, as in job occupation, the Israelites for a period each year eventually became less than freeman and a little higher in status than a slave. This characterizes them as *corvée* labor (community service tax in the form of forced labor).¹⁰ Regardless of their status, their skills in agriculture and as government employees were quite valuable to the Egyptians. The Israelites were not a tribe of nomadic Bedouins herding animals but a semi-pastoral community, having a highly skilled social complex.¹¹

The draft labor assigned to pharaoh's construction projects worked for three months, starting in September and ending in November. Agriculture at this time was impossible. With agriculture dormant, those people who worked the fields provided a large pool of additional manpower. The labor pool usually assigned to construction projects from the agricultural base stayed local. Those who were military conscripts

but no longer met the standards required of the Egyptian military were given the duty to construct great temples, government buildings, military forts, and to maintain irrigation systems. The unemployed were temporarily hired, fed, and were provided medical assistance from military doctors who were assigned to these crews to make sure that the workers were fit and healthy.¹²

The Israelites provided the Egyptian economy with additional resources. Also, Egyptians also saw their military service as a political tool to help control and expand the pharaoh's state. However, after many centuries of stability as a segment of Egyptian society, the Israelites fell out of favor with the pharaoh due to their growing numbers. The pharaoh found the Hebrew population size worrisome. "Behold, the people of the children of Israel are more and mightier than we: Come on, let us deal wisely with them; lest they multiply, and it come to pass, that, when there falleth out any war, they join also unto our enemies, and fight against us, and so get them up out of the land."¹³

The Bible, particularly Exodus 12:37-38 and Numbers 1:46, provides an idea of the Hebrew population size based on estimates of the men able to serve in the military, which was roughly 603,550.¹⁴ Given that the Israelite troops numbered approximately 603,550, it would indicate that the population including the women and children along with the elderly exiting Egypt was about two million people.¹⁵ However, this estimate is high because the term *eleph* in Hebrew means one thousand. Only later during the time of the United Kingdom of Israel did this term come to mean one thousand when units of a thousand men were called *alaphim*.¹⁶

However, the term *eleph* can mean "clan" and if so, it changes the numerical *eleph's* structure. Instead of looking at *eleph* to mean one thousand men or manpower as they did during the monarchy, consider that the term *eleph* describes one unit rather than numbers.¹⁷ To provide more clarity, George E. Mendenhall sums it up well in the chart below.



Tribe	Numbers 1		Numbers 26		I Chron 12	
	Units	Men	Units	Men	Units	Men
Reuben.....	46	500	43	750 ¹⁷	(40) ¹⁸	xxx
Simeon.....	59	300	22	200	7	100
Gad.....	45	650	40	500	(40)	xxx
Judah.....	74	600	76	500	6	800
Issachar.....	54	400	64	300		200 יב'יהם and their men ¹⁹
Zebulun.....	57	400	60	500	50	xxx
Ephraim.....	40	500	32	500	20	800
Manasseh..... (Half-tribe).....	32	200	52	700	18 (40)	xxx xxx
Benjamin.....	35	400	45	600	3	xxx
Dan.....	62	700	64	400	28	600 ²⁰
Asher.....	41	500	53	400	40	xxx
Naphtali.....	53	400	45	400	37	1000 יב'יהם ²¹
TOTALS.....	598	5550	596	5750	329	2300²²

Source: George E. Mendenhall, "The Census Lists of Numbers 1 and 26," *Journal of Biblical Literature* 77 (1958): 52-66.

If units rather than sequential numbers are used, then the total population may have been twenty to twenty-five thousand and the force to protect them approximately five thousand five hundred or five thousand seven hundred fifty men.¹⁸ The military was too small to penetrate Canaan and attempt settlement, which explains why Moses kept the Hebrews in the desert for thirty-eight years.

After thirty-eight years had passed, the Israelite population ranged between thirty-one thousand and forty-one thousand. Of course, these numbers depend on the mortality rate experienced by the people during their exile. However, given that Joshua led forty contingents over the Jordan River and that each contingent consisted

of two hundred men, the troop strength was likely eight thousand armed men. With an army of eight thousand or so from ages twenty years on up at Moses or Joshua's side, the Israelite population at the time was roughly thirty-five thousand.¹⁹ Comfortable with the size of his army, Moses decided it was time to set off into Canaan.

Aside from the harsh desert conditions, it is obvious from a military perspective that two million people could not have sustained themselves in the Sinai due to the lack of resources, such as sufficient food and water. What perishable items they took from Egypt, whether water, plant, or animal, could not sustain them for an extended period. Even though the Midianites did advise the Hebrews where to search for food and water, they were still living on a makeshift diet. The need to grow food and to breed new livestock to replenish the eatable commodities was important. In addition, the need to feed that very resource was important. Both man and beast in one sense or another were at war over the scraps found in the harsh wilderness. The Hebrews referenced the limited food supply in scripture. They recalled how good their diet was while living in Egypt, how they ate fish, cucumbers, melons, leeks, onions, and garlic.²⁰ They went from a steady diet in Egypt to a slow death in the wilderness.

Given that food is a crucial substance to maintain health and longevity, the combat soldier in the modern world needs three meals ready to eat (MREs) a day which have roughly 1,250 calories each, and contain 13 percent protein, 36 percent fat, and 51 percent carbohydrates. In total, the modern soldier consumes—on a daily basis—3,750 calories a day to maintain health.²¹ In the ancient world, roughly three pounds of wheat per person was the standard. However, three pounds of wheat only provided that individual 2,025 calories per day. While 2,025 calories are sufficient for a short time it is insufficient overall, and lacks the nutritional requirements needed to survive as a fully functional soldier. When it comes to the amount of water needed, the modern soldier needs five quarts of water per day but under desert conditions, the U.S. and Israeli Defense Force recommend nine quarts a day.²² However, it is apparent that the Hebrew soldiers did not have wheat to eat in the wilderness and lacked a sufficient supply of water. While certain food groups mentioned were unavailable, the Hebrews were able to eke out a diet on quail, manna, and cheese. Beef and mutton are a possibility, but given that livestock was a herder's source of income, it seems unlikely. Even with the benefit of beef and mutton, it was not enough to survive.²³ As the Bible makes it clear, after many decades in the wilderness, only a few leaders who made it out of Egypt were alive,

which indicates that starvation, thirst, diseases, exposure, and power struggles decimated the original population that left Egypt and much of their limited livestock. It is plausible that twenty thousand or so could have survived. A second reason why two million could not have made the journey is hygiene.

Keeping hygienic is important for the health and well-being of an army. However, given that the Hebrew army was living and travelling alongside the civilian population makes it more relevant. Regardless of whether the army is living among the civilian population or far away in a barracks, the need to keep clean and stay healthy is universal. For the Hebrews traveling with Moses, hygiene seems almost nonexistent. The Hebrews did not have physicians traveling with them. The Levites were spiritual physicians but nothing more. They did not have medical training but did provide the community with a series of cleanliness laws (sanitary practices) found in the Books of Leviticus and Deuteronomy. Keeping clean to stave off sickness and disease is important but of minimal benefit when compared to access to a practicing physician. This is not to say that Levitical priests ignored the ill, however, most of them likely did so for fear of losing their own life, as they were incapable of curing the illness. The Hebrews believed that if a person was found to be ill, it must have been due to his or her sins. Two verses support this notion. Exodus 15:26 states, “I am the Lord that healeth thee.” Deuteronomy 32:39 states, “I wound, and I heal: neither is there any that can deliver out of my hand.” This does not imply that an Israelite could not try to rid disease and ease the pain of the suffering. One such treatment mentioned in the Bible is hyssop, which is an antiseptic mentioned in the Book of Numbers 19:18. It states, “And a clean person shall take hyssop, and dip it in the water, and sprinkle it upon the tent, and upon all the vessels, and upon the persons that were there, and upon him that touched a bone, or one slain, or one dead, or a grave.” Even though this is just one verse mentioning one antidote, it illustrates that even without physicians on hand, the people still had some knowledge of remedies, and did their best in treating the ill—even with the belief that God curses and cures the individual. While the Israelites believed that illness comes from God as a punishment for a moral transgression, they did not believe that God caused broken limbs or nasty wounds. This means the injured did not commit a moral transgression. Such an injury, which can lead to illness, was no mystery at all. Therefore, a Levite—or anyone for that matter—could treat the injury.²⁴

It becomes evident that the Hebrews had little or no training in the knowledge of medicine like that of those they had escaped from, the Egyptians. Even

the Sumerians (4000 - 2000 BCE) long before the Hebrews, had a much greater understanding of medical procedures in treating the ill.²⁵ Because of their lack of knowledge, they decided that illness must be the will of God. This view prevailed among the Hebrews until after they returned from the Babylonian exile around 539 BCE. After the Babylonian exile, the Hebrews' knowledge of medicine grew greatly, but their religious beliefs held them back. Starvation, which led to disease and death, had nothing to do with moral transgressions. Instead, it was due to the decisions made by their leader, Moses, and the willingness of the elders to go along.

After thirty-eight years had passed, many of the Israelites who lived in Egypt had died. A multitude that had no inkling of what life was like in Egypt replaced the previous generation. This overwhelmingly young Israelite population was hungry for conquest in a literal sense. While their elders enjoyed the commodities of Egypt many decades ago, the younger generation was eager to conquer the land that was "flowing with milk and honey."²⁶ This land flowing in abundance of food was likely a tool Moses used to stoke the flames of the youth, and indicates that the Israelites had little to eat. The Israelites did not have a supply train or the ability to purchase food for some time.²⁷ Whatever rations like manna or quail that the early Israelites had, they consumed quickly.²⁸ As the Israelites ate primarily manna and quail, the Levites dined on the livestock, such as bull, lamb, goat, pigeon, or turtledoves, which they sacrificed three times a day, including holy days. Of course, the offering depended on what the common Israelite could afford to give up and provide as a sacrifice. This likely continued during the time that the next generation of Israelites were born in the wilderness.²⁹ Hence, near riots occurred over food.³⁰ With a lack of provisions and water, the Israelites were in a state of semi-starvation during their forty years in the wilderness and it is safe to say that the older generation that came forth from Egypt likely died from malnutrition and disease. While the older generation slowly passed away, their children also suffered from this semi-starvation rollercoaster, which likely caused an increase in depression, distress, disease, illness, and apathy.

In conclusion, it seems evident that the Hebrew exodus from Egypt never numbered in the millions; rather it was less than forty thousand. Even with a little over twenty thousand people, maintaining a healthy population would be hard, and surely, people would perish quickly in an area lacking provisions to sustain the necessary caloric intake and to keep hygienic. The population that left Egypt departed with a full belly and ended up like their future generations before entering Canaan, as a half-starved society seeking to do almost anything to avoid semi-

starvation. This is why the Hebrews headed for Canaan; it was the only area they knew that could provide them the freedom they desired and food they required.

Notes

1. Richard A. Gabriel, *The Military History of Ancient Israel* (Westport, Connecticut: Praeger, 2003), 61.
2. Exodus 16:3 (King James Bible).
3. Numbers 11:5 (Complete Jewish Bible).
4. Gabriel, 61.
5. Abraham R. Besdin and Joseph Dov Soloveitchik, *Reflections of the Rav: Lessons in Jewish Thought Adapted from the Lectures of Rabbi Joseph B. Soloveitchik* (Hoboken, N.J.: Ktav Pub. House, 1989), 204.
6. Gabriel, 61.
7. Rosalie A. David, *Handbook to Life in Ancient Egypt* (New York: Facts on File, 1998), 322.
8. Gabriel, 61.
9. Genesis 39.
10. Gabriel, 62-63.
11. Gabriel, 62-63; Norman K. Gottwald, *The Tribes of Yahweh: A Sociology of the Religion of Liberated Israel, 1250-1050 B.C.E.* (Maryknoll, N.Y.: Orbis Books, 1979), 455.
12. Gabriel, 61-62.
13. Exodus 1:8-10.
14. Exodus 12:37-38; Numbers 1:46.
15. Warren W. Wiersbe, *The Wiersbe Bible Commentary: The Complete Old Testament in One Volume* (Colorado Springs, CO: David C. Cook, 2007), 148.
16. Gabriel, 87.
17. Boyd Seevers, *Warfare in the Old Testament: The Organization, Weapons, and Tactics of Ancient Near Eastern Armies* (Grand Rapids, MI: Kregel Academic, 2013), 53-54.
18. Numbers 1:2-3, 17-46; 26:2; Gabriel, 88.
19. Gabriel, 113-114. According to Gabriel, "An Israelite population of 35,000 under a militia system of military recruitment accessing all males beginning at age 20 would be able to put between 8,000 and 9,000 fighting men in the field calculated at approximately 25 percent of the gross population. We might conservatively estimate the size of Joshua's army then at least 8,000 men."
20. Numbers 11:5; Norman K. Gottwald, *The Tribes of Yahweh: A Sociology of the Religion of Liberated Israel, 1250-1050 BCE* (Sheffield: Sheffield Academic Press, 1999), 455.

21. "Soldier Life: Meals, Ready-to-Eat," Go Army.com, accessed August 8, 2015, <http://www.goarmy.com/soldier-life/fitness-and-nutrition/components-of-nutrition/meals-ready-to-eat.html>.

22. Gabriel, 88-89.

23. Ibid.

24. Richard Gabriel, *Man and Wound in the Ancient World: A History of Military Medicine from Sumer to the Fall of Constantinople* (Washington, D.C.: Potomac Books, 2012), 104-105.

25. "Sumer," San Jose State University Department of Economics, accessed August 8, 2015, <http://www.sjsu.edu>.

26. Exodus 3:8.

27. Gabriel, *The Military History of Ancient Israel*, 89.

28. Exodus 16:13; Numbers 11:31.

29. Leviticus, 1:17.

30. Exodus 16:3, Numbers 11:4; Gabriel, *The Military History of Ancient Israel*, 89.

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