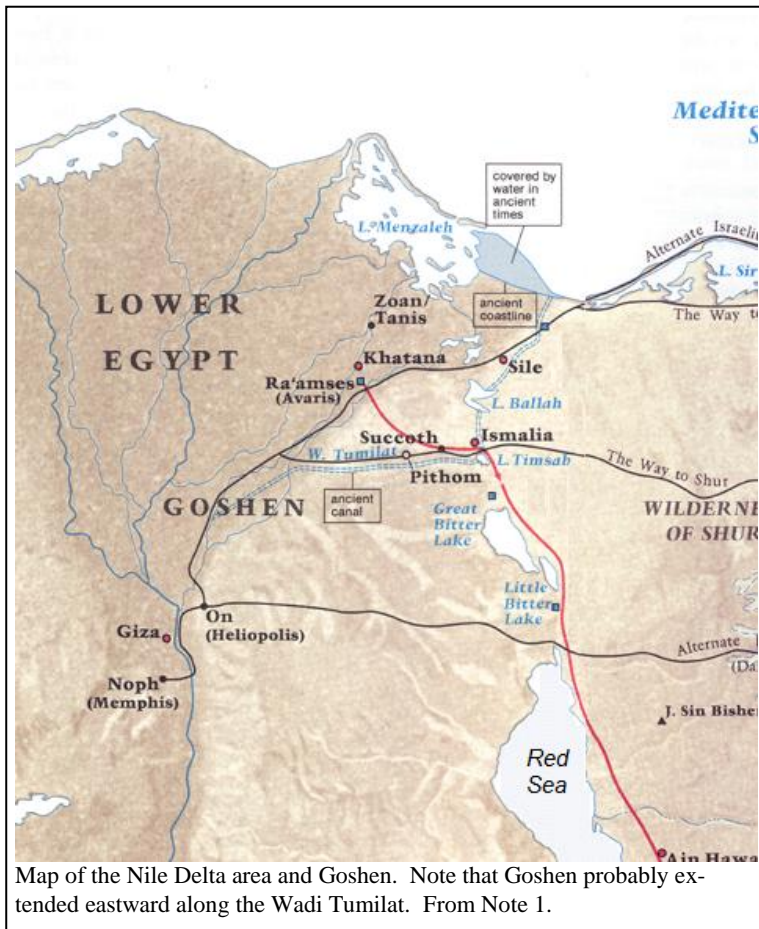


Chapter 5: Moses and the historicity of the Bible.



Map of the Nile Delta area and Goshen. Note that Goshen probably extended eastward along the Wadi Tumilat. From Note 1.

A week later, at the usual time, Xiao Wang and Xiao Li returned to Professor Ho's office. After the preliminary greetings, Xiao Wang spoke first. "I read your paper on archaeology that proves Abraham—" here Professor Ho raised both eyebrows toward the ceiling and opened his lips to interrupt, but Xiao Wang lifted a hand to forestall him—"no, I know what you'll say: 'Not *proves*, but gives *supporting evidence* for the Biblical record.' And that's all I meant. The archaeology about those cities and customs really does show me that the record of Abraham fits with Palestine around 2000BC. It's reasonable to believe that it could have happened."

Professor Ho leaned back in his seat and beamed at Xiao Wang. "Quite right! It is reasonable to believe it, and, if you continue to examine it honestly, you will find that it really is true!"

"But I have a question...."

"Certainly!"

Xiao Wang hesitated, puzzling over how to express his problem. "First of all," he started slowly, "I really would like more specific evidence for the history of the Bible. Like records about the same people and events from sources besides the Bible."

"Of course! There's plenty of it. But I'm afraid I'll have to ask you to wait another thousand years," said Professor with a slight smile.

"From about 1000BC on, starting with the book of 1st Samuel in the Bible, we have much more explicit evidence of specific people and events. [See chapter 6.] Next time you come we can get started on that. But there's some important things before it which we still need to cover first—like Moses and the Exodus."

"That's my second problem" Xiao Wang continued. "I read ahead a little in the Bible into the book of Exodus. The whole story there about ten plagues and the Red Sea opening up seems kind of fantastic. Is there any evidence for it?"

"Lots! I think you'll be surprised. The record of the ten plagues in Exodus is part of what convinced me that the Old Testament cannot be an edited compilation of legends."

Xiao Wang was amazed. "The ten plagues convinced you? How? I can hardly believe they really happened! It seems like a fairy tale."

Professor Ho nodded agreeably. "That's because you don't know the special geographical factors behind them. In reality, the plagues accurately reflect a specific sequence of geographical, seasonal and causal factors."

"What are they?"

"Hold on! We'll get to that. But first we have to get the Jews *into* Egypt¹, before we can get them out. And for that we need to review what happened to them after Abraham."

"OK, let's go. I just read that section," Xiao Wang consented.

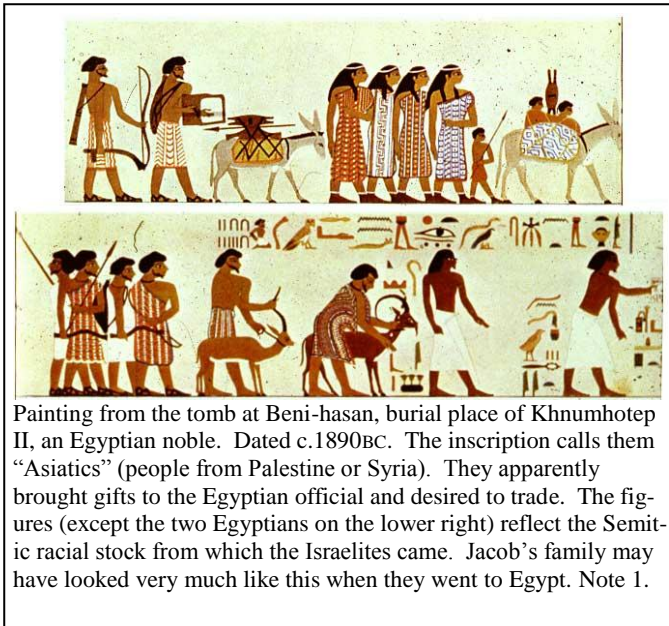
The Jews Go to Egypt

"You might remember that when God promised Abraham his descendents would inherit the land of Canaan—that is, Palestine—He also warned him that they would first be slaves in a foreign country:

13 And *God* said to Abram, "Know for certain that your descendants will be strangers in a land that is not theirs, where they will be enslaved and oppressed four hundred years. 14 "But I will also judge the nation

c.2090BC	Abraham moves to Canaan
c.1898	Joseph is sold into Egypt
c.1885	Joseph becomes a high official in Egypt
c.1876	Israelites (i.e., Jacob's household) move to Egypt
c.1805	Joseph dies
c.1800-1550	Israelites prosper in Egypt
c.1520	Moses is born in Egypt
c.1520-1480	Moses is educated in Pharaoh's court
c.1480	Moses flees from Egypt to Midian
c.1480-1440	Moses is a shepherd in Midian
c.1440	Moses returns, leads Israelites out of Egypt
c.1440-1400	Israelites journey in the wilderness
c.1400	Moses dies in the wilderness
c.1400BC	Joshua leads the Israelites into Canaan

Dates are estimates. The estimates of some scholars who believe in Christianity are up to 200 years later.



Painting from the tomb at Beni-hasan, burial place of Khnumhotep II, an Egyptian noble. Dated c.1890BC. The inscription calls them "Asiatics" (people from Palestine or Syria). They apparently brought gifts to the Egyptian official and desired to trade. The figures (except the two Egyptians on the lower right) reflect the Semitic racial stock from which the Israelites came. Jacob's family may have looked very much like this when they went to Egypt. Note 1.

whom they will serve; and afterward they will come out with many possessions." ... 18 On that day the LORD made a covenant with Abram, saying, "To your descendants I have given this land, From the river of Egypt as far as the great river, the river Euphrates:" [Genesis 15:13-14, 18 NAS]

The 'land that is not theirs' was Egypt. How did they come to be there? [It is suggested that the reader first reads Genesis 45:25—46:7, Genesis 50:22-26, and Exodus 1:1-22 before continuing.]

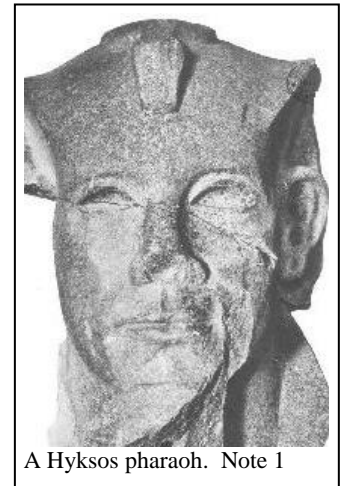
"Abraham's grandson Jacob, who was also called Israel, had twelve sons. These became the ancestors of the twelve tribes of Israel. One of them named Joseph was sold into Egypt as a slave by his brothers. By God's providence, he eventually rose to become a high official under Pharaoh. If our dating is correct, this was during a time when nomads from Palestine and Syria were known to travel to Egypt for trade and were also known to become permanent residents in Egypt.² Eventually Joseph's extended family, all the Israelites, moved to Egypt and settled in the northeastern corner

of the country, in a place called Goshen. It seems that much of Goshen was too far from the Nile and too dry to do much farming, but it was suited to herding cattle. The Israelites prospered in Egypt and their numbers increased greatly across the next several hundred years.

"Egypt, however, went through some upheavals. A group of 'Asiatic' foreigners known as the Hyksos gradually moved into Egypt's territory. Using their superior military technology of war chariots and composite bows, they eventually gained control over Egypt and ruled for about a hundred years, from c.1650 to c.1550BC. It was a little bit like China's situation under the Mongols during the Yuan dynasty.

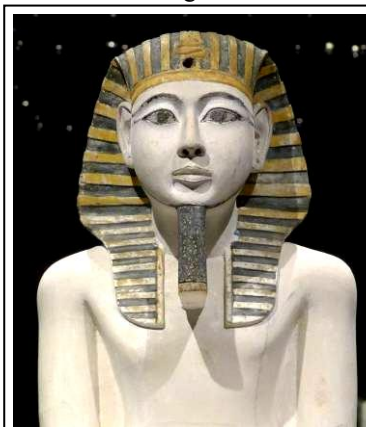
"The native Egyptians expelled the Hyksos about 1550BC and established Egypt's 18th Dynasty. Understandably, they had a suspicious attitude toward foreigners living in Egypt. The fact that the Israelites were from the same general area and racial background as the Hyksos probably made the Egyptians even more suspicious of them. This is the probable historical background for the Bible's statement:

8 Now a new king arose over Egypt, who did not know Joseph. 9 He said to his people, "Behold, the people of the sons of Israel are more and mightier than we. 10 "Come, let us deal wisely with them, or else they will multiply and in the event of war, they will also join themselves to those who hate us, and fight against us and depart from the land." 11 So they appointed taskmasters over them to afflict them with hard labor. ... 14 and they made their lives bitter with hard labor in mortar and bricks and at all *kinds* of labor in the field, all their labors which they rigorously imposed on them. [Exodus 1:8-11, 14 NAS]



A Hyksos pharaoh. Note 1

The 'new king' was one of the early rulers of the new dynasty, perhaps it's founder. Based on a hundred years of



Pharaoh Amenhotep I (c.1546-25BC). Possibly the pharaoh who ordered the beginning of the Israelites' forced labor. From note 1.



Pharaoh Thutmose I (c.1525-08BC). Possibly the pharaoh who ordered the male infants to be killed. From note 1.

bitter experience with the 'Asiatic' Hyksos, he wanted to reduce the Israelites to a semi-slave status so they would be unable to ally themselves with potential enemies of Egypt.³ This policy apparently continued for decades. But despite being subject to oppressive corvee labor for building projects in the Nile Delta area, the Israelites in Goshen continued to grow in population.⁴ Finally the Egyptians resorted to enforcing male infanticide to limit the Israelite population:

22 Then Pharaoh commanded all his people, saying, "Every son who is born you are to cast into the Nile, and every daughter you are to keep alive." [Exodus 1:22 NAS]

This is the historical situation under which Moses was born."^A

^A The precise date of the Exodus has not yet been established but is an area of active (and contentious!) research. The most likely [continued on next page...]



Hatshepsut (c.1504-1482BC). Some scholars think the daughter of Pharaoh who found Moses was the famous Hatshepsut who later reigned as Pharaoh, the only woman to do so in Egypt's history. From note 1.

The life of Moses: birth to age 40

[Here read Exodus 2:1-10.]

5 The daughter of Pharaoh came down to bathe at the Nile, with her maidens walking alongside the Nile; and she saw the basket among the reeds and sent her maid, and she brought it to her. 6 When she opened it, she saw the child, and behold, the boy was crying. And she had pity on him and said, "This is one of the Hebrews' children." ...10 The child grew, and she brought him to Pharaoh's daughter and he became her son. And she named him Moses, and said, "Because I drew him out of the water." [Exodus 2:5-6, 10 NAS]

"That sounds like a fairy tale!" Xiao Wang objected. "The baby the king was trying to kill is saved by the princess...."

"Really?" replied Professor Ho mildly. "Far stranger things have happened in recorded history! In the 1940s in Europe, a great number of brave European women and men risked their lives to save Jewish babies and adults from the Nazis. Many of these non-Jews wound up dying for their bravery in concentration camps. Pharaoh's daughter wasn't facing a risk like that! In fact, many scholars

have suggested that this particular daughter of Pharaoh was none other than the famous Hatshepsut, who would later reign herself as the only female Pharaoh in Egypt's history.

"Pharaoh's daughter, whether Hatshepsut or some other, took on Moses as her ward. The name she gave him, by the way, is distinctly Egyptian, not Hebrew; it occurs as a compound part of many Pharaohs' names. Subsequently he was raised in the palace, gaining a thorough Egyptian education which would be useful later when he was inspired to write the first five books of the Bible. His studies probably included several writing methods, including Egyptian hieroglyphics and one or more phonetic writing methods.⁵

"Can we take a little historical detour here?" Professor Ho asked with a smile.

"In Egypt?" queried Xiao Li.

"No; to Europe in the 1800s. When Karl Marx went to college in the first half of the 19th century, the learned anti-Christian professors were explaining that Moses could not have written the Pentateuch in 1400BC because 'writing hadn't been invented yet'! That was ridiculous, of course; now we have examples of writing from 1,500 years before Moses's time.⁶ But scientific archaeology was barely getting started when Marx was in college. Based on erroneous 'wisdom' like that—including evolution, of course—Marx abandoned his nominal Christianity and became an atheist. The historical consequences have been enormous! Of course, Marx should have tried harder to find the truth about these matters. If he had sought the truth earnestly, he would have found it. A lot of the information was available before the end of his life.

"It's the same in every generation. It's light enough for those who want to see to be able to see, and it's dark enough for those who don't want to see to claim that they can't.

"But back to ancient Egypt. Moses spent the first forty years of his life in a position of security and privilege in the king's palace. But he never forgot his ethnic roots."

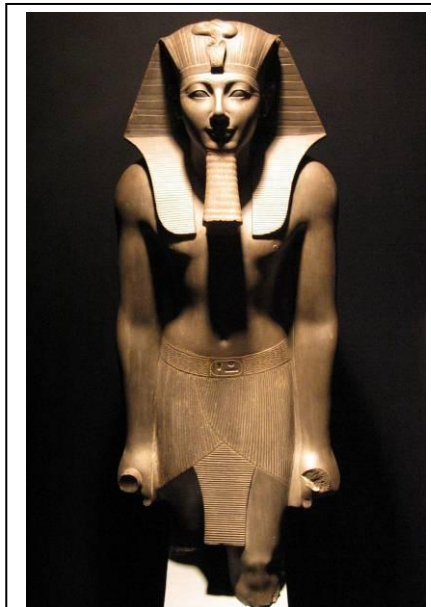
The life of Moses: Age 40 to 80 as a shepherd

[Here read Exodus 2:10-22]

14... Are you intending to kill me as you killed the Egyptian?" Then Moses was afraid and said, "Surely the matter has become known." 15 When Pharaoh heard of this matter, he tried to kill Moses. But Moses fled from the presence of Pharaoh and settled in the land of Midian... [Exodus 2:14-15 NAS]

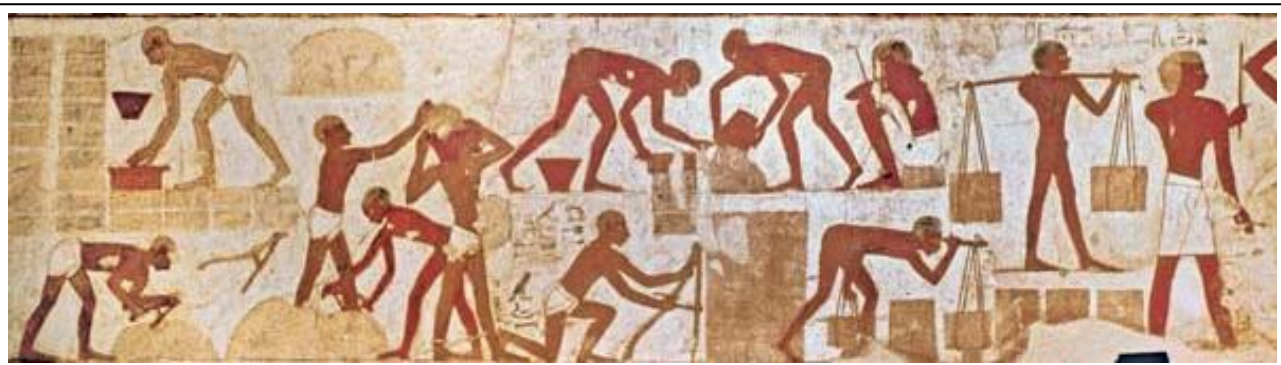
"Moses's first attempt at delivering his people from oppression was foolhardy and perhaps unjust. It resulted in his fleeing for his life to the backward, undeveloped land of Midian. There he married and spent the next 40 years tending his father-in-law's sheep.

"Finally, after forty years being cultivated in the palace and forty years looking for grass in the wilderness, he was ready to receive a revelation from God."



Pharaoh Thutmose III c.1482–1450BC. Possibly the pharaoh reigning when Moses fled from Egypt at age 40. From note 1.

timeframe is around 1440BC during the 18th Egyptian Dynasty. Those dates are used here. If the Exodus actually occurred around 1250BC during the 19th Dynasty, the Pharaohs doing the oppression would be different, but the discussion of the ten plagues would not be influenced at all. For the purposes of this chapter, whether the Exodus occurred in c.1440BC or c.1250BC makes little difference.



Painting from the tomb of Rekhmire, vizier under Pharaoh Thutmose III. The painting dates to c.1450BC. Scene shows prisoners of war being used as slaves in brick making operations. The accompanying inscription identifies some of those pictured as “Asiatic foreigners,” i.e. Semitics from Sryo-Palestine (the ones depicted with yellow skin). Although these are probably not Hebrews, they illustrate the use of Semitics as forced labor in brick making in Egypt at the time of the Exodus. See Note 3; picture from Note 1.

The Life of Moses: He sees God at age 80 and goes to Egypt

1 Now Moses was pasturing the flock of Jethro his father-in-law, the priest of Midian; and he led the flock to the west side of the wilderness and came to Horeb, the mountain of God. 2 The angel of the LORD appeared to him in a blazing fire from the midst of a bush; and he looked, and behold, the bush was burning with fire, yet the bush was not consumed. 3 So Moses said, "I must turn aside now and see this marvelous sight, why the bush is not burned up." 4 When the LORD saw that he turned aside to look, God called to him from the midst of the bush and said, "Moses, Moses!" And he said, "Here I am." 5 Then He said, "Do not come near here; remove your sandals from your feet, for the place on which you are standing is holy ground." 6 He said also, "I am the God of your father, the God of Abraham, the God of Isaac, and the God of Jacob." Then Moses hid his face, for he was afraid to look at God. 7 The LORD said, "I have surely seen the affliction of My people who are in Egypt, and have given heed to their cry because of their taskmasters, for I am aware of their sufferings. 8 "So I have come down to deliver them from the power of the Egyptians, and to bring them up from that land to a good and spacious land, to a land flowing with milk and honey, to the place of the Canaanite and the Hittite and the Amorite and the Perizzite and the Hivite and the Jebusite. 9 "Now, behold, the cry of the sons of Israel has come to Me; furthermore, I have seen the oppression with which the Egyptians are oppressing them. 10 "Therefore, come now, and I will send you to Pharaoh, so that you may bring My people, the sons of Israel, out of Egypt." 11 But Moses said to God, "Who am I, that I should go to Pharaoh, and that I should bring the sons of Israel out of Egypt?" 12 And He said, "Certainly I will be with you, and this shall be the sign to you that it is I who have sent you: when you have brought the people out of Egypt, you shall worship God at this mountain." 13 Then Moses said to God, "Behold, I am going to the sons of Israel, and I will say to them, 'The God of your fathers has sent me to you.' Now they may say to me, 'What is His name?' What shall I say to them?" 14 God said to Moses, "I AM WHO I AM"; and He said, "Thus you shall say to the sons of Israel, 'I AM has sent me to you.'" 15 God, furthermore, said to Moses, "Thus you shall say to the sons of Israel, 'The LORD, the God of your fathers, the God of Abraham, the God of Isaac, and the God of Jacob, has sent me to you.' This is My name forever, and this is My memorial-name to all generations. [Exodus 3:1-15 NAS]

“I read this the other day,” said Xiao Wang, his face quizzical. “Why is there a bush burning? And what is God’s name?”

“Good questions!” approved Professor Ho. “The burning bush is fairly easy. Obviously the Jews do not worship bushes, nor fire. The burning bush was just a temporary symbol or vision that God used to reveal something about Himself to Moses. Of course bushes don’t burn without being destroyed, and scraggly desert shrubs burn up especially fast. This small miracle was to demonstrate God’s supernatural power. Meanwhile, there was no vision of God Himself—just a flame and a voice. God is invisible, and the flame was just a temporary symbol.”

“What about His name?” Xiao Wang asked.

“It’s actually absolutely fascinating. Here again God is trying to teach us something about Himself. Our Chinese translation in Exodus 3:14, ‘I am the “self-existent and eternally existent One” ’ [我是“自有永有者”] is actually an interpretation. A direct translation would be something like ‘I am the I am’ or just ‘I am I’. Compare the English translation: ‘I am Who I am.’ Similarly, the phrase translated in Chinese as ‘The self-existent One sent me to you’ [那自有者派我到你们这里来] is literally ‘The “I am” sent me to you’, as in the English ‘I AM has sent me to you.’ ”

“But what does that mean?” asked Xiao Wang. “If someone asks me who I am and I say ‘I am I,’ it won’t help them much. It would even sound arrogant.”

“It would be arrogant for a human being,” agreed Professor Ho. “But for God it’s the most accurate statement He can make about Himself. We human beings define ourselves with reference to some broader, general category of things. We say we are male or female; we have a gender. We say we come from China; we belong to a nation. We give our last name, and it tells everyone who some of our ancestors were. We might further define ourselves by our hometown,

our school or company, or, for a professor, our academic specialty.

“But God cannot use any of these categories, or anything like them, to describe Himself. Because He is not physical, He cannot use any physical characteristic like gender to describe Himself. Because He is eternal, that is, He has always existed, he cannot use any reference to origin like a last name or a hometown to describe Himself. Because He is unique, He cannot describe Himself as part of some larger group, like a nation.”

“Then how can we understand Him at all?” wondered Xiao Wang.

Professor Ho shook his head. “I don’t want to mislead you. I do not mean that God is amorphous and undefined. He has characteristics—like omnipotence, omniscience, love and righteousness. But He is *completely* defined only with reference to Himself. He is unique and completely self-dependent. That’s why the Chinese translators chose the phrase ‘self-existent and eternally existent One’ [‘自有永有’]. That phrase is actually a pretty good choice!

“Most scholars think that name usually used for God in the Old Testament, Yahweh, comes from the verb ‘to be.’ This is the same verb from which the Hebrew word for ‘I am’ comes. The scholars say the meaning of the word Yahweh might be ‘He is,’ emphasizing that God is self-existent, or it might be ‘He causes [everything] to be,’ emphasizing that God is the Creator of everything else that exists.

“And that brings us to the purpose of the ten plagues.”

Why use ten plagues to get the Israelites out of Egypt?

“You mean that God created the ten plagues?” asked Xiao Wang.

“Well He did,” admitted Professor Ho, “but that’s not my point. My point is what God was trying to teach through the ten plagues.”

“You said they proved to you—or I should say, gave you more evidence—that the Bible’s history is accurate” Xiao Wang reminded him.

“Yes,” Professor Ho agreed again, “they do do that. We’ll come to that later. But God’s main goal in the ten plagues was to teach us something about Himself and about the world that we live in.”

“I thought the point was to get the Israelites out of Egypt,” objected Xiao Li.

“Yes, certainly,” returned Professor Ho. “But have you ever thought about what a complicated method God chose? With His unlimited power, He could have accomplished the goal much more simply and much faster—like when He created things by just speaking a word. Why did God use such a complex process? During the seventh plague, the hailstones, God tells us why:

13... Thus says Yahweh, the God of the Hebrews... 14 “...this time I will send all My plagues on you and your servants and your people, so that you may know that there is no one like Me in all the earth. 15 For if by now I had put forth My hand and struck you and your people with pestilence, you would then have been cut off from the earth. 16 But, indeed, for this cause I have allowed you to remain, in order to show you My power, and in order to proclaim My name through all the earth.” ... 29 And Moses said to him [Pharaoh], “As soon as I go out of the city, I will spread out my hands to Yahweh; the thunder will cease, and there will be hail no longer, that you may know that the earth is Yahweh’s.” [Exodus 9:13, 14-16, 29 NAS]

By means of the ten plagues, Yahweh wanted Egypt, Israel, and the entire world to know that He is the one and only true God, that the physical universe belongs to and is controlled by Him, and that all other so-called ‘gods’ are false.”

“Why did He need ten plagues to show that?” asked Xiao Wang.

“To understand that,” Professor Ho explained, “you need to understand the worldview of the people Moses was facing. In the Egypt of that time, there were few or no atheists. Moses was facing superstitious idolaters. Ancient Egyptians worshipped countless gods, most of which were related to natural phenomena, such as the sun god, the god of the Nile river, the frog god and many others. Because of this, God’s most important goal in the plagues was to prove that the ‘gods’ worshipped by the Egyptians were created phenomena under the sovereign control of the true God Yahweh. Therefore most of the plagues related to natural phenomena which the Egyptians had deified and worshipped as ‘gods.’

“Just before the last plague, God explicitly states this goal:

12 ‘For I will go through the land of Egypt on that night, and will strike down all the firstborn in the land of Egypt, both man and beast; and against all the gods of Egypt I will execute judgments -- I am the LORD. [Exodus 12:12 NAS]

God’s executed judgments against all the so-called ‘gods’ of Egypt by showing that He Himself controlled everything the Egyptians associated with these ‘gods.’ And this was a lesson not only for them but for all of humanity.

“You see, in human history, there have been essentially three different views of nature:

1. Superstitious religions think that natural forces are controlled and managed by different gods, or even that those natural forces are themselves gods. Natural phenomena are not regarded as rule governed, but rather are thought to be under the control of many self-willed ‘gods.’ Both the Bible and modern science show that this isn’t so.^B
2. Atheism claims matter is eternal and everything (including human beings) is controlled by natural laws. The exist-

^B Some forms of post-modernism are starting to drift back toward this superstitious view. All living things taken together as a group, or the entire earth, or the universe itself are coming to be seen as a ‘super-organism’ with purpose and will, perhaps active in directing its own ‘evolution.’ These views are a step back toward the belief system of the ancient Egyptian idolaters!

tence of the universe and everything in it is without cause or reason. We refuted that earlier by looking at entropy, which demands an origin for the universe, and the complexity of life, which demands a Designer. [See chapter 1.]

3. The Bible tells humanity: Nature was created and is controlled by the one and only God. Most of the actions by which He exercises His sovereignty are by means of the natural laws which He Himself has established and maintains.^C As we discussed earlier, this worldview is the necessary basis for modern science. [See chapter 4.]

A major goal of the ten plagues was to refute the first and establish the third worldview. Moses wasn't facing atheists; he was facing nature worshippers. So he showed that Yahweh is the one and only Lord of everything the Egyptians had deified and idolized.

"Let's look at what He did. Here's a chart summarizing the sequence of events and some of the probable cause and effect relationships."

^C Islam also holds this worldview, but took it from Bible over five hundred years after the New Testament was completed.

Plagues One to Nine: A Seasonal, Geographical, Causal, Linked Sequence.

Heavy rainfall in the highlands of Ethiopia and the Sudan

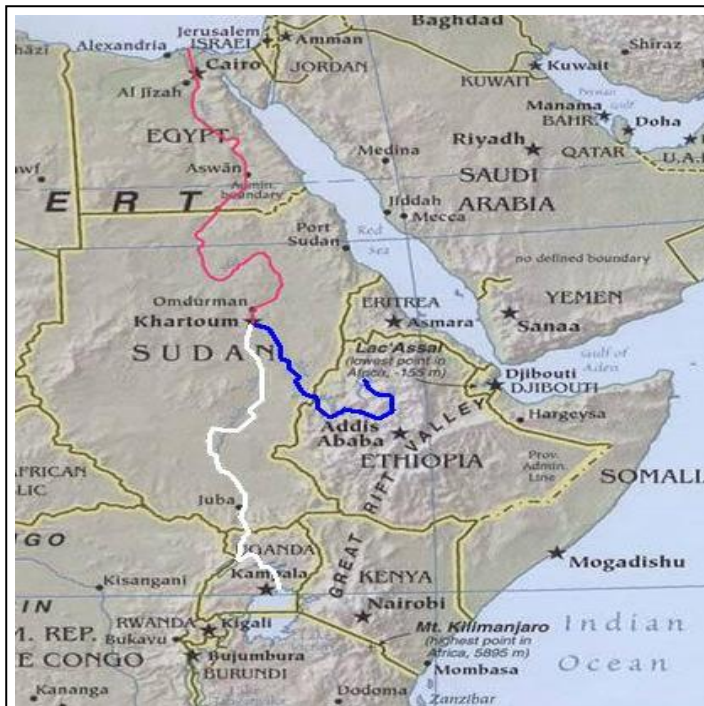
The Nile flood is unusually high and carries an unusually large amount of soil, microorganisms, and decomposed materials

1:Water turned to blood	Jun-Oct (?) flood stage (Jul 15-20?)	Soil and possibly algae from the above turn the Nile river red; the water is putrefied ↓ Fish die, the water cannot be drunk
2:Frogs swarm	7 days later (during the flood)	Microorganisms in the water have opportunity to infect the frogs ↓ Due to silt, toxins in water &/or disease, frogs come ashore & seek shelter from sun in houses ↓ The frogs suddenly die, perhaps due to disease
3:Gnats	Later (Nov-Dec? Pooled water?)	Perhaps because the flood was so high, when it recedes the remaining pools are especially numerous, causing many gnats to breed
4:Flies swarm	Later (Dec-Jan? Ground saturated?)	After the water recedes, flies multiply on the rotting organic matter left behind, possibly including on the dead bodies of the fish and frogs ↓ These possibly carry anthrax or some other pathogen, perhaps from bodies of dead animals
5:Cattle Pestilence	late Dec-Jan (ground partly dry)	Egyptians begin to put their cattle out in the field ↓ Cattle are infected, possibly with internal anthrax from eating contaminated vegetation ↓ The cattle which have been put out in the field die
6:Boils	Dec-Jan	Possibly due to bites from the flies of the fourth plague or exposure to the dead animals of the fifth plague, humans are infected, perhaps with skin anthrax, and develop boils
7:Hail	late Jan-early Feb (barley in the ear)	Time calculated based on crop conditions.
8:Locusts	late Feb-mid-Apr	Because of heavy rainfall the prior year in Ethiopia and the Sudan, by March of the following year unusually many locusts have bred there. They are blown into Egypt.
9:Darkness	March-mid-Apr	Especially large amounts of soil left by the prior year's unusually high flood and bare fields due to the hail and locusts cause the "khamsin" to be extremely severe
10:Death of firstborn	late Mar-late Apr	Completely supernatural miracle Date of occurrence calculable from Jewish Passover: between Mar 25 and Apr 24

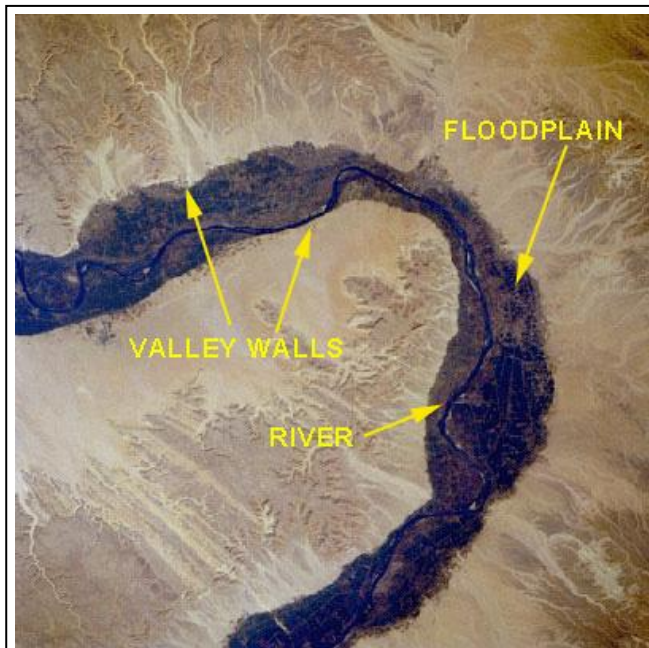
[Here read Exodus 7-10.]

"This diagram," Professor Ho continued, "outlines the cause and effect relationships which God probably used to bring about most of plagues one through nine. It also shows the plagues' time sequence. To understand the cause and effect relationships and time sequence, we need to know some of the geography of Egypt.

"The Nile in Egypt is not formed by local rains. Southern Egypt gets virtually no rain, and the Delta only averages 20 centimeters a year. The water flows in from the south. The source of the mighty Nile river was not mapped until the 19th century. It's headwaters are far from Egypt in Ethiopia, the Sudan, and Uganda. Every year, mountain meltwaters and spring rains pour into the Nile from these distant sources, producing it's annual flood stage starting in late June or July. It very consistently surges between July 15-20 every year,⁷ then continues to rise more intermittently and slowly for several months. The height of the flood is determined by the amount of winter and spring precipitation in the head-



The Nile (single line in north) and its source rivers (two separate lines below the fork in the south). From note 1.



Nile river valley from air. Note how the river in the center has a floodplain on both sides. The floodplain is flanked by steep valley walls. Outside the narrow river valley, the surrounding higher ground is barren desert. From note 1.

amount of reddish sediment, and also picked up an unusually large amount of decaying organic matter and microorganisms.^D

4. These materials, the by-products of their decay, and microorganisms living off them made the Nile's water undrinkable.
5. The sediments, poisons, and microorganisms in the water killed all the fish, further fouling the water.

Although the water of the Nile has some changes every year during its flood, it is extremely rare that it is so severe. If it had merely been the usual Nile flood circumstances, a combination of allowing the soil sediments to settle out of water

water basins. The amount of water also influences its quality. When the volume of water is great, it carries much more reddish colored earth from Ethiopia and many more microorganisms from swamps and lakes in the Sudan and Uganda.⁸

"Of course the Egyptians, and Moses, could have no idea in advance how high the flood would be that year or how much the quality of the water would change."

1st Plague: Water turned to 'blood.' Time: probably during the Nile flood stage, between late June and early November. (Exodus 7:14-24)

"Did the water really become blood?" asked Xiao Li.

"Very probably not," replied Professor Ho with a slight shake of his head. "Calling the water 'blood' doubtless refers to its color changing to red and the water quality going bad, becoming undrinkable. For a similar example of the Hebrew word 'blood' meaning 'red in color,' compare:

The sun will be turned into darkness and the moon into blood before the great and awesome day of the LORD comes. [Joel 2:31 NAS]

Obviously the prophet Joel does not intend us to think the moon will turn into red blood cells and plasma! Neither should we read it that way in Exodus. In fact, the same phrase is known to have been used at least once in ancient Egyptian literature, in 'The Admonitions of Ipuwer,' to describe what historians believe was a similarly contaminated Nile flood:

Indeed, the river [i.e. the Nile] is blood, yet men drink of it. Men shrink from human beings and thirst after water.⁹

As I mentioned above, the Nile river floods for several months every year and normally carries some red colored soil. The year of the Exodus, however, the river had so much mud and microorganisms in it that the water was a deep red color and was rancid and undrinkable. This was far beyond a normal flood season. The inferred cause and effect sequence was probably:

1. That winter and spring, precipitation in Ethiopia, the Sudan and Uganda (the sources of the Nile) had been especially heavy. This, of course, was prepared beforehand by God, causing the first to ninth plagues to be ready to occur when Moses came to Egypt.
2. Because of the heavy runoff, the water in the Nile's tributaries was especially deep and fast moving.
3. The deep river waters scoured up an unusually large

^D There are many speculations about the nature of the purported microorganisms, including various types of algae and the fish killing *Pfiesteria*. Although it is obvious that brackish flood water will be infested with microorganisms, we do not have enough data to make any specific determination.



Nile at flood. From note 1.



Nile at low stand. From note 1.

stored in vessels and/or filtering through clothes would probably have made the water drinkable (compare Exodus 7:19). But these methods would not remove toxins or microorganisms. So this time the Egyptians had to dig wells by the banks of the Nile to obtain water for drinking, water which had either been in the water table before the flood or which was filtered by the sandy soil (7:24), showing that this flood was different from usual.”

“Then where’s the miracle in that?” asked Xiao Wang a little combatively. “As you describe it, it’s just a series of natural events.”

“Indeed, it could have been. But how could Moses have known?” countered Professor Ho. “No one in Moses’s time was able to predict this event. They could not even guess the weather in Ethiopia and the Sudan, much less could they know it would make the Nile undrinkable. So the miracle lies in this: God revealing the event to Moses before it happened, and God arranging the timing and severity of the plague.

“But to be honest,” continued Professor Ho, “that’s not my main interest in it. Instead, I’m interested in the cause and effect. Notice that the first plague seems to have come about through a series of interlinked causes. Furthermore, the circumstances are unique to Egypt. You’ll find that most of the following plagues are similar in their causal linkage. If the history in the book of Exodus really were just a myth cobbled together from fragments of legends by some Jews sitting in Palestine, how could it have such a logical series of cause and effect?”

Xiao Wang was silent and thoughtful, but gave no sign of being convinced.

Professor Ho smiled gently. “Of course I realize that’s not very convincing just from the first plague. It will become clearer as we go along.

“By the way—speaking now not of my concerns,

but of the needs of the people in Moses’s day—most scholars agree that this was the first step in Yahweh demonstrating His superiority over the ‘gods’ of Egypt. Because the Egyptians regarded the Nile river as a god and worshipped it, this plague showed that Yahweh was the real God, who controlled the natural objects and forces which they worshipped.”

2nd Plague: Frogs swarm ashore. Time: Seven days after the first plague. (Exodus 7:25—8:15)

“Why did all the frogs suddenly leave their comfortable homes in and around the high stand Nile and jump around under the hot Egyptian sun? And congregate in the houses of humans? Possibly the rotting fish infected the water to a degree that finally made it intolerable for the frogs. More likely, however, their odd behavior is explicable by some disease they contracted from the increasingly bacteria laden waters. This would account both for the fact that they seemed to no longer have any natural fear of humans, and for their sudden deaths on the following day.^E The key point is the logical fit. The event fits the geography of Egypt along the Nile, not that of Palestine. It also has a logical antecedent in the fouling of the water of the Nile.

“The miracle in this was Moses being able to predict the frogs coming ashore in swarms, to predict their strange behavior, and their death at the selected time in answer to Moses’s prayer.

“The Egyptians also worshipped a frog god. This plague again demonstrated that Yahweh was the only true God, and that what the Egyptians worshipped was merely a part of His creation and under His sovereign control.”

3rd Plague: Gnats swarm. Time: After the plague of frogs (possibly November or December). (Exodus 8:16-19) “Although there is some translation question, ‘gnats’ apparently refers to a tiny flying insect living in Egypt which is barely visible to the eye.^F Its bite can cause itching. Their origin was perhaps related to the especially severe flood of the Nile river, which would have left behind an unusual number of shallow, stagnant pools of water and damp areas on high ground that was not normally flooded. Such conditions would have provided an ideal breeding ground for billions of

^E Of course it is possible that God directly intervened to make them die on that day and did not use a disease.

^F One proposed species is the *Culicoides canithorax*, which is known to also be able to spread some diseases.

tiny gnats. Rising in swarms, they might have looked like clouds of dust.

“The annual Nile river flood peaks in October and then begins to recede in November. The Bible doesn’t tell us how much time passed between the frogs and the gnats. Many scholars suggest, however, that several months may have passed, since the plague of gnats fits the conditions in Egypt when the Nile flood is beginning to recede.”

This time Xiao Li had a question. “Did the Egyptian magicians believe in Yahweh because of this plague? It says they said it was from God.”

Professor Ho shook his head. “I don’t think so. In the previous two plagues, they had been able to make water change color or attract a few frogs—whether by sleight of hand or occultic power from the devil, I don’t know. But this time they couldn’t imitate the plague with their tricks. When they felt compelled to admit, ‘This is the finger of God,’ (Exodus 8:19), they were just admitting it could not be done by their own so-called ‘magic.’ Therefore it had to be the work of some sort of ‘god,’ but that was not an admission that it was done by Yahweh, the God of the Israelites.”

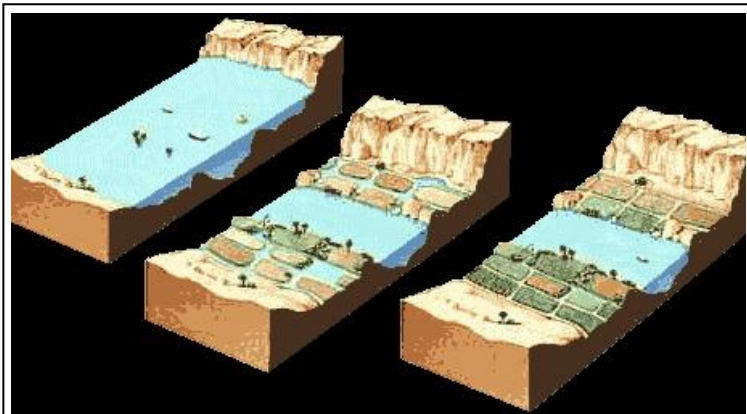


A Culicoides biting. Actual size of an adult female (males do not bite) is about 1½ mm. From note 1.

4th Plague: Flies swarm. Time: After the plague of gnats (possibly December or January). (Exodus 8:20-32)

“As the Nile river continued to recede, unusual quantities of damp, rotting material would have been left behind by an unusually high and sediment laden flood. All this would provide ideal conditions for breeding flies.

“The most frequently suggested candidate is the *Stomoxys calcitrans*, well known in Egypt. This is a vicious, blood sucking fly which is known to swarm. It will bite any vertebrate, including humans and animals. It is known to spread diseases in this way.



An illustration of the annual flooding and gradual drying out of the fields around the Nile River. From note 1.

“The Israelites lived in Goshen, which was on the edge of the delta and just east of it. They would have been much less affected by the annual Nile flood than the Egyptians. Thus there would have been much less rotting material left behind to breed flies. Many scholars have suggested that this is the reason they did not suffer from the fourth plague.

“Note again that all of these conditions fit perfectly with the Nile ecosystem and the geographical facts about where the Israelites were living.

“The miracle in this plague was shown in three elements: predicting the beginning, ending in answer to prayer, and the regional scope of the plague (Goshen, where the Israelites lived, did not have the flies). Since during the

previous plague the magicians had said it was caused by some ‘god,’ but were not willing to acknowledge Yahweh, God ensured that the Egyptians and the Israelites would fare differently during the plague, thus showing that it was the Israelites’ God Yahweh who was performing these miracles.

5th Plague: Livestock die of disease. Time: After the plague of flies; probably late December or January. (Exodus 9:1-7)

“The timing of this plague can be inferred from the livestock in the fields. The Egyptians stabled their livestock from about May through December, during the annual flood and the beginning of the drying out period. It’s clear that only some of the livestock were affected; Exodus 9:3 limits it to ‘livestock which are in the field.’ Thus the livestock still stabled in barns and pens on high ground which had not been touched by the flood would not have been affected. Those animals were left alive to face the seventh plague later (Exodus 9:19-20).

“Thus presumably this plague occurred when some livestock was just beginning to be let out into the fields in late December or in January. There they contracted a swift acting plague. Many have suggested it was anthrax picked up from the contaminated fields.

“There are two types of anthrax, internal (including lung and intestinal) and skin. Internal is usually fatal. When livestock graze in infested areas, they ingest or inhale anthrax spores or bacteria. From infection to the beginning of symptoms takes between 12 hours and five days. Anthrax outbreaks among livestock typically occur after either floods or droughts.¹⁰ The high Nile flood might have provided the conditions for contami-



Mummy of a bull. From note 1.

nation.

“Several other livestock plagues, such as bluetongue disease and African horse sickness, have also been proposed as the causative agents.¹¹ The Bible does not give us enough data to be certain which disease God used. What is clear, however, is that the situation fits the conditions of contamination which could easily occur after a severe Nile flood. Depending on the timing, either the gnats of the third plague or the flies of the fourth plague could have been the spreaders of the cattle plague, as many scientific interpreters have suggested.

“Meanwhile, cattle in the relatively dry Goshen area—which was also not subject to the plague of flies—were unharmed.

“The miracle here includes Moses’s prediction of this event (he did not have modern science to tell him the particulars of livestock infections), the time of the plague (even modern science would find it hard to predict), and the limitation of the area where the plague occurred.

“The gods of the Egyptians included the bull, the cow and the calf. Sacred bulls associated with temples were even mummified and placed in special graveyards! These ‘gods’ could not hinder Yahweh nor protect the Egyptians’ cattle.”

6th Plague: Boils. Time: After the plague on livestock; probably December or January. (Exodus 9:8-12)

“This plague was symbolized by black soot and characterized by boils which broke out into running sores. This has led many to suggest it was skin anthrax.

“Skin anthrax is the most common form contracted by human beings. It is characterized by a black pustule (perhaps symbolized by the soot Moses threw into the air) which swells and opens into a running sore. It is usually not fatal. The symptoms manifest half a day to five days after infection. It is possible that it was spread to humans by the flies of the fourth plague, or the bodies of the livestock of the fifth plague, or bacterial spores in the ground, or by several factors combined together.

“Of course, it could have been some other disease. Alternate proposals include Glanders (*Pseudomonas mallei* infection) which is a highly contagious infection that can be spread through the air and by fly bites and also causes swelling,¹² and Nile-blisters, which are similar to scarlet fever.¹³

“This plague, too, was apparently limited just to the Egyptians (see Exodus 9:11).

“The miracle here was God’s revelation to Moses, which allowed him to predict the plague before any symptoms were visible. Moses did not have modern medical knowledge to guide him!

“The Egyptian gods of healing, including Sekhmet, could not help the magicians or anyone else in Egypt when Yahweh sent sickness.”

7th Plague: Hail. Time: Late January to early February. (Exodus 9:13-35)

“From the crop conditions recorded in Exodus 9:31, we can calculate that the hail must have occurred in late January or early February. In Goshen, east of the Nile river delta, no hail fell.

“The miraculous nature of the hail is in three things. First, the coming and severity of the hail was predicted the day before it occurred. We have no reason to think it was not a typical clear and sunny day in Egypt when Moses made his prediction! In any case, there was no way for the ancients to know it would hail furiously the following day. Secondly, the hail stopped due to Moses’s prayer. Thirdly, the severity of the hail was worse than anything Egypt had ever experienced.

“The Egyptians deified and worshipped the sky in the form of a goddess called Nut. In this plague, people who chose not to fear Yahweh and stay inside could be killed by lightning or hailstones. Nut didn’t help anybody!”

Professor Ho mused for a moment. “Hail is very rare in Egypt. Was the occurrence of the severe hailstorm related to the same unusual weather patterns which probably produced the red, contaminated Nile flood? I don’t know; I would love to see some research about it! But I must leave that to younger minds!” Professor Ho smiled hopefully at the boys.

8th Plague: Locusts. Time: Late February to early April. (Exodus 10:1-20)



Close-up of locust. Note 1.



Locust swarm. From note Er-

“Why were there so many locusts? The severity of the Nile flood in the previous year would have been due to heavy rainfall in Ethiopia and the Sudan. This would cause the vegetation in those areas to flourish, providing food for local locusts and enabling them to lay large numbers of eggs. By spring of the second year, the young locusts which hatched out would be especially numerous. By March they would have been in the immature adult stage, which is when they consume the most and fly the farthest, often in huge swarms.”¹⁴

Xiao Wang had an eye for details. “But the Bible says it was an east wind; the Sudan is *south* of Egypt.”

Professor Ho smiled happily. “Good point, Xiao Wang! The Hebrew language of the Old Testament of the Bible only has four wind directions: east, west, south, and north. Thus Exodus 10:13’s ‘east wind’ could have been a wind blowing from the southeast. That might have included some part of the Sudan or Ethiopia. However, more likely the locusts were blown in from the Red Sea coast of the Arabian Peninsula. What sometimes happens is, swarms bred in Ethiopia migrate across the southern Red Sea into Yemen or Saudi Arabia. From there they can be blown into Egypt, or breed and leave the next generation to be blown there. Just such a two step migration occurred in 1992-1993 when



Khamsin winds.

Sudanese locusts first swarmed into Yemen and Saudi Arabia and then produced swarms which moved into southeastern Egypt.¹⁵

“During the eighth plague, the wind blew twenty-four hours before the locusts reached Egypt, so the locusts must have come from a very distant place. This indirectly indicated that Yahweh was not merely the ‘god’ of some local area, like many of the ‘gods’ of the religion of Egyptians and most other nationalities. Yahweh was the lord of all the earth.

“Of course no one in Egypt at that time could have predicted this event. Moses prophesying the coming of the locusts and their severity is obviously miraculous. God’s turning around the wind and driving the locusts into the Red Sea may also have been His intervention in the ‘natural’ order, even though God used a ‘natural’ element, the wind, to accomplish His purposes.

“In this critical situation, none of Egypt’s ‘gods’ associated with agriculture were of any help.”

9th Plague: Darkness. Time: March to mid-April. (Exodus 10:21-29)

“The plague of darkness very probably also illustrates the distinctly Egyptian background of the plagues. Egypt is subject to a ‘khamsin’ wind usually in late March to early May, especially during April. It blasts out of the Sahara desert without warning, blowing from the south or southeast and carries with it windblown sand and dust, obscuring the sun. A khamsin commonly lasts two or three days.

“Although the Bible does not specify that the darkness was caused by a khamsin, all the details fit perfectly:

1. The Bible describes it as a darkness ‘which may be felt’ (Exodus 10:21) is very appropriate for a condition caused by dust and sand.
2. It’s special severity was probably due to the previous year’s Nile river flood having been much higher than usual, hence the amount of mud deposited was especially great. In addition, the bare soil left behind by the hail and locusts would be easily scoured up by the wind. Because of this, the amount of dust blown by the wind was especially great, resulting in a darkness unlike the usual.
3. The darkness occurred not long before Passover, which would have fallen between March 25 and April 24. This range falls exactly into the period when a khamsin was most likely to occur.
4. Once more, the land of Goshen where the Israelites were was different; there was at least some light there (Exodus 10:23). Probably Goshen was less impacted by the annual Nile flood, and thus had less sediment. Furthermore, it had avoided the plague of hail, and conceivably also the locust plague, so the soil may have had more vegetation to hold it. The hills south of the Wadi Tumilat in Goshen may have also provided some protection from the wind.

The difference between the plague of darkness and an ordinary khamsin was in the severity. If it had been the ordinary, annual phenomenon, Pharaoh would not have been impressed—he’d seen dozens of them before. But this one was so severe it frightened him into proposing a compromise (Exodus 10:24).

“The cause of the severity of the ‘khamsin wind’ darkness, the seasonal timing of the plague, and probably also the geographical difference between Egypt and Goshen—all fit with the known geographical and meteorological facts of Egypt. Why does that matter? Because it shows us again that Exodus is not a ‘legend’ edited by successive generations of priests and scribes sitting in Palestine around 600BC. Palestine doesn’t have khamsins!^G If the account in Exodus really were made up myths from a completely different time and place, it could never be so accurate.

“Among the many ‘gods’ worshipped by the ancient Egyptians, perhaps the highest was the sun ‘god’ which they called Re. The ninth plague showed that Yahweh was greater than the sun god. Yahweh could block it out at His pleasure, because the sun was nothing more than one of the material objects which He had created.

“The miracle in the ninth plague was that, as soon as Moses stretched out his rod, the ‘khamsin wind,’ a suddenly occurring phenomenon which could not be predicted by people then, immediately started. He also predicted the unprecedented severity.”

^G Although what are called ‘khamsin’ winds do blow in Palestine, they do not produce the choking, extreme dust storm conditions common in Egypt.

Plagues 1 to 9 comprise a linked series of cause/effect relations, showing Exodus is not a fabricated legend but actual history

Xiao Wang spoke up. “What you say is reasonable. But if the first through ninth plagues were natural phenomena, what evidence is that for God? Isn’t it just that the Israelites saw some natural phenomena, then recorded them in their national history book?”

Professor Ho sat up straight and beamed at him. “Isn’t it just that?” he echoed. “Yes, it *is* ‘just that’! In other words, it is just plain historical fact, accurately recorded in the Bible.

“Our goal in researching this part of Biblical history is not proving that the Bible is a revelation from God, but rather to show its historical accuracy. Unbelieving scholars usually think that the five books of Moses (Genesis, Exodus, Leviticus, Numbers, Deuteronomy) are false. They say that different writers at different times wrote down the traditions of the Jewish people, sometimes adding stories which they made up themselves. Finally, editors gathered all these materials, and compiled them into a book of the Bible. They claim that all the books in the Old Testament of the Bible were written this way. They divide the ‘ten plagues’ into three sets of material with separate origins. In these so-called ‘origins,’ one described seven plagues, one had five, and the other had four or five. Later an editor compiled them together. This hypothetical process began 900BC at the earliest, they claim, was not finished until as late as 600BC or 400BC, and was done by Israelites living in Palestine. The unbelieving scholars claim that the other books of the Old Testament of the Bible are the same, all having several authors, with multiple source materials being compiled much later by various editors. This viewpoint was advanced by 19th century scholars who followed the evolutionary philosophy of Hegel, and is still the theory held by unbelieving scholars today. Part of the reason Marx rejected Christianity was that he was heavily influenced by these erroneous ideas while he was in college. All Western scholars who reject the factuality of the Old Testament of the Bible take this theory as their basis. This is despite the fact that they have absolutely *no manuscripts* broken up into the imaginary little pieces that their theory requires—not even one!

“Now we can use the history of the ten plagues to test which of these two contradictory viewpoints is correct. Is Exodus a single author’s record of actual history, or is Exodus is many different authors’ and editors’ compilation of traditions and myths?” Professor Ho leaned forward in his seat and spoke emphatically. “If Exodus is a myth, how did an editor living in Palestine accurately arrange a sequence of plagues whose geography, seasons, and cause and effect relations belong to Egypt?”¹⁶ He pulled out a sheet from a folder on his desk and continued, “Consider these factors:”

Special geographical features

- Obviously, the annual Nile river flood belongs to Egypt. The natural phenomena it produced are all characteristic of that area, namely the 1st plague, water turned to blood; the 2nd plague, frogs coming ashore; the 3rd plague, gnats; and the 4th plague, swarms of flies. At least the first two do not fit Palestine at all.
- After the 1st plague, water turned to blood, the Egyptians could dig wells anywhere along the banks of the Nile. This is not the situation in Palestine where wells are scarce and precious.
- The probable cause of the 9th plague, darkness, was a ‘khamsin wind’ dust storm, a special characteristic of Egypt. There is no equivalent in Palestine, though mild dust storms do occur.

Seasonal sequence

- Please see the diagram above. The 1st plague, water turned to ‘blood,’ had to come first both because it was the trigger for most of the rest and because of the seasonal order.
- The 3rd plague, gnats, 4th plague, swarms of flies, and 5th plague, livestock pestilence, all would have happened later, after the floodwaters had receded at least partially.
- The 7th plague, hail, happened in late January or early February, which is correctly placed *after* the livestock began to be put out to pasture again.
- The 8th plague, locusts, is especially appropriate to the year following an unusually great Nile river flooding.
- The 9th plague, darkness, was probably caused by a khamsin dust storm occurring just before Passover. Passover ranges from March 25 to April 25, while khamsin in Egypt range from late March to early May, peaking in April. The timing is correct.

Cause and effect relationships.

- The high Nile flood would have been caused by the prior winter and spring’s exceptionally heavy rainfall in Ethiopia and the Sudan. The resulting heavy sediment load would have caused the 1st plague, water turned to blood.
- The 1st plague, water turned to blood, caused the 2nd plague, frogs come ashore, and the severity of the 3rd plague, gnats, and 4th plague, swarms of flies.
- The 3rd plague, gnats, and the 4th plague, swarms of flies, may have been the transmitters of the diseases causing the 5th plague, livestock pestilence, and the 6th plague, boils.
- That Goshen did not have the 4th plague, swarms of flies, is probably because most of that region was not part of the Nile river valley.
- The fact that the Israelites did not suffer the 4th plague, swarms of flies, may be the reason they were spared the 5th plague, livestock pestilence, and the 6th plague, boils. Alternately, simply the distance of Goshen from the main Nile river valley may have been the reason.
- The cause of the 8th plague, locusts, was probably the same as that of the 1st plague, the prior year’s exceptionally

heavy rainfall in Ethiopia and the Sudan.

- The severity of the 9th plague, darkness, was exacerbated by the sediment left by the unusually high flooding of the Nile. The 7th plague, hail, and the 8th plague, locusts, probably also contributed to it.

Professor Ho looked up from the paper and stared at the boys over the top of his glasses. “What do you think? Can it really be a lucky compilation of mythological traditions? That viewpoint is an affront to logic! Not to speak of the specific contents of the plagues, just the odds of arranging only *eight* items in the correct sequence is one in $1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 =$ one in 40,320! And that doesn’t take into account the fact that the plagues themselves have to be realistic for the Egyptian setting. It is universally agreed that the Israelites were already living in Palestine before 1000BC. If Exodus were myths compiled after 900BC, how did the supposed ‘editor’ come up with a sequence 100% logical and accurate? It’s irrational to think that way. The fact is, Exodus is an eye witness record of actual events.”

God works through ‘natural’ and ‘supernatural’ means

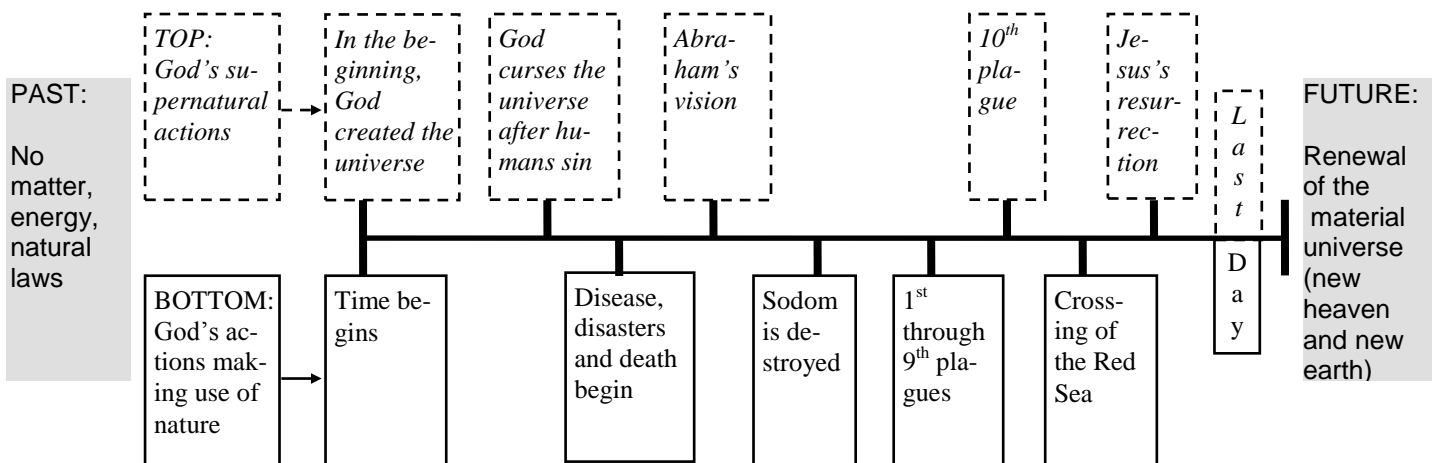
Xiao Li had looked increasingly troubled through Professor Ho’s discussion of miracles. Now he couldn’t contain himself anymore. “But Professor Ho! I always thought the ten plagues were *all* miracles. Why all this talk about ‘natural’ means? I agree that God controls nature, but the ten plagues don’t seem natural at all. Water turned to blood? Three days of darkness? And the death of the firstborn? Why can’t we just believe God did it like the Bible says?”

Professor Ho looked solemn and sympathetic. “Xiao Li, I understand your point,” he began gently. “First let me say that I *do* believe God caused the ten plagues—actively, consciously, purposely caused them. Secondly, I know that many Christians regard all of the plagues as exclusively miraculous events. I have every respect for that viewpoint. It’s perfectly logical and it does not go against scripture or science. Thirdly, let me affirm again that I believe the tenth plague was strictly miraculous.

“However, I also believe the Biblical record fits with the idea that God used so-called ‘natural’ means to accomplish His goals in plagues one through nine. The text specifically talks about frogs, gnats, flies, winds—created material objects which were always present in Egypt. So I know for sure God used frogs, gnats, flies and wind! Remember, Moses and God were not facing atheists and philosophical materialists in ancient Egypt. God was revealing Himself to idolatrous nature-worshippers. So it’s not surprising that He made use of natural processes to show that natural entities and forces are not at all divine. Only Yahweh, who is able to foreknow and control natural phenomena, is God.

“Part of the problem is the way we use the words ‘natural’ and ‘miraculous.’ What we call ‘natural’ and ‘supernatural’ events are just two different ways in which God works in the universe.” Professor Ho pulled another piece of paper from his file. “Have a look at this chart. It might help us to understand.

“This diagram represents two different methods by which God acts in the human realm: He influences the world through the ‘natural’ laws which He created and sustains, and He also influences the world through what we regard as ‘supernatural’ methods.



“In the beginning, when only God existed, there was no matter, energy or natural laws. That’s ‘off the chart’ on the far left. In the chart itself, the top section shows God’s supernatural actions and the bottom section shows God’s actions through the natural laws He established.

“God’s first supernatural action which we know about was creating the universe, including establishing the natural laws. That act of creation itself is on the top half of the chart; it’s a supernatural act, a miracle if you like. In other words, the natural laws exist because of a miracle! After that, on the bottom half, time ‘naturally’ starts ticking away in the physical universe.

“After awhile, Adam and Eve chose to sin. God then intervened supernaturally and cursed the physical universe (top half of chart). It might even mean that He changed the natural laws in some way. On a cursed earth, disease, natural disasters and death ‘naturally’ occur (bottom half of chart).

“But God still works in both ways. Around 2000BC, God appeared to Abraham in a vision, a supernatural event (top half). Later, Sodom and Gomorrah were destroyed by what appears to have been God’s providential control of the tim-

ing of a natural event, probably an earthquake (bottom half).

“Now we come to the time of the ten plagues. As nearly as I can tell, plagues one through nine were God’s use of precisely timed natural events—frogs, boils, hail, locusts—to accomplish His goal of teaching Egypt and the world that He is in control of nature. So plagues one to nine are on the bottom half. The tenth plague clearly seems to be purely miraculous, carefully targeting a specific set of people, so it’s on the top half.

“For the crossing of the Red Sea, the Bible says God used a wind to blow back the waters, so it belongs to the bottom half. And of course, an event like the resurrection of the dead body of Jesus Christ is strictly miraculous, so it goes on the top half.

“God continues to act in the world in both natural and supernatural ways, by both ‘ordinary’ and ‘miraculous’ means, and He will do so to the end.”

This time it was Xiao Wang who had an objection. “But if the plagues were natural phenomena, in what sense did God ‘actively’ or ‘consciously’ cause them? How could He have done that?”

“One way is by setting up the necessary conditions in advance,” Professor Ho promptly replied. “The long chain of cause and effect relations which led to the shift in the wind and blew the locusts of the eighth plague away from Egypt into the Red Sea could have been built into the weather patterns of the earth from the moment of the curse. That simply means that God ‘set things up’ thousands of years before the wind, because He knew in advance when Moses would pray and what kind of wind he would need.

“I grant you, of course, that God could have actively intervened that very day to produce a wind that otherwise would not have happened—in other words, what we would call a supernatural intervention, a miracle. That’s totally logical and possible. But He could have achieved the same goal by setting in motion weather patterns on the day Adam and Eve sinned. Either way it was His work. And that’s what the Egyptians were—and we are—supposed to learn: God controls nature. By predicting the events in advance, God showed that it is He who is in charge of the weather—not some rain god. And it’s still true today.”

Xiao Li was still upset. “It still bothers me to think most of what God does in the world is just ordinary nature!”

“On the contrary,” Professor Ho replied, raising his eyebrows with a solemn look on his face, “it greatly comforts me to know God my father has carefully arranged the ‘ordinary’ events of my life to achieve His own purposes.”

“What about the tenth plague,” asked Xiao Wang, “the death of the firstborn? Do you think that was God using ‘natural’ or ‘supernatural’ means?”

“A supernatural miracle, to be sure!” Professor Ho replied immediately.

“It seems cruel to me!”

“Many people have a misunderstanding about it. Let’s look at what happened.”

[Here read: Exodus 11:1—12:51.]

10th Plague: Death of the firstborn. Time: between March 25 and April 24 (Passover) (Exodus 11:1—12:30)

Increasing severity of the 10 plagues

1. Water to blood: Inconvenient.
2. Frogs: Unpleasant.
3. Gnats: Uncomfortable.
4. Flies: Mildly painful.
5. Livestock die: Costly.
6. Boils: Very painful.
7. Hail: Very costly.
8. Locusts: Disastrously costly.
9. Darkness: Terrifying.
10. Death of firstborn: Irredeemable.

“The tenth plague, the death of the firstborn, was the capstone to the increasingly severe plagues. Pharaoh and the Egyptians could have given in earlier, say, after the sixth or seventh plague, and let the Israelites go worship. God gave them lots of chances. But it took the death of the firstborn to finally convince them. Let’s review the events of the final plague.” Professor Ho pulled his battered Bible in front of him, adjusted his bifocals, and began to read.

11:1 Now the LORD said to Moses, “One more plague I will bring on Pharaoh and on Egypt; after that he will let you go from here. When he lets you go, he will surely drive you out from here completely.” ... 4 Moses said, “Thus says the LORD, ‘About midnight I am going out into the midst of Egypt, 5 and all the firstborn in the land of Egypt shall die, from the firstborn of the Pharaoh who sits on his throne, even to the firstborn of the slave girl who is behind the millstones; all the firstborn of the cattle as

well. 6 ‘Moreover, there shall be a great cry in all the land of Egypt, such as there has not been before and such as shall never be again. 7 ‘But against any of the sons of Israel a dog will not even bark, whether against man or beast, that you may understand how the LORD makes a distinction between Egypt and Israel.’ 8 “All these your servants will come down to me and bow themselves before me, saying, ‘Go out, you and all the people who follow you,’ and after that I will go out.” And he went out from Pharaoh in hot anger. 9 Then the LORD said to Moses, “Pharaoh will not listen to you, so that My wonders will be multiplied in the land of Egypt.” 10 Moses and Aaron performed all these wonders before Pharaoh; yet the LORD hardened [literally: strengthened] Pharaoh’s heart, and he did not let the sons of Israel go out of his land. ... 12:29 Now it came about at midnight that the LORD struck all the firstborn in the land of Egypt, from the firstborn of Pharaoh who sat on his throne to the firstborn of the captive who was in the dungeon, and all the firstborn of cattle. 30 Pharaoh arose in the night, he and all his servants and all the Egyptians, and there was a great cry in Egypt, for there was no home where there was not someone dead. 31 Then he called for Moses and Aaron at night and said, “Rise up, get out from among my people, both you and the sons of Israel; and go, worship the LORD, as you have said. 32 “Take both your flocks and your herds, as you have said, and go, and bless me also.” 33 The Egyptians urged the people, to send them out of the land in haste, for they said, “We will all be

dead." [Exodus 11:1, 4-10; 12:29-33 NAS]

Professor Ho looked up at the boys. "Let's set the background. Passover and the tenth plague occurred on the same evening. According to the Jewish calendar, it was the 14th day of Nisan (also called Abib), the first month in their lunar calendar. In the modern solar calendar, the 14th day of Nisan falls between March 25 and April 24.

"God's goal in the tenth plague is stated plainly:

"For I will go through the land of Egypt on that night and will strike down all the firstborn in the land of Egypt, both man and beast; and against all the gods of Egypt I will execute judgments -- I am the LORD." [Exodus 12:12 NAS]

'[A]ll the gods of Egypt' were judged in the tenth plague since not one could protect humans or livestock. This included Pharaoh, since the Egyptians regarded him as a demi-god, the son of the sun god. But even the 'divine' Pharaoh's firstborn son died in the tenth plague. None of the 'gods' could enable the Egyptians to escape the righteous anger of the true God, Yahweh. After the firstborn died, everyone should have known that the gods worshipped by the Egyptians were false, and that only Yahweh was the true God and everything was under His authority.

"In a sense, then, the tenth plague was the logical extension of the first nine. But there was a difference."

The 10th Plague: A wholly supernatural miracle

Professor Ho pulled the chart out from beneath his Bible. "You remember I said that it seems God made use of 'natural' means under His own control to bring about the first nine plagues. Of course He could have intervened miraculously 'on the spot' to bring them about, but for most of the plagues it looks more like He sovereignty set things up in advance via the natural causes He established. In any case, He definitely made use of what we would call natural phenomena. But the death of the firstborn is in a different category. It is entirely a supernatural miracle."

"How can you tell the difference?" challenged Xiao Wang.

"First of all, because the text explicitly says so!" Professor Ho replied promptly.

"For the LORD will pass through to smite the Egyptians; and when He sees the blood on the lintel and on the two door posts, the LORD will pass over the door and will not allow the destroyer to come in to your houses to smite you. [Exodus 12:23 NAS]

"Secondly," continued Professor Ho, "the phenomenon is distinctly different from the others. Reddened Nile water, cattle plagues, hail, locusts, et cetera—all these things were known to happen in Egypt, even if never on such a scale before or after. But the sudden death of each and every firstborn male among humans and livestock, all over Egypt, all on the same night—that was a unique occurrence and obviously a miraculous one. The precision of this plague: only striking firstborn males; the distribution of it: both humans and livestock; the timing of it: every one died the same night; the range of it: every household in Egypt that did not have blood on the door posts; when all these are taken together, it becomes unreasonable to view it as a natural phenomenon. Note also the condition for avoiding it: not simply being in Goshen, but going through the Passover ritual. And consider further: for people who spread the blood on their door posts, apparently even the firstborn of their cattle did not die (Exodus 11:7, 13:13). This wasn't caused by some as yet undiscovered, magical property of lamb's blood on door posts! The cattle were *outside* the houses.^{17,18}

"I see your point," admitted Xiao Wang. "But how does it prove the Bible is accurate history?"

"I didn't say it does," countered Professor Ho with a gentle smile. "The first nine plagues helped me to understand that the Bible is an accurate history book. The tenth plague teaches me about God's wrath, His mercy, and His way of saving people."

"But it seems totally unfair to me!" Xiao Wang broke in heatedly. "Why did God go and kill all those innocent people? It wasn't their fault that Pharaoh wouldn't let the Israelites go. And many of the ones who died must have been children!"

The 10th Plague: Was it unfair?

"Many have felt that way," agreed Professor Ho. "I first did when I read it. I thought it seemed both unfair and unloving. But now I understand better, and I think I can explain it to you. The first thing we need to realize is God's unlimited right to determine the length of every person's life."

"It still seems unfair to me," objected Xiao Wang.

"Perhaps that's because you haven't yet understood the meaning of God being the Creator. Tell me Xiao Wang, do you still believe in evolution?"

"No."

"Then where do you think we came from?"

Xiao Wang was silent for a moment. "I guess you will say to me that since God made us in the first place, He has the right to 'unmake' us whenever He pleases."

"Precisely. It flows logically from the fact that He is the Creator. He doesn't 'owe' us 70 years just because we managed to be born! Life is a free gift from Him, and it's always a temporary one on this sin-cursed earth. He takes it away from all of us, and He has the right to do so at any time."

The 10th Plague: Was it unjust?

"I see your point," said Xiao Wang grudgingly. "But it still seems unjust. Why didn't God just punish Pharaoh by

making him die?"

"Yes, a good question," agreed Professor Ho. "Do you remember when we talked about Adam and Eve's sin and the curse that came because of it? [See chapter 2.] Physical death for Adam and Eve's descendents, including the firstborn Egyptians, is not so much a *punishment* for sin as it is a *consequence* of sin and the curse. Otherwise, Christians would never die, because their sins have already been forgiven! Punishment comes *after* death—in hell, forever.

"So the death of the firstborn was not so much punishment on the individuals who died as it was punishment on the nation of Egypt as a whole. In a sense, it was the Egyptians who *didn't* die who were punished. What they regarded as best and most precious—the firstborn—was taken away from them. This was a collective punishment directly commensurate to their collective sin of having tried to kill all the male children of the Israelites decades earlier. It was also a punishment for their ongoing sin of enslaving the Israelites and repeatedly refusing to let Yahweh's people go and worship Him."

"But why punish everybody for Pharaoh's choices?"

"Because they all chose to participate in it. That's illustrated at least three times. When Pharaoh commanded that the male infants be killed, the Israelite midwives chose not to obey:

16 and he [Pharaoh] said, "When you are helping the Hebrew women to give birth and see them upon the birthstool, if it is a son, then you shall put him to death; but if it is a daughter, then she shall live." 17 But the midwives feared God, and did not do as the king of Egypt had commanded them, but let the boys live. [Exodus 1:16-17 NAS]

The midwives needed a lot of courage to do that! But they did, and they got away with it. If the midwives, who were members of a despised minority group, could get away with disobeying Pharaoh in this matter, so could the Egyptians. But it seems clear that the Egyptians were actively seeking Israelite infants to throw into the Nile, otherwise Moses's mother would not have been forced to hide him:

1:22 Then Pharaoh commanded all his people, saying, "Every son who is born you are to cast into the Nile, and every daughter you are to keep alive." ... 2:2 [Moses's mother] conceived and bore a son; and when she saw that he was beautiful, she hid him for three months. 3 But when she could hide him no longer, she got him a wicker basket and covered it over with tar and pitch. Then she put the child into it and set it among the reeds by the bank of the Nile. [Exodus 1:22, 2:2-3 NAS]

Pharaoh didn't personally go out and look for Israelite babies. Thus we infer that many of the Egyptians were active in trying to kill the Israelite infants. It would have been easy for them to turn a blind eye—much safer than it was for the Israelite midwives to disobey Pharaoh! But they *chose* to look for the babies.

"Second, even after the infant killing campaign passed, the Egyptians as a group were active in enforcing slavery on the Israelites during the following forty years. This included violent abuse:

11 Now it came about in those days, when Moses had grown up, that he went out to his brethren and looked on their hard labors; and he saw an Egyptian beating a Hebrew, one of his brethren. 12 So he looked this way and that, and when he saw there was no one around, he struck down the Egyptian and hid him in the sand. [Exodus 2:11-12 NAS]

Although Moses's action in this case may well have been wrong, it's clear that the Israelites were being cruelly oppressed, both by forced labor and by casual violence. The Bible's history is carefully selective. What is recorded is to be taken as representative of the general situation of the Israelites and the Egyptians during those decades. Things did not change much in the subsequent forty years before Moses returned to Egypt:

2:23 Now it came about in the course of those many days that the king of Egypt died. And the sons of Israel sighed because of the bondage, and they cried out; and their cry for help because of their bondage rose up to God. ... 3:7 The LORD said, "I have surely seen the affliction of My people who are in Egypt, and have given heed to their cry because of their taskmasters, for I am aware of their sufferings. 8 "So I have come down to deliver them from the power of the Egyptians, and to bring them up from that land to a good and spacious land.... [Exodus 2:23, 3:7-8 NAS]

"Third, even after the plagues, both Pharaoh and his officials tried to re-enslave the Israelites:

5 When the king of Egypt was told that the people had fled, Pharaoh and his servants had a change of heart toward the people, and they said, "What is this we have done, that we have let Israel go from serving us?" 6 So he made his chariot ready and took his people with him; [Exodus 14:5-6 NAS]

It wasn't just Pharaoh, but also 'his servants.' Note that 'his people,' a substantial army, went with him, too. Remember, 'his people' had just experienced the death of the firstborn. Regardless of Pharaoh's command authority and any threat of punishment they may have faced, self-preservation alone would have motivated them to go into hiding or desert on the road. Instead they chose to go after the Israelites, showing their willful determination to enslave them.

"When we consider all these things together, it's clear that the Egyptians were collectively guilty, so they receive a collective punishment."

The 10th Plague: Was it unloving?

Xiao Li spoke up. “Professor Ho, I understand that the Egyptians deserved punishment. But doesn’t God love everyone?”

“Absolutely.”

“Isn’t He merciful?”

“Very!”

Xiao Li’s voice grew troubled. “The plagues, especially the tenth, have always bothered me. Why did God just care about the Israelites, not the Egyptians? Why didn’t He give the Egyptians a chance?”

Professor Ho leaned forward and raised his eyebrows in surprise. “A chance! He gave them nine chances! Nine plagues, gradually increasing in severity. It was they who refused to repent.”

“But after that they were stuck, and the tenth plague wiped out their firstborn.”

“Ah! I see your misunderstanding.” Professor Ho sat back up in his chair and raised a finger. “You think that after the ninth plague the Egyptians had no way to avoid the tenth. Actually, they almost certainly did.

“Recall that Moses publicly warned the Egyptians that the firstborn were about to be killed:

4 Moses said [to Pharaoh], "Thus says the LORD, 'About midnight I am going out into the midst of Egypt, 5 and all the firstborn in the land of Egypt shall die, from the firstborn of the Pharaoh who sits on his throne, even to the firstborn of the slave girl who is behind the millstones; all the firstborn of the cattle as well. ... 8 "All these your servants will come down to me and bow themselves before me [Moses], saying, 'Go out, you and all the people who follow you,' and after that I will go out." And he went out from Pharaoh in hot anger. [Exodus 11:4-5, 8 NAS]

Remember also that by this point Moses’s every action was being closely followed by the Egyptians:

3 The LORD gave the people favor in the sight of the Egyptians. Furthermore, the man Moses himself was greatly esteemed in the land of Egypt, both in the sight of Pharaoh’s servants and in the sight of the people. [Exodus 11:3 NAS]

There was a wide public proclamation of the conditions for avoiding the death of the firstborn:^H

22 “You shall take a bunch of hyssop and dip it in the blood which is in the basin, and apply some of the blood that is in the basin to the lintel and the two door posts; and none of you shall go outside the door of his house until morning. 23 For the LORD will pass through to smite the Egyptians; and when He sees the blood on the lintel and on the two door posts, the LORD will pass over the door and will not allow the destroyer to come in to your houses to smite you.” [Exodus 12:22-23 NAS]

Notice the conditions here. Being an Israelite or living in Goshen isn’t what matters. What counts is whether the blood was on the door posts. There is no reason to think that an Egyptian could not have chosen to sacrifice a lamb and sprinkle the blood, or to have spent the night inside a Israelite home.^I

“But that’s just speculation,” objected Xiao Wang.

“Actually, it’s supported by two very important pieces of data,” Professor Ho replied at once. “After Moses prophesied the plague of hail, some of the Egyptians took warning:

20 The one among the servants of Pharaoh who feared the word of the LORD made his servants and his livestock flee into the houses; 21 but he who paid no regard to the word of the LORD left his servants and his livestock in the field. [Exodus 9:20-21 NAS]

This example from at least eight weeks before the death of the firstborn shows that at least some Egyptians feared Yahweh enough to take action to avoid a predicted plague. Why wouldn’t they do so before the tenth plague?

“But there is a more convincing datum from just after the tenth plague. When the Israelites were leaving Egypt that night,

38 A mixed multitude also went up with them, along with flocks and herds, a very large number of livestock. [Exodus 12:38 NAS]

Thus we know that there were many non-Israelites who left Egypt along with the Israelites. Who were they?

“On the one hand, it is impossible to imagine that someone whose own firstborn son had just been killed by Yahweh would have been willing to go with Yahweh’s people. The ones who went with them were probably Egyptians and people from non-Egyptian minority groups people who had heard Moses’s warning, believed, and sprinkled the blood, thus escaping the tenth plague.

“On the other hand, since everyone else’s firstborn had died, these people would be *personas non grata* thereafter in Egypt. The Egyptians would lump them together with the feared and hated Israelites. They would be regarded as traitors and enemies. This would further motivate them to leave with the Israelites.

“Thus we have every reason to think that non-Israelites could avoid the death of the firstborn and that some of them

^H This instruction was probably given at least several days, and possibly two weeks or more, before the death of the firstborn. A careful reading shows that Exodus 11:1-3 and 12:1-20 probably occurred *before* Exodus 10:24-29 and 11:4-10. The material is arranged partly topically, not completely chronologically.

^I Note that the rules of Exodus 12:43-49 seem to have been added *after* the first Passover, at Succoth (Exodus 12:37).

actually did. God loves everyone and made the same way of escape available to everyone.”

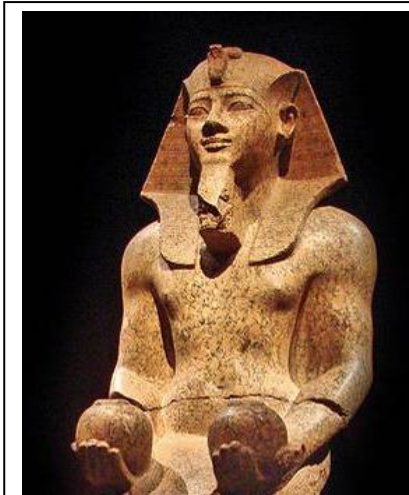
Pharaoh’s hard heart: Was it God’s fault?

Xiao Li was silent for awhile looking at the Bible. He had never realized before that *anyone* in Egypt could have sacrificed a Passover lamb and escaped the tenth plague. “I see now!” he said at last. But then he looked up and continued. “But Professor Ho, there’s another problem which has always bothered me. It seems like God *wanted* Pharaoh to not let them go. It says God hardened his heart.”

As so often before, Professor Ho nodded sympathetically. “I understand your feeling completely! I was very troubled by those scriptures in the past. But what the Bible is actually saying here turned out to be different from what I thought. Take the example right before the death of the firstborn:

Moses and Aaron performed all these wonders before Pharaoh; yet the LORD hardened [Hebrew: ‘chazaq,’ strengthened] Pharaoh’s heart, and he did not let the sons of Israel go out of his land. [Exodus 11:10 NAS]

On the surface of it, it sounds like God is changing Pharaoh’s mind, forcing him to refuse to let the people go. But there’s an important translation issue here. The Hebrew word translated ‘hardened’ is ‘chazaq.’^J It actually means ‘strengthened’ or ‘encouraged,’ and that’s the way it should be translated, as it is almost everywhere else it appears, such as:



Pharaoh Amenhotep II c.1450-25BC. Possibly the pharaoh reigning when the Exodus happened. From note 1.

3 Encourage the exhausted, and strengthen [chazaq] the feeble. 4 Say to those with anxious heart, "Take courage [chazaq], fear not. Behold, your God will come with vengeance; The recompense of God will come, But He will save you." [Isaiah 35:3-4 NAS]

What God was really doing was strengthening Pharaoh’s heart, not hardening it. For all his arrogance, Pharaoh was still just a human being. The plagues had overwhelmed his ability to resist and he was ready to give in. But God strengthened his heart, giving him the psychological strength needed to overcome the terror of the plagues and make a free choice to do what he really wanted to. God didn’t change Pharaoh’s mind for him. God was actually extending the range of Pharaoh’s free will. Sadly, Pharaoh used that free will to keep on rebelling against God.”

Passover: The spiritual lesson from the death of the firstborn

Xiao Wang had a further question. “Professor Ho, I can agree that it was fair for God to punish the Egyptians. And I see that He gave them a chance—even a lot of chances—to avoid it. But there’s one thing I don’t understand.

What’s all this bit about putting a lamb’s blood on the door posts?”

“In fact,” Professor Ho replied, “that’s the most important part of the whole record. The tenth plague is an historical reality. But it’s also a physical picture, drawn in human history, illustrating a spiritual fact: sin leads to death, and forgiveness only comes by the shedding of blood.

“As I said a moment ago, the death of the firstborn was not actually a punishment on them for their sin. They faced judgment *after* they died; then they received a just recompense for what they did on earth. But their physical death was a picture representing the spiritual death and judgment that all of us will face because of our sins.”

“But didn’t the Israelites have sins too?” queried Xiao Wang. “Why did they all get off?”

“That’s exactly the point,” replied Professor Ho. “The Israelites *did* have sins too, so to make the picture complete, their firstborn should have died, too. That’s where the lamb comes in. The lamb was killed as a symbol, taking the place of the firstborn of the Israelites.

“The symbol of lamb’s blood was absolutely required to keep the firstborn alive. To avoid some of the other plagues, such as the hail or the darkness, one merely had to be in Goshen where the Israelites were living. To avoid the death of the firstborn in the tenth plague, Israelites or non-Israelites had to purposely slaughter the Passover lamb and sprinkle its blood on the door posts. Let’s consider the major symbols of Passover and their meanings.

1. The lamb represented a sacrificial victim dying in place of another who was supposed to die, in this case, in place of the firstborn of the Israelites.
2. The lamb had to be ‘unblemished’ (Exodus 12:5), without any visible sign of defect. This means that the sacrificial

^J Three different Hebrew words are used to describe the condition of Pharaoh’s heart: ‘chazaq,’ #2388 (strong); ‘kabad,’ #3513 (heavy, glorious); and ‘qashah,’ #7185 (hard). Of the nineteen statements about Pharaoh’s heart in Exodus chapters 4 through 14, twelve use ‘strengthen’ (chazaq, #2388), six use ‘made heavy’ (kabad, #3513), and only one, Exodus 7:3, uses ‘harden’ (qashah, #7185).

‘Chazaq’ appears about 290 times in the Old Testament. The only places where ‘chazaq’ is translated ‘harden’ are with regards to Pharaoh (plus once in Joshua 11:20). The other 277 times it is translated strengthen, encourage, make firm, etc. Likewise, ‘kabad’ means ‘heavy, weighty, dull, honorable, glorious’ and should not be translated as ‘harden.’

‘Harden’ in Exodus chapters 4–14 is merely a traditional translation and is an error, except for Exodus 7:3. Exodus 7:3 is a prediction. The fulfillment of the prediction comes when subsequently, God ‘hardened’ Pharaoh’s heart by *strengthening* it, enabling him to do what he wanted to. God did not forcibly change Pharaoh’s mind.

victim who took the place of another had to be morally perfect. If he had sin of his own, his death could only be the punishment for his own sin, not for someone else's.

3. The blood of the lamb represents its life, especially its life sacrificed in taking the punishment which someone else's sin deserved. When God saw the blood, it would symbolize that the required death penalty for sin had already been carried out there, so He could 'pass over' that place.
4. The blood had to be applied to the door posts. Choosing to slaughter the lamb and sprinkle its blood on the door posts showed that a person or household believed what God had spoken through Moses, and because they believed, they obeyed the requirements of the ritual.
5. The death of all the firstborn who did not have blood on their door posts symbolized God's punishment of sin, which is eternal *spiritual* death in hell.
6. In contrast, the survival of the firstborn of those who believed Moses and sprinkled the blood symbolized the forgiveness of sin available to anyone who believes God. Like Abraham, this is an example of 'justification by faith.' The Israelites were sinners just like the Egyptians were, and they too deserved punishment. They were saved because they trusted God and sacrificed the Passover lamb—not because of their own good works or merit. And note again that there is no reason to think that you had to be an Israelite to participate in the Passover.

"All of these symbols prefigure Jesus Christ. He is the 'lamb of God' (John 1:29) who was sacrificed so our sins could be forgiven. He is the reality which fulfills the symbols of the Passover.

1. Jesus is the sacrificial victim who died in the place of others, suffering the punishment of God for the sake of all humanity.
2. Jesus was perfect, 'unblemished.' He never once did anything against His conscience. In His entire life He never disobeyed or neglected a single command of God.
3. Jesus's blood was shed for the sake of humanity. He sacrificed His life on the cross, taking the punishment which the sins of human beings deserve. He suffered not only physical death, but also the spiritual death of separation from God while He was on the cross—in other words, He went to hell. Jesus's death means that the punishment our sins require has already been carried out.
4. Just as the lamb's blood had to be sprinkled on the door posts before the firstborn inside the house could avoid judgment, the blood of Jesus has to be applied to the heart of an individual if he is going to be forgiven. That means each individual must choose to repent and believe in Jesus. Otherwise Jesus's death will have not been effective for that person. One sprinkling of a lamb's blood only had effect for a single house; one person's choice to have faith in Jesus only has effect for that single person.
5. Just as the firstborn in houses which did not have the blood sprinkled on the door posts died, so too people who do not believe in Jesus will be punished by God with spiritual death in hell.
6. In contrast, just as the firstborn in houses which *did* have the blood sprinkled *did not* die, so too Christians, who believe in Jesus, will not go to hell, even though they have sin. When God carries out the final judgment, He will 'pass over' anyone who has the blood of Jesus sprinkled on his or her heart. These are the people who believe in Him.

"All of this and more was being taught through the death of the firstborn and the Passover. And so you see it all still relates directly to us. When God judges, each one of us will either be 'passed over' in mercy because the blood of Jesus is on door of our heart—or else punished in justice, because of our own sins."

Everyone was silent for a while, pondering. A desire to know the truth had led Xiao Wang reexamine biology and evolution, and that had led him to the conclusion that there was a creator. That had been wonderful in some ways; it gave him a whole new view of the world, a much more hopeful and meaningful one. The thought that that creator might know about him and care about him was also attractive, though he really wasn't sure about it yet. But as he had been reading the Bible, a small, nagging fear had begun to grow in his mind: what if that creator wasn't pleased with him? And what if people really did have an immortal soul and would have to face judgment? Those were just passing thoughts, but Xiao Wang didn't like them. For the first time he could understand why Professor Ho had said Darwin didn't *want* Christianity to be true. [See chapter 1.] Xiao Wang wasn't so sure he himself wanted it to be true!

Professor Ho interrupted his thoughts. "Well boys, we're almost out of Egypt, but we've still got to cross the Red Sea!"

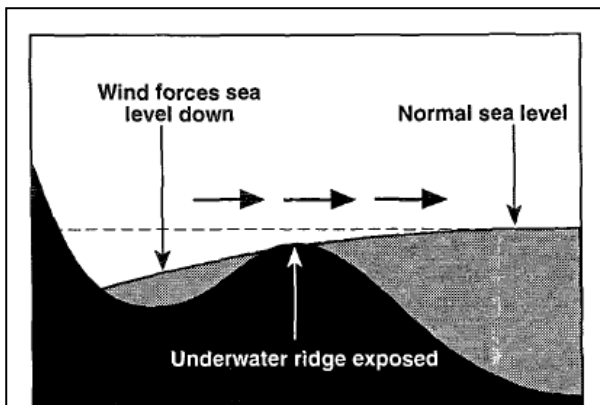
Crossing the Red Sea

[Here read Exodus 13:17—14:31.]

Xiao Wang looked up with a smile. "Well Professor Ho, what kind of miracle was the crossing of the Red Sea? Natural or supernatural?"

Professor Ho smiled back. "I take it you mean Xiao Wang," he gently corrected, "did God use natural or supernatural means to part the waters, right? The text specifically answers that question for us: God used a wind."

21 Then Moses stretched out his hand over the sea; and the LORD swept the sea back by a strong east wind all night and turned the sea into dry land, so the waters were divided. 22 The sons of Israel went through the midst of the sea on the dry land, and the waters were like a wall to them on their right hand and on their left. 23 Then the Egyptians took up the pursuit, and all Pharaoh's horses, his chariots and his horsemen went in after them into the midst of the sea. 24 At the morning watch, the LORD looked down on the army of the Egypt-



Southern (Red Sea) crossing theory. Underwater ridge hypothesis. Israelites cross along the top of the ridge. Cross section, viewed from the side. (Note: in this view, the Israelites would have been walking *into* the paper of this page.) From Note 23.

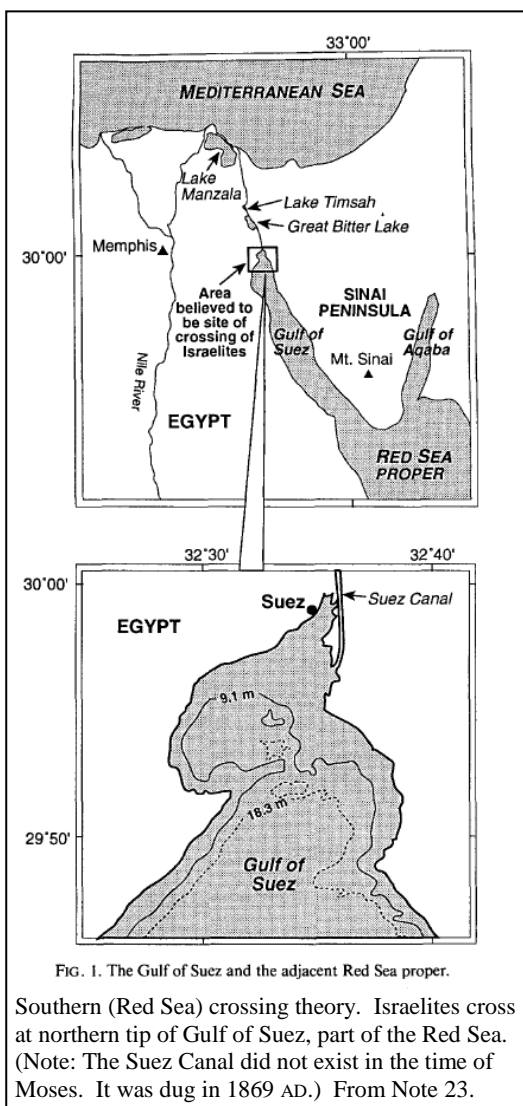


FIG. 1. The Gulf of Suez and the adjacent Red Sea proper.

Southern (Red Sea) crossing theory. Israelites cross at northern tip of Gulf of Suez, part of the Red Sea. (Note: The Suez Canal did not exist in the time of Moses. It was dug in 1869 AD.) From Note 23.

tians through the pillar of fire and cloud and brought the army of the Egyptians into confusion. 25 He caused their chariot wheels to swerve, and He made them drive with difficulty; so the Egyptians said, "Let us flee from Israel, for the LORD is fighting for them against the Egyptians." 26 Then the LORD said to Moses, "Stretch out your hand over the sea so that the waters may come back over the Egyptians, over their chariots and their horsemen." 27 So Moses stretched out his hand over the sea, and the sea returned to its normal state at daybreak, while the Egyptians were fleeing right into it; then the LORD overthrew the Egyptians in the midst of the sea. 28 The waters returned and covered the chariots and the horsemen, even Pharaoh's entire army that had gone into the sea after them; not even one of them remained. [Exodus 14:21-28 NAS]

The description is quite explicit. The water was driven back by an east wind which continued all night long. It created an open passage in the middle through which the Israelites went. The Egyptians followed, but God made it hard for them to drive—how He did that isn't specified, maybe it was miraculous. The Egyptians lost their nerve before they got to the other side and doubled back. While they were in the middle of the passage, the waters flowed back and drowned them. We infer that the wind stopped when Moses raised his hand the second time, allowing the water to return.

"To understand this event, first of all, we need to clear our minds of images seen in movies and artists' portrayals. They show a narrow passage between high walls of water in the middle of a deep sea. Obviously God has plenty of power to do that, but that's not the sort of situation that could ever be caused by a wind. Since the text says God used a wind, we should logically first think about what a wind could do.

"It is well known that sustained strong winds can lower water levels by as much as several meters. This sometimes exposes lake bottoms and seabeds. To take one example, in 1882 Lake Menzaleh [also spelled Manzala] in the Nile delta was blown dry for a distance of over 10 kilometers by an east wind.¹⁹ The lake was normally a little less than two meters deep. Many other examples are known.

"A number of atmospheric and oceanic scientists have tried to calculate the wind speed necessary to open a passage through which the Israelites could cross. Their research has been published in several ordinary scientific journals."

"You mean a scientist would use the Bible record as a basis for research?" asked Xiao Wang.

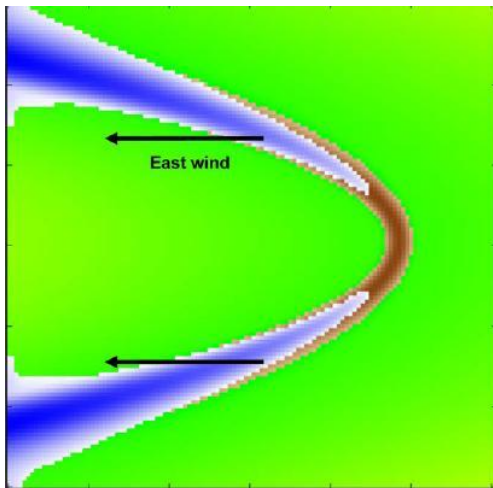
Professor Ho raised his eyebrows. "I'm a little surprised you would still ask a question like that, Xiao Wang. Of course the prejudiced atheist scientists are unhappy about it—several of them even criticized the 2010 research on those grounds.²⁰ But the Bible is a book of history, so it is natural to use science to study it."

"Were those researchers believers?"

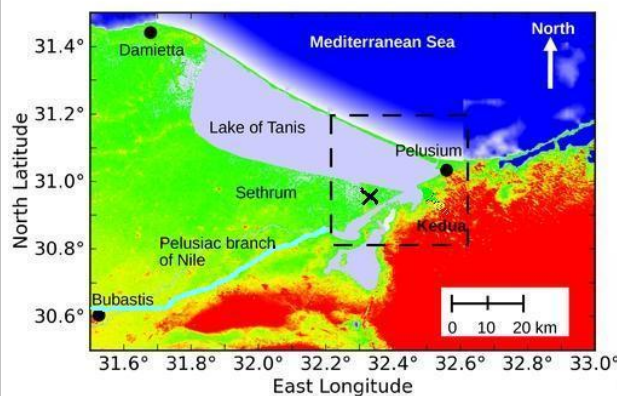
"Some were, some weren't. Obviously they all at least thought it was possible such an event had happened.

"To calculate the necessary wind, the first question we need to try to answer is: where did the Israelites cross? Our Bibles read 'Red Sea' [Exodus 13:18, 15:4], but that's an interpretation. The Hebrew literally reads 'Reed Sea,' which could have referred to the Red Sea, but possibly could have meant one of the lakes or lagoons further north. In addition, several places close to the site of the crossing are listed [Exodus 14:2, 9], but the exact identification of these places is still being debated by biblical archaeologists.²¹ There are basically two possibilities: a 'northern' crossing, somewhere in the 'Bitter Lakes' region, and a 'southern' crossing at the tip of the Gulf of Suez of the Red Sea.

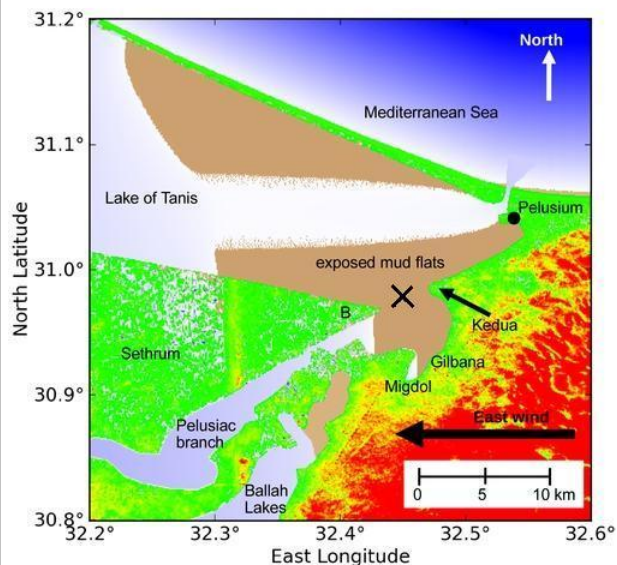
"First let's consider the 'southern,' Red Sea possibility. The Gulf of Suez is long and shallow. Two oceanographers have calculated that a properly oriented wind of 72km/hr blowing for ten hours would blow back the water more than a kilometer from the northern tip, piling it up further south. If the wind suddenly stopped or shifted, the piled up water



Schematic of a wind opening up a passage at a bend where a river flows into a lake, creating two 'walls' of water, one on either side of the passageway. Modified from Note 19.



Northern crossing theory. Geography of the Nile delta area as it may have been in Moses's day. Map shows situation before the wind starts blowing. Israelites at "X" with lake on north and branch of Nile on south. Modified from Note 19.



Northern crossing theory. Situation while crossing the Red / Reed Sea. Israelites cross through "X". Egyptians behind them at "B". From Note 19.

would flow back in as little as four minutes at a speed of about 18km/hr, with breaking waves and at least a couple of meters deep, drowning anyone in it's path.²²

"If the water was piled up south of the Israelites, how could it have been like a wall on their left and right?" asked Xiao Wang.

"Excellent question!" agreed Professor Ho. "Scientists for over a century have suggested that at the place where the Israelites crossed the Red Sea, there may have been an underwater ridge two to three meters high. At least one ridge like that is known to exist in the shallow waters of the Gulf of Suez today. However, such features are subject to rising, sinking and erosion, so if the Israelites did cross a ridge, it might not be there anymore after 3,400 years of geological activity.

"The ridge envisioned would have been exposed by the wind, allowing the Israelites to walk across it. It would have been like a long dam, holding back water on it's north side, which would have formed the 'wall' on the Israelites' left. Some distance away to the south would have been the piled up water, higher than the ridge, forming the 'wall of water' on their right."

"How often would something like that happen?" queried Xiao Wang.

"No one knows for sure," Professor Ho replied. "Later research by the same two scientists estimated that such a wind might blow in that area on the order of once every 1,000 years."²³

"So the Israelites were really lucky!" said Xiao Wang with a bantering smile.

"Um, yes; if you call that luck," returned Professor Ho dryly. "Once in a thousand years! There are about 365,250 days in a thousand years. How would you like to face a hostile army behind you and deep water in front of you and bet on having 'lucked' into the day of the millennial sea clearing? Odds like that are under the providential control of God, regardless of whether He pre-programmed the wind into the weather patterns or directly caused it on that night.

"I should mention, however, that many scholars think the Israelites crossed further north through one of the lakes located between the Gulf of Suez and the Mediterranean Sea.²⁴ Two other scientists modeled a wind separating the waters there.²⁵ First they reconstructed the probable geography of the area several thousand years ago. Based on some archaeologists' understanding of the place names in Exodus 13 and 15, they assumed the Israelites had the 'sea' of the ancient Lake of Tanis, equivalent to today's Lake Menzaleh [also spelled Manzala], to their left on the north and the Pelusiac branch of the Nile to their right on the south. If a sufficiently strong east wind blew, it would have cleared a path at the angle where the branch of the Nile flowed into the lake, leaving water on the Israelites' left and right as they passed through.

"In either the northern or the southern case, a drop in the wind speed or shift in the wind direction would allow all the backed up water to suddenly flow back into the passageway as a fast moving gravity wave. Anyone in it's path would be drowned.

"I must emphasize here that all the experimental calculations are still speculative. Those calculations vitally depend on the specific geography of an area, and we aren't certain yet where the Israelites crossed. Perhaps someday

we'll be more sure. What we can be sure of now is that the event described is completely realistic: a wind opening up a temporary crossing through an Egyptian body of water. But it would be very rare. So rare that having it start when Moses raised his arm, just when the Israelites needed it, why that would be tantamount to—”

“A miracle!” said Xiao Wang with a laugh.

Is that a forced interpretation?

But Xiao Li didn't think it was funny. He was once more troubled by the idea of attributing what seemed like a miracle to God using so-called 'natural causes.' “Professor Ho, how is your interpretation of the parting of the Red Sea any different from the Christians who read evolution into Genesis? They're adding in what they call 'natural causes' too!”

Professor Ho was surprised at the question. “The difference, Xiao Li, is that I'm doing exactly the opposite of them! I'm following the text of the Bible—not adding to it or subtracting from it.

“The text in Exodus says God used a wind—so I conclude He used a wind! In Genesis, the text says ‘God said, “Let there be...”; and it was so,’ so I conclude He spoke and it was so. Genesis says God made organisms ‘after their kind,’ so I conclude He made them in distinct groups without intervening links—which, incidentally, is also what I observe in the world around me and in the fossil record! [See chapters 1-3.]

“Exodus says the wind continued ‘all night,’ till nearly daybreak, so I conclude it blew for 10 hours or more.^K Genesis says ‘there was morning and evening, a sixth day,’ so I conclude the sixth day lasted 24 hours. Exodus says ‘in six days God made the heavens and the earth’ so I conclude He did it in six days!

“The difference between my view here and the view of the evolutionary compromisers is I start with what the text says, and then apply natural science to try to understand it in more detail, if possible. They start with the erroneous ‘doctrines of Darwin’ and then revise the Bible to try to make it fit evolution—but it can't.”

What about the pillar of cloud and fire?

“Well then, what about the pillar of cloud and fire?” Xiao Li spoke a little combatively.

“Let's consider the description in the text,” Professor Ho replied calmly. “The pillar is specifically said to be a manifestation of ‘the LORD going on before them’ as guidance [Exodus 13:21]. When the Israelites are stuck facing the sea with the Egyptians coming behind them, the pillar moves to the back of the Israelite camp to block the Egyptians. During the next 40 years, it leads them from place to place through the Sinai Peninsula. Most of the time it hovers directly over the tabernacle of Yahweh in the middle of their camp.

“What naturally occurring phenomenon could possibly have been like a pillar of cloud by day and fire by night that moved from place to place? Just consider the behavior of the pillar. It's moment is obviously intelligently directed, and not by a human being! That alone proves to me that it must have been a miraculous phenomenon. Naturally occurring clouds don't align themselves into long term pillar, shine with their own light at night, or move in a purposefully, intelligently directed pattern.”^L

“So you don't think it could have been a natural phenomenon?” asked Xiao Wang.

Professor Ho shook his head. “No, I think it was a strictly supernatural manifestation. I don't think anyone will ever discover a natural phenomenon like it. But even if they did, the movement of the pillar was obviously miraculously directed by God.

“The whole Exodus event shows us that God is in control of nature and able to act supernaturally whenever He pleases. That's a major part of what He was teaching.”

What kind of ‘proof’ is there for history?

Xiao Wang had a final objection. “But you haven't *proven* that the parting of the Red Sea recorded in Exodus happened!”

“What do you mean by ‘proven’?” Professor Ho paused for a moment to let Xiao Wang think. “Historical events aren't proven the way the laws of physics are. We can't do a controlled scientific experiment to prove history; we can't rerun the Exodus and observe it. Historical events, for the most part, are evidenced by historical records, usually documents. I have a detailed, reliable historical document, the book of Exodus, which has withstood centuries of hostile criticism from unbelieving scholars. When I examine archaeological evidence, such as Egyptian tomb paintings showing Semitic ‘Asiatics’ in Egypt during Joseph's time, it fits the record in Exodus. When I apply natural science, such as equations for wind pushing back water in the Red Sea, it too fits the record in Exodus. That's not absolute proof—you can't get that about any historical event—but it's very good evidence. And as we move on in the Bible the historical evidence gets richer and richer.

“Xiao Wang, my whole point in discussing the plagues and the Red Sea crossing with you has been to show you that the Bible is true history. That includes parts of it which, at first glance, you might feel seem like myths. So we're still

^K On April 10th night lasts for about 11 hours and 15 minutes in the Nile delta area. Of course, if the wind began during the day, the total blowing time would have been longer.

^L The only naturalistic explanations the author has seen are almost too absurd to bother refuting. Smoke and light from a volcanic eruption is sometimes suggested, but obviously volcanoes don't move around. The pillar moved from the front to the back of the Israelite camp on the night of the Red Sea crossing. Subsequently, the pillar led the Israelites from place to place for 40 years. Furthermore, geology indicates there has been no volcanic activity in the Nile delta in the past 4,000 years.

at step two of demonstrating the truth of Christianity:

1. Nature demonstrates that a supernaturally powerful, non-material Creator exists.
2. History and archeology demonstrate that the Bible records are historically accurate and allow us to approximately date when the Bible was written.
3. Prophecies written in the Bible and fulfilled long afterward demonstrate that it is a revelation from God.

If you can come next week, I can give you much more specific examples of archaeological confirmation from about 1000BC onwards. And we can begin to look at fulfilled prophecy!"

Xiao Wang smiled brightly. "I'll be there!"

¹ Picture downloaded from:

Map of the Nile Delta: bibleistrue.com/qna/qna55.htm

Beni Hasan Asiatics: biblearchaeology.org/post/2009/09/09/The-Beni-Hasan-Asiatics-and-the-Biblical-Patriarchs.aspx#Article.

A Hyksos pharaoh: britam.org/Hyksos.html

Pharaoh Amenhotep I: used by permission from flickr.com/photos/26330013@N08/7397124846/in/photostream.

Pharaoh Thutmos I CC-BY Udimu, <http://commons.wikimedia.org/wiki/File:Bm.JPG>

Pharaoh Thutmos III PUB-DOM <http://upload.wikimedia.org/wikipedia/commons/b/bc/TuthmosisIII-2.JPG>

Pharaoh Hatshepsut: christogenea.org/Overview/images/egypt/2739486507_74e70dd811.jpg

Asiatic slaves in making bricks in Egypt during this time period, see: cojs.org/cojswiki/Image:Brickmaking_2.jpg

Nile and source rivers: academic.brooklyn.cuny.edu/geology/leveson/core/topics/time/graphics/nile_;

Nile river valley from air: blogs.ei.columbia.edu/wp-content/uploads/2010/06/river_nile_route.jpg

Nile at flood: tufts.edu/alumni/magazine/spring2007/images/features/A4763_NS.jpg

Nile at low stand: farm1.static.flickr.com/29/38165462_6337a62bdb_b.jpg.

Culicoides: [zarim.co.il/BeitKneset/ParashahPix/Culicoides-obsolete/20biting/20\(female\)/20495x312.jpg](http://zarim.co.il/BeitKneset/ParashahPix/Culicoides-obsolete/20biting/20(female)/20495x312.jpg)

Illustration of annual flooding of Nile: cpus.gov.cn/kply/dh/nl/b992.gif

Mummy of a bull: Use by permission from Dasist flickr.com/photos/dasist/21682869/sizes/m/in/photostream/.jpg

Picture of a locust: PUB-DOM en.wikipedia.org/wiki/File:SGR_laying.jpg

Pharaoh AmenhotepII: CC-BY Jean-Pierre Dalbera,

en.wikipedia.org/wiki/File:Statue_of_Amenhotep_II_from_the_Museo_Egizio.jpg

² Finegan, Jack. Handbook of Biblical Chronology. Revised Edition, 1998. Hendrickson Publishers, Inc. Pg.210-211 (§369-370).

³ For a discussion of the use of slaves in brick making operations during this time period in Egypt, see: Byers, Gary A. "The Bible according to Karnak" *Bible and Spade* Fall 2004, available online at: biblearchaeology.org/post/2009/08/13/the-bible-according-to-karnak.aspx

⁴ Vos, Howard F. Nelson's New Illustrated Bible Manners & Customs. Thomas Nelson Publishers, 1999. Pg. 52-53.

⁵ Unger, Merrill F., R.K. Harrison, Howard F. Vos and Cyril J. Barber. The New Unger's Bible Dictionary. Revised and updated edition. Moody Press, 1988. Pg. 887.

⁶ See, for example, the ancient near eastern tablets dated to c.3000BC pictured online at: cdli.ucla.edu/collections/ashmolean/ashmolean.html

⁷ Note 5, Pg.922.

⁸ Barker, Kenneth L. and John R. Kohlenber III, eds. Zondervan NIV Bible Commentary, Volume I: Old Testament. Zondervan, 1994. Pg.77

⁹ The Admonitions of Ipuwer, 2. Sir Alan Gardiner, translator (?). xenohistorian.faithweb.com/africa/Ipuwer.html

¹⁰ Holmes, Chris. Spores, Plagues and History: The Story of Anthrax. Durban House, 2003.

¹¹ Meakin, John. "Plagued by Doubt." *Vision*. Spring 2001. vision.org/visionmedia/article.aspx?id=1077

¹² Note 11.

¹³ Note 8, Pg.80.

¹⁴ Anti-Locust Research Centre, Ministry Of Overseas Development, London. The Locust Handbook. Library.Ubc.Ca/Ereserve/Biol120/Locust/Locust.Htm

¹⁵ Showler, Allan T. "The Desert Locust in Africa and Western Asia: Complexities of War, Politics, Perilous Terrain, and Development." Radcliffe's IPM World Textbook. ipmworld.umn.edu/chapters/showler.htm

¹⁶ Kitchen, K. A. On the Reliability of the Old Testament. William B. Eerdmans Publishing Co., 2003. Pg. 250-252.

¹⁷ Attempts at explaining the death of the firstborn as being due to mycotoxins are absurd. We briefly refute it here.

The suggested scenario is roughly: A. Grain saved from the hail was hastily stored wet. B. This was then contaminated by locust droppings. C. The grain was covered by sand from the khamsin, sealing in the droppings and moisture. D. Toxic mold grew in the upper layer of the covered grain. E. Then the Egyptians feed double portions of grain from off the top of the contaminated stores to the firstborn. F. The first animals to feed would have been the most dominant—typically the eldest. They would have eaten the toxins off the top.

A. Nothing was harvested after the hail. It was not harvest time! Nor is there any reason to think the hail penetrated the granaries. It rains about 8 inches a year in the delta, so granaries had to be able to withstand some amount of precipitation. Individual houses are believed to have had their own smaller stores (see Note 18); even if the household storage jars were broken or baskets wet by the hail, the grain would have quickly dried up in Egypt's climate, as would the hail and rain themselves. The Egyptians were well aware of the need to keep grain dry and surely would have taken action to spread out and re-dry any wet grain. Furthermore, at least eight weeks passed between the hail and the death of the firstborn. The Egyptians had not yet brought in a harvest, so they would have continually been removing grain from storage, which (at least for small household stores) would both use up any damp grain on the top and allow the stores to be exposed to the dry air.

B. Egyptian granaries were presumably built taking into consideration the need to keep insects out. There is no reason to expect a significant amount of droppings in the granaries during the less than one day locust plague. Furthermore, remember that the Egyptians were using stored grain at this time. If there really were droppings on the top, especially in household stores, they

would have been removed or else used up immediately after the locust plague. The communal granaries (as portrayed in tomb painting) were emptied from the bottom, not the top, so supposed contaminated upper layers would not have been reached for a long time.

C. Khamsin winds were a regular occurrence in Egypt. Grain storage had to have been built taking the need for preventing sand entrance into consideration. Furthermore, khamsin winds are exceptionally *hot* and *dry*, so they would have tended, if anything, to dry the grain. Hot, dry and windy does not promote mold growth!

D. Based on points A–C above, there is no reason to expect mold to grow in the granaries or even in the smaller storage areas.

E. The Egyptians had not yet brought in a harvest and would have continually been using stored grain for food. Any upper layer stored in small household containers, theoretically contaminated by locust droppings, would have taken off almost immediately. Why didn't anyone die before Passover night? Even if we assume the locusts were immediately followed by three days of khamsin darkness, with the death of the firstborn on the next night, it still wouldn't work. The Egyptians ate bread as a staple which was hand ground from grain by women in each household. Any contaminated grain should have been mixed among the entire household. How could *all* of the firstborn and *only* the firstborn be affected by the imagined toxin? This is absurd.

F. This one is the most absurd. Even if the cattle's feed was contaminated (which we have no real reason to expect), how are we to believe that it was given to them with such careful layering that all the toxic parts were on the top? Furthermore, 'firstborn' cattle would have included immature animals who would not have been able to force their way in front of full grown ones. How are we to believe the *all* the firstborn cattle and *only* the firstborn cattle would have consumed lethal amounts of contaminated feed?

¹⁸ See Murray, Mary Anne. "Cereal Production and Processing," in Paul T. Nicholson and Ian Shaw, Eds, Ancient Egyptian Materials and Technology. Cambridge University Press, 2000. Pg.527-528.

¹⁹ Drews, C. and W. Han (2010) "Dynamics of Wind Setdown at Suez and the Eastern Nile Delta." PLoS ONE 5(8): e12481. [plosone.org/article/info:doi/10.1371/journal.pone.0012481](https://doi.org/10.1371/journal.pone.0012481)

Three graphs use by permission CC-BY Carl Drews, Weiqing Han, plosone.org/article/info:doi/10.1371/journal.pone.0012481

²⁰ See the comments about Note 19 on the webpage.

²¹ Note 4, Pg.86.

²² Nof, Doron and Nathan Paldor. "Are there oceanographic explanations for the Israelites' crossing of the Red Sea?" Bulletin of the American Meteorological Union, 73:3 (March 1992) doronnof.net/files/46.pdf

²³ Nof, Doron and Nathan Paldor. "Statistics of Wind over the Red Sea with Application to the Exodus Question." Journal of Applied Meteorology, 33:8 (August 1994). [journals.ametsoc.org/doi/pdf/10.1175/1520-0450\(1994\)033/3C1017/3ASOWOTR/3E2.0.CO/3B2](https://journals.ametsoc.org/doi/pdf/10.1175/1520-0450(1994)033/3C1017/3ASOWOTR/3E2.0.CO/3B2)

²⁴ For one example see Byers, Gary A. "New Evidence from Egypt on the Location of the Exodus Sea Crossing." Bible and Spade 19:2 (Spring 2006). biblearchaeology.org

²⁵ Note 19.