

# Exodus Decoded

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Tuesday 11 Sep 2007

## [Revisiting \*The Exodus Decoded\* \(speaking of unscrupulous filmmakers\)](#)

I don't know how I missed this one, but the November/December 2006 issue of *Biblical Archaeology Review* has an interesting review of *The Exodus Decoded*. The review is written by Manfred Bietak, an archaeologist featured—and, as it turns out, *misrepresented*—prominently in the film. After describing how Jacobovici took statements by Donald Redford out of context to make Redford appear to support positions with which Redford actually disagrees, Bietak writes,

The same thing happened to me. Short statements from my interview, cut out of context, come across as seeming to support the film's argument. In fact, I objected to dating the Exodus story to the Hyksos period and the reign of Ahmose. And I objected, not because I wanted to steer clear of Biblical chronology and history (the film claims that I was afraid of the Egyptian authorities—nonsense), but because archaeology does not provide any trace of Israelites before the Iron Age (shortly before 1200 B.C.E.). Written evidence is provided for the first time on the so-called Israel Stela from the fifth year of Pharaoh Merneptah's reign (c. 1209 B.C.E.). It is probably no coincidence that likely evidence of Proto-Israelites appears in the archaeological record in Egypt in the latter half of the 12th century B.C.E. in the remains of a typical structure known as a Four-Room House, considered the customary housetype of Israelites throughout the Iron Age until the Babylonian Exile.

So skilled was Jacobovici at twisting Bietak's positions that I was fooled into thinking Bietak agreed with Jacobovici about the relationship between the eruption of Thera/Santorini and the presence of Santorini pumice in the Nile Delta region. Actually, Bietak would provide an explanation very similar to the one I advanced in my long serial review of *The Exodus Decoded*:

The film should have made clear to the audience that, in fact, this argument skates on thin ice. First of all, the date of the Thera eruption is not settled. Radiocarbon dates place it at about 1720 B.C.E.; however, on historical grounds, it can be argued that it occurred in 1500 B.C.E. or even slightly later. Jacobovici's contention holds water, so to speak, only if 1500 B.C.E. proves correct.

What is, however, highly unlikely is that Egypt was shrouded in a cloud of volcanic ash. Vulcanologists and oceanographers have clearly shown (based on sediment accumulation) that the ash from the eruption was transported northeastward, across Asia Minor. The dark clouds never reached Syria, Palestine or Egypt.

The Theran pumice that does appear at Egyptian sites most likely arrived by sea or by trade. Jacobovici shows some of this pumice from my site of Tell el-Dab'a as proof of his position. However, the Theran pumice that massively appears at Tell el-Dab'a and at some other Egyptian and southern Palestinian sites is from the Tuthmoside period and later (several generations after Pharaoh Ahmose). The tephra-particles found in the Nile Delta by Daniel Stanley of the Smithsonian Institution were not found in a datable context and, according to our petrographic scientist, Max Bichler, were too large to be windborne. All this means that it is highly unlikely that volcanic signals from Thera affected Egypt, except that tsunamis may have inundated the northern parts of the delta.

So I publicly apologize to Professor Bietak for getting snookered by Jacobovici's editing. If any Higgsion readers still harbor illusions that Jacobovici might really have been onto something valuable or accurate in *The Exodus Decoded*, I urge you to read Bietak's article, "The Volcano Explains Everything—Or Does It?" in *Biblical Archaeology Review* 32.6 (November/December 2006), both to get an Egyptologist's assessment of Jacobovici's mistakes and to see how Jacobovici twists the experts' words, by creative snipping in the editing bay, to make it seem like those experts say things that they really don't believe.

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## [The Exodus Decoded: An extended review, epilogue](#)

In the last few minutes of *The Exodus Decoded*, James Cameron returns for some closing comments (I have indicated in square brackets the visuals that accompany these comments):

Here we were shown for the first time ancient hieroglyphics [the *Admonitions of Ipuwer*] and stone carvings [one of the shaft grave stelae] depicting the parting of the sea. We saw the biblical plagues deciphered [El-Arish granite shrine], and the archaeological [mummy] and geological [CGI roiling water] proof that they actually occurred. We even trekked to the real Mount Sinai [CGI maps, vaguely, transitioning to Cameron himself]. And then Jacobovici revealed what is arguably the discovery of the millennium: a gold image of the ark of the covenant.

If you have been following this series, then you can already identify many problems with Cameron's closing statement, and the implicit claims made by superimposing these specific images over Cameron's claims. Let me summarize by reviewing, in bullet-point fashion, Jacobovici's "exhibits." Throughout the summary, please remember that Jacobovici wants to associate the Hebrew exodus with the expulsion of the Hyksos, and he wants to date both to 1500 BCE.

- A. *The Ahmose stela*. The Ahmose Stela predates 1500—Jacobovici's date for the exodus—by several decades, and the "tempest" described on that stela does not closely resemble the biblical plagues story, as Jacobovici claims it does.
- B. *Pharaoh Ahmose*. The mummy itself, of course, proves nothing, and Jacobovici's attempt to connect Ahmose linguistically to Moses rests on phonemic coincidences that only exist in Jacobovici's distorted pronunciations.
- C. *The Beni Hasan tomb paintings*. Jacobovici misdates the paintings to 1700 BCE (they are really from about 1890 BCE) and tries to identify the people depicted with Jacob's family entering Egypt, even though the hieroglyphic captions clearly identify them otherwise.
- D. *The Jacob-har royal ring*. The ring belonged to a well-attested Hyksos ruler, bearing his own name, as you would expect from a signet ring. There is no evidence to connect the ring to Joseph.
- E. *Inscriptions at Serabit el-Khadem*. The presence of the divine name "El" in the inscriptions does not inherently connect the inscriptions to Israelite slaves, because Canaanites worshiped El for centuries before and after the emergence of Israel. Moreover, Jacobovici misrepresents the content of the inscriptions, and excludes inscriptions that don't sound "Israelite" to him.
- F. *Santorini/Thera pumice in Egypt*. Jacobovici wants the pumice to link the plagues to the Santorini eruption, but according to volcanologists the volcano erupted some 125 years before Jacobovici's date for the exodus, and the excavation layer in which the pumice was found postdates Ahmose's death.
- G. *The Admonitions of Ipuwer*. Jacobovici claims that this text describes the seventh plague, but in fact it does not describe the same thing Jacobovici describes. Moreover, the Ipuwer text predates Jacobovici's 1500 BCE date for the exodus by 200–600 years.
- H. *Santorini Ash in the Nile Delta*. To Jacobovici, this proves that the ash cloud reached Egypt and caused the plague of darkness. However, the amount of ash that reached Egypt was much too small to cause the plague of darkness.
- I. *Mass graves at Tell el-Daba*. Jacobovici thinks that mass graves at Tell el-Daba contain the corpses of victims of the tenth plague, but the corpses actually appear to be those of diseased soldiers who died over a longer period of time than one night (this according to Bietak, the excavator whom Jacobovici keeps invoking).
- J. *Ahmose's son, Prince Sapir*. The prince died young, about age 12, but of course this does not prove that he was a victim of a supernatural plague.
- K. *El-Arish granite shrine inscription*. Jacobovici mangles the inscription and ignores the fact that it dates from over a millennium after Ahmose to claim that it tells the story of the exodus from Pharaoh's point of view.
- L. *The Yam Suph/Reed Sea*. Jacobovici's identification of the Yam Suph may actually be correct, but not for the reasons he gives.
- M. *Santorini wall paintings*. Jacobovici wrongly claims that a particular wall painting from Santorini depicts a Minoan voyage to Avaris. He then locates some of these Minoans among Moses's followers in the exodus—which, of course, the painting cannot possibly demonstrate.
- N. *Mycenaean grave stelae*. According to Jacobovici, the Minoans who followed Moses out of Egypt somewhere hopped aboard ships (from the middle of the Sinai peninsula) and "returned" to the Greek mainland, specifically Mycenae, where they carved grave stelae illustrating the crossing of the sea. Jacobovici's interpretations of the stelae are highly suspect and depend in part on distorting the stelae.
- O. *Mount Sinai (Hashem el-Tarif)*. As with the Yam Suph, Jacobovici may be correct about the location of Mount Sinai, but the identification is not compelling. Moreover, his data that lead him to Hashem el-Tarif are flawed. Even if he is correct about the location of Mount Sinai, this does not prove anything else in his case.
- P. *The ark of the covenant*. I should say, the Mycenaean bird sculpture/pendant, because it does not really resemble the ark of the covenant. Jacobovici distorts the biblical description of the ark of the covenant and of the tabernacle in order to be able to claim a resemblance between the miniature sculpture and the ark.

For detailed discussions of each point, please consult the various individual posts in this long series. The summary, however, should serve as a helpful reminder that Jacobovici's entire presentation is a house of cards, poorly constructed out of misconstrued, misunderstood, and outright misrepresented data. *The Exodus Decoded* is a slick, attractive presentation, but lacks reliable substance.

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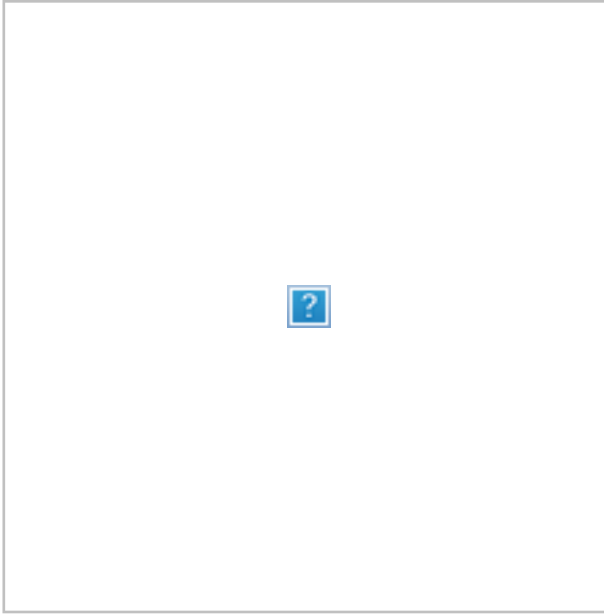
## [\*\*\*The Exodus Decoded: An extended review, part 15\*\*\*](#)

As *The Exodus Decoded* draws to a close, Simcha Jacobovici tries to bolster his unusual claim of Cretans (Minoans) leaving Egypt with Moses and then “returning” to Mycenae (on the Greek mainland) by drawing a connection between a piece of Mycenaean jewelry from Grave Circle A and the famous biblical ark of the covenant. For several minutes, *The Exodus Decoded* treats viewers to an attractive CGI reconstruction of the tabernacle as it is described in the book of Exodus. Jacobovici even gives us some footage from *Raiders of the Lost Ark*, and who can complain about that? However, in several respects, Jacobovici misstates the facts, and whether these misstatements are intentional or unintentional, they don't help his case. (The question of intentionality only goes to whether Jacobovici is a sloppy reader or a slick charlatan, not to whether he is correct.)

At the beginning of this segment, Jacobovici tells viewers that the entry curtain to the tabernacle was decorated with “winged lions, or griffons, figures usually associated with ancient Greece.” (As a side note, Jacobovici seems not to know, or care, that [griffons](#) [also spelled "griffin" or "gryphon"] were typically imagined as part eagle, part lion, and Greek representations thereof seem to derive from older ancient Near Eastern traditions.) Jacobovici says that the same figures decorated the tabernacle's inner curtain. A few minutes later, at the end of the *Raiders* footage, Jacobovici's voiceover claims that book of Exodus attributes to the ark of the covenant “a golden cover crowned by birds.” However, Jacobovici's “winged lions” and “birds” are nowhere to be found in the book of Exodus. Rather, the book of Exodus describes the interior walls (formed by curtains, since the tabernacle was designed to be portable) of the tabernacle as being decorated with *cherubim* (Exod 26:1), and it describes the lid of the ark as crowned by a pair of *cherubim*. When modern Americans think of “cherubs,” their thoughts might easily be drawn to fat-bottomed Botticelli angels, but in the ancient Near East cherubim would have been conceived of as human-headed, animal-bodied, winged creatures that attended or guarded the divine throne room. An ivory plaque from pre-Israelite Megiddo illustrates the Canaanite conception of such a creature, which in this carving flanks the king or prince on his throne.



An ivory plaque from Israelite Samaria (I think this one is from Samaria; there are other examples also from Samaria, Phoenician examples from Salamis, etc.) shows the same type of creature. And while I imagine that most of you have seen pictures of Assyrian *lamassu* (human-headed winged lions) and/or *shedu* (human-headed winged bulls), I might as well display one of the former here for good measure.



Creatures like these are what the biblical narrator had in mind gracing the walls of the tabernacle (and later temple) and the ark of the covenant. They are neither lions nor birds, nor people, but an amalgamated creature. By casting the curtains' cherubim as “winged lions,” Jacobovici hopes to draw a connection with ancient Greece. The connection is backwards; cherubim are well-attested in the ancient Near East well before griffons or the similar winged sphinxes are attested in Greece. It's a “native” Near Eastern creature, not an import from Greece. By casting the cherubim on the ark of the covenant as “birds,” Jacobovici hopes to draw a more specific connection, as we shall see.

Before we get there, however, another of Jacobovici's misreadings (or misrepresentations) of the biblical text must be corrected. Jacobovici claims that the book of Exodus describes “a four-and-a-half meter high altar for sacrificial animals.” Jacobovici's figures are way off. According to Exodus 27:1, the sacrificial altar was to be three cubits high. A cubit is about 18 inches; far from being 4.5 *meters*, three cubits is more like 4.5 *feet*—the perfect height for a normal man standing on the ground. Rather than thinking that Jacobovici somehow mistook feet for meters, it seems more likely that Jacobovici is attributing the *tabernacle* the gigantic altar described in 2 Chronicles for Solomon's *temple*; that altar is said (in 2 Chron 4:1) to have been 10 cubits high; 10 cubits is about 15 feet, which is pretty close to 4.5 meters. Jacobovici has also added a ramp to the tabernacle's altar, a detail not present in the Torah. Exodus 20:26 does prohibit the use of *steps* to ascend an altar (although Ezekiel 43:17 seems to ignore this little prohibition), but the description of the tabernacle's altar says nothing about ramps, nor does the description of Solomon's altar. Now I well know that many artists' depictions of Solomon's altar will show a ramp or steps leading up to the top of the altar, but this is guesswork based on the size of the altar. I also know that some cultic installations that survive from the Iron Age and even the Late Bronze Age attest to ramps or staircases (e.g., the altar or cult site that Adam Zertal excavated on Mount Ebal, and the big altar at Tel Dan), but some do not (e.g., the small limestone altar at Tel Dan, the cult stand from Ta'anach, the small incense altar from Ashkelon, the stone altar from Beersheba, and so on)—and while such a ramp makes perfect sense in the Chronicler's vision of Solomon's temple, the latter are more similar in size to the altar of burnt offering described in Exodus 27 (and 38). Simply put, under the influence of Chronicles or some other source, Jacobovici has vastly enlarged the altar described in the book of Exodus. The importance of this will become clear soon.

Now Jacobovici returns to Greece, looking for more support for his bizarre theory about Greeks leaving Egypt with Moses and then setting off from some unknown port (he never deals with this issue) to go to Mycenae. As the camera (filming at a weird angle) shows Jacobovici studying the stelae from Grave Circle A, his voiceover claims that the Bible says the tribe of Dan helped to construct the ark of the covenant. This is a *huge* overstatement. According to the book of Exodus, the chief artisan working on the temple project was one Bezalel, from the tribe of Judah; his assistant, Oholiab, was from the tribe of Dan. Having one of the two lead artisans on the project be from the tribe of Dan is a long way from associating the ark especially with that tribe. “Is it a coincidence,” Jacobovici asks, “that Homer calls the people buried at Mycenae *Danaoi*?” The answer to that question is rather complicated; the short version is that if there *is* a connection between Homer's *Danaoi* and the biblical tribe of Dan, it [probably went the other way](#). That is, the *Danaoi* may have been among the “Sea Peoples” who migrated eastward across the Mediterranean into the Levant, and may have then come into contact with some Israelites who absorbed the name, or already had a similar name, or something along those lines. Some scholars have suggested that Semites from Cilicia migrated westward to become the Danaoi, but this would have no connection with the Israelites whatsoever. Jacobovici is attempting to make something out of a mere verbal resonance.

Having transformed Homer's *Danaoi* into biblical “Danites,” Jacobovici then goes looking among the Mycenaean artwork for a representation of the ark. To no one's surprise (despite his use of the word “incredibly”), he claims to have found just such a “piece of priestly jewelry.” I'm not sure why he characterizes the jewelry as “priestly”; the Bible does not describe the Danites as priests, and previously Jacobovici has cast the Danites as artisans (far overgeneralizing from the one Danite mentioned in the biblical story). In any event, Jacobovici starts from the real object—shown in the screen shot on the left below—and then works more of his CGI magic to transform this fine little sculpture into a 3D diorama—shown in the screen shot on the right.



Jacobovici wants viewers to picture the little Mycenaean sculpture (at least three copies were found in the Grave Circle A shaft graves) as a representation of what a Danite might see as he looked at the ark of the covenant, and past it, up the ramp to the top of the horned altar of burnt offering. What's more, Jacobovici claims that this is how the objects would "appear when seen from the Holy of Holies, looking out. Until now, the only person who would have seen these objects from this perspective is Moses." If that latter sentence is true, one wonders how the Danites—a non-priestly tribe, of which Moses was not one—could have sculpted so fine a representation thereof! Be that as it may, there is one *huge* problem with Jacobovici's assumption that this lineup goes from the inside of the Most Holy Place, looking out. Specifically, the only text to describe a staircase (there are no such descriptions of ramps) leading up to an Israelite altar is in Ezekiel 43, where it is specified that the steps face *east*; the opening of the temple is also supposed to face east, which would put the ark of the covenant at the far *western* end of the temple, in the Most Holy Place—so what is Jacobovici's ark of the covenant doing sitting at the base of the ramp in his diorama? There is no textual justification for this; according to Ezekiel 43—which pertains to an idealized, visionary temple (no Hebrew Bible texts say anything about a ramp or staircase in Solomon's actual temple, much less the tabernacle)—the ramp should be on the far side of the altar from the ark of the covenant, completely concealed behind it from the perspective of the Most Holy Place, looking outward.

In all of this talk about ramps, please don't forget that the book of Exodus says nothing about a ramp, and with good reason: in Exodus, the altar of burnt offering is only 4.5 feet tall! The problems with Jacobovici's elevation of the altar to such a great height—making it about three times as tall as the biblical narrative describes for the tabernacle—has already been described above, as has Jacobovici's substitution of birds for cherubim. But that doesn't stop him from claiming that "At last, we know what the ark of the covenant looked like." Balderdash. The mockup in *Raiders*, though its cherubim are anthropomorphic rather than theriomorphic, is a better visualization of the biblical description.

This concludes the presentation of "evidence" in *The Exodus Decoded*. I'll be back in Part 16 with comments on James Cameron's and Simcha Jacobovici's wrap-up remarks, and offer some wrap-up remarks of my own.

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Wednesday 18 Oct 2006

## [\*\*\*The Exodus Decoded: An extended review, part 14\*\*\*](#)

About twenty minutes (excluding commercials) from the end of *The Exodus Decoded*, Jacobovici turns his attention to Israel's wilderness experience and the location of Mount Sinai. He starts this segment by claiming that the seismic activity behind the ten plagues also led to oil and gas fires in the Sinai peninsula, and that these fires produced "just as the Bible says ... a pillar of smoke by day and a pillar of fire by night, beckoning them into the desert." (The ellipses represent the removal of the single word "is," just to make the syntax flow well in the previous sentence). Curiously, the footage over which this claim appears shows *multiple* fires—how would Moses and the Israelites have known which one to "follow," especially since a "pillar of fire" above an active gas vent or something like that would not be moving through the desert "just as the Bible says"? Moreover, in Jacobovici's footage, the fires are clearly visible in the daytime, not obscured by smoke. Furthermore, the Bible does not say that the Israelites were led by a pillar of *smoke* (קִיטָר) but of *cloud* (עֲנַן). Here, as in other parts of the film, Jacobovici has will-nilly altered the text's claims, "explained" the modified claims "scientifically," and then claimed that his explanation is "just as the Bible says."

Jacobovici attempts to locate Mount Sinai on a map by, to speak rather loosely, triangulating its position based on distances given in the Bible. Before he gets to the actual data, Jacobovici states, "Many would argue that identifying Mount Sinai would be tantamount to corroborating the biblical tale." I'm not sure who these "many" are, or why this should be believed to be true. If we could reach certainty that a particular mountain was indeed the mountain that the biblical writers had in mind when they wrote of Mount Sinai, all that locating this mountain would prove is that the mountain itself is not imaginary or, to use Jacobovici's term, merely "legendary." It would not prove that Moses actually got ten commandments from God there.

With a flourish typical of *The Exodus Decoded*'s "we were there first!" rhetoric (although quite often the connections proposed have been around for many years), Jacobovici tells viewers that "adventurers" have been seeking Mount Sinai for "thousands of years," but have always ended up in the wrong place. Of course, the real test is not whether the rhetoric is annoying, but whether the data hold up. Jacobovici first takes viewers to Jebel Musa, the site of St. Catherine's monastery, a mountain identified in Christian tradition as Mount Sinai since the third century CE. Jacobovici's objections to Jebel Musa have all been heard before, and they are all quite reasonable. On a beautiful CGI relief map of the Sinai peninsula, Jacobovici traces the proposed "northern," two "middle," and "southern" routes of the Israelites through the Sinai peninsula. Jacobovici rightly rejects the northern route, since the biblical narrative explicitly says that the Israelites did not go by a coastal route (although Jacobovici seems not to realize that this wreaks havoc with his notion that some of those who followed Moses out of Egypt and to Mt. Sinai then sailed "back" to Greece). Since Jacobovici has already (and, as I said, quite reasonably, though not in much detail) ruled out Jebel Musa, this also rules out the southern route.

Jacobovici uses three biblical data to try to locate Mt. Sinai. First, according to Jacobovici, Mount Sinai is a fourteen-day journey from a place in Egypt called Elim, which Jacobovici says is "easily identified" just south of Lake Balah. There are at least a couple of significant problems with Jacobovici's treatment of this biblical "coordinate." First, note that Jacobovici places Elim fourteen days from Mount Sinai, and "just south" of Lake Balah. According to Exodus 15:22 says that the Israelites went a three days' journey into the wilderness of Shur after crossing the sea, then went to Elim, and then on into the wilderness of Sin. The idea that Elim would represent a backtracking toward Egypt seems bizarre to me, and the book of Exodus does not hint at any connection between Elim and the sea, but the book of Numbers does indicate a stop by the Yam Suph in between leaving Elim and reaching the wilderness of Sin (Numbers 33:10). The usual identification of Elim, by the way, is much farther south than Jacobovici indicates, but then the usual identification of Elim is largely guesswork; curiously, Jacobovici's map places Elim closer to the traditional location than to the site the voiceover describes. The real problem is not Jacobovici's identification of Elim—about which the most that can be said is "maybe so, maybe no"—but with Jacobovici's mathematics. As far as I can tell, the only way to derive Jacobovici's elapsed time of fourteen days' journey from Elim to Mount Sinai is to take the date given for the Israelites' arrival at Sinai, "the third new moon" (the first of the month), and subtract the date given in Exodus 16:1, "the fifteenth day of the second month." The elapsed time between the fifteenth day of the second month and the first day of the third month would be two weeks, Jacobovici's fourteen days. So far, so good, but the problem is that this fourteen-day trip *does not start at Elim*. Read Exodus 16:1 carefully: "The whole congregation of the Israelites set out from Elim; and Israel came to the wilderness of Sin, which is *between Elim and Sinai*, on the fifteenth day of the second month after they had departed from the land of Egypt" (NRSV). Elim is some unspecified distance from "the wilderness of Sin," and it is from this wilderness that it takes the Israelites fourteen days to enter "the wilderness of Sinai" per Exodus 19:1. Thus we have two problems with using Elim as a coordinate for trying to find Mount Sinai: the identification of Elim itself is ambiguous, and its distance from Mount Sinai (taking the biblical narrative at face value) is ambiguous. These ambiguities make Elim practically useless as a coordinate for triangulating Mount Sinai's location. (I don't know whether Jacobovici's estimate of how far the entire group of Israelites could have traveled in one day is realistic or not, or whether he has adequately taken into account terrain variances for the trip; Bryant Wood [see below] claims that Jacobovici has vastly overestimated the distance a large group could travel in one day.)



Jacobovici's second biblical datum is the claim that Moses first encountered God at the burning bush on Mount Sinai itself (see Exodus 3:1 and, perhaps more importantly though overlooked in *The Exodus Decoded*, Exodus 3:12). Therefore, Jacobovici infers, Mount Sinai must be "within flock-grazing distance of Midianite territory." It is worth noting that Exodus 3 calls the mountain of God "Horeb," not "Sinai," and we should reckon with the possibility that the different names stem from different Israelite traditions, and that these distinct traditions might not cohere with one another on the location of Sinai itself. Jacobovici's assumption that data from different streams of biblical tradition will cohere with one another may not be well-founded. If not, this would introduce a serious problem with Jacobovici's procedure, but a problem owing more to the nature of the source material than to Jacobovici's reasoning. Within the framework of Exodus 3 and its larger source tradition, Jacobovici's inference is entirely reasonable. Midian, of course, is in Arabia, not the Sinai Peninsula, which is one of the arguments advanced by proponents of identifying Mount Sinai with Jebel el-Lawz in western Arabia. Jacobovici, though, claims that Midianite remains have been identified at Timnah, which is deep in the southern Arabah, perhaps 27.5 km or so north of the northern tip of the Gulf of Aqabah. I do not know much about the excavations and discoveries at Timnah, but Jacobovici's claim is consistent with the very little I've read about the site. Jacobovici's scenario is certainly

more plausible than those offered by proponents of Jebel el-Lawz.

Jacobovici's third biblical datum comes from Deuteronomy 1:2, "By the way of Mount Seir it takes eleven days to reach Kadesh-barnea from Horeb." As an aside, although the specific identification of Mount Seir is uncertain, it would seem to be in Edomite territory, in a ridge that runs down east of the Dead Sea all the way down to Timnah and its environs. If Mount Sinai is *not* Jebel el-Lawz in Arabia (and I don't think it is), I have no idea why anyone would *want* to go from Kadesh-barnea to Mount Horeb by way of Mount Seir. It seems like a strange route to me, and the circuitry of the route should be taken into account while trying to measure the "eleven days." Jacobovici, however, doesn't take the phrase "by the way of Mount Seir" into account; he simply draws an arc showing an eleven-day journey from Kadesh-barnea. Also, 1 Kings 19:4–9 throws a monkey wrench into the machinery by saying that it took Elijah—one man traveling alone—41 days to reach Horeb from Beersheba. Beersheba is nowhere near a thirty-day journey from Kadesh-barnea. Using Jacobovici's figure of 15 km per day (which, remember, is for a large group of people



traveling with children, senior citizens, and flocks), Elijah should have been able to get from Beersheba to Kadesh-barnea in just 5 days. Elijah's journey is, in fact, one of the data that supporters of Jebel Musa cite in its favor. While the circuitry of the route is a problem in Jacobovici's own reasoning and lack of scrupulous attention to the actual details of the text, the Elijah problem points up the ambiguity of the source material itself. The biblical traditions about the location of Mount Sinai/Horeb may simply be too confused to provide the kind of firm geographical data that Jacobovici wants.

In any event, using these three data points leads Jacobovici to a relatively small area in the Sinai peninsula, highlighted in blue on the CGI map. Based on the presence of "sanctuaries," Jacobovici narrows his search down to a specific mountain, which he calls "Jebel Hashem el-Tarif," more frequently found labeled as "Jebel ash-Sha'ira." [Bryant Wood](#), a (very) conservative interpreter, writes this about Jacobovici's triangulation:

Jacobovici's methodology in attempting to locate Mt. Sinai is admirable in that he utilizes Biblical data. Unfortunately, some of his information is incorrect. He bases the location on the distances the Israelites could travel within the Biblical timeframe. He begins by saying it took the Israelites 14 days to travel from Elim to Mt. Sinai. Elim, he suggests, is located at Ayun Musa on the northeast shore of the Gulf of Suez, which is no doubt correct, but his timeline is off. According to Exodus 16:1, after the Israelites left Elim, they "came to the Desert of Sin, which is between Elim and Sinai, on the 15th day of the second month after they had come out of Egypt." They then arrived at the Desert of Sinai a month later (Ex 19:1; Nu 33:3). So, the travel time from Elim to the Desert of Sinai was more than 30 days, not 14 days. The daily rate of travel Jacobovici assumes, 15 km (9 mi) is also incorrect. Pastoralists traveling with their flocks can go no more than 10 km (6 mi) per day (Wood 2000). In addition, one cannot simply multiply a rate of travel times the number of days traveled and draw a straight line on a map to locate Mt. Sinai. The ancient routes and the zigs and zags and ups and downs of traveling by foot in a rugged terrain must be taken into account. Although Hashem el-Tarif may be a valid candidate for Mt. Sinai, one cannot arrive at that identification using Jacobovici's calculations.

But what of Jacobovici's other "evidence" for the identification of Hashem el-Tarif as Mount Sinai? First, Jacobovici claims, the mountain is surrounded by a "plateau" that could have held "hundreds of thousands" of Israelites. Of course, if the biblical numbers are not exaggerated, you don't just need room for "hundreds of thousands" of Israelites, but for *over two million* Israelites; the figure of approximately 600,000 exodus-ing Israelites, given in the book of Numbers, applies only to males 20+ years old who are physically fit for war; it does not count any women, aged men, infirm men, or boys age 19 and under. I don't actually know whether the plateau could hold that many people—but then, I think the numbers are vastly exaggerated, if there's any historical reality to the exodus story at all, so I'm not really worried about, or impressed by, the size of the plateau. (By the way, there's an interesting tension in Jacobovici's narrative here; on the one hand, he acts like the mountain is hidden away in a military zone, but three minutes later he says the mountain is easily accessible, right on the main highway.)



Second, according to Uzi Avner of the Arava Institute for Environmental Studies, who appears on-screen in *The Exodus Decoded*, this particular mountain is surrounded by a high concentration of "open-air sanctuaries." As it turns out, the Bible says nothing about any such sanctuaries, so the connection with the exodus is tenuous. Jacobovici's reasoning seems to be that the Bible refers to Sinai as a "holy mountain"—though in fact the Bible uses this designation overwhelmingly for *Zion*, not Sinai—and therefore, there must have been sanctuaries there. Certainly the Bible narrates some worship activities going on there, but Jacobovici doesn't present anything that would link these sanctuaries specifically to an Israelite presence. If Hashem el-Tarif is really the biblical Mount Sinai, and if the various "sanctuaries" around the mountain are ancient (nobody in the film speaks to this

point), then we would expect to find among them Moses's twelve pillars (Exodus 24:4). But nothing like this is introduced by Jacobovici, nor have I found any indication of such at Hashem el-Tarif in any other mention of the mountain. Third, Jacobovici shows footage of a "cleft in the rock" atop Hashem el-Tarif, but such a feature is hardly unique to this mountain. Fourth, Jacobovici says that a holy mountain should have gravesites of "holy men," but this criterion is patently *not* drawn from the Bible, as the Bible says nothing about Sinai having any such gravesites. Rather, this criterion is drawn from Jacobovici's own thinking about what a "holy mountain" *must* have—and undoubtedly from the fact that Hashem el-Tarif does have such gravesites. Finally, Uzi Avner shows Jacobovici some calcification that he says is evidence of an ancient natural spring, which Jacobovici claims the Bible says should be found at the top of Mount Sinai. In fact, the book of Exodus says nothing about any such spring, nor does Deuteronomy, nor does 1 Kings 19 (Elijah's visit to Horeb). The closest thing I can find to such a claim comes from Exodus 17, set at Massah/Meribah. The text reads in part as follows:

The LORD said to Moses, "Go on ahead of the people, and take some of the elders of Israel with you; take in your hand the staff with which you struck the Nile, and go. I will be standing there in front of of you on the rock at Horeb. Strike the rock, and water will come out of it, so that the people may drink." Moses did so, in the sight of the elders of Israel. (Exodus 17:5–6, NRSV)

The text does not refer to a natural spring, but a miraculous provision of water. It also does not place this issue of water on top of Mount Sinai—in fact, the later narrative is emphatic about the people *not* going up on Mount Sinai, and not even *touching* the mountain. If the small, ancient spring on the top of Hashem el-Tarif reflects this "miracle" (no miracle at all, according to Jacobovici—like everything else in the story), then we must conclude either that the people really did swarm all over the mountain to get the water, or that Moses carted enough water for "several hundred thousand Israelites" (Jacobovici's phrase from earlier in the program) down the mountain. Or maybe he had magically animated broomsticks that helped him. It's entirely possible, of course, that some such natural spring lies behind the biblical text, and that it supplied water for a much smaller group, and that the mountain and the Israelite group have been magnified in the retelling over hundreds of years—but that's not what Jacobovici keeps claiming throughout *The Exodus Decoded*. He keeps claiming that his reconstruction *matches* the biblical story, when in fact, it does not.

The "fit" between Hashem el-Tarif, as described in *The Exodus Decoded* (everything I know about the mountain comes from the program itself), and the biblical Mount Sinai is thus, as you can see, somewhat "loose." Jacobovici's identification is marred by the distance problems described above, and the entire procedure is limited by our inability to show that the source materials from which Jacobovici draws actually cohere in their own "understandings" of where Mount Sinai lies. Thus, it cannot be said that Jacobovici is certainly right. But it also cannot be said that Jacobovici is certainly wrong about the identification of Hashem el-Tarif as Mount Sinai. He *might* be right. He *might* be wrong. The case is not closed.

If you are interested in exploring more about the location of Mount Sinai, play around with the interactive map below. Please note that the map was prepared several years ago, long before *The Exodus Decoded* (so Hashem el-Tarif was not on my radar) and when I knew less about the debate than I now do.

*Note: The map does not extend far enough east to show the position of Jebel el-Lawz accurately. Jebel el-Lawz is farther east than shown here.*

Read the whole series: [Part 1](#) | [Part 2](#) (with [addendum](#)) | [Part 3](#) | [Part 4](#) | [Part 5](#) | [Part 6](#) | [Part 7](#) | [Part 8](#) | [Part 9](#) | [Part 10](#) | [Part 11](#) | [Part 12](#) | [Part 13](#)

[16 comments](#) [Christopher Heard](#) | [Bible \(specific texts\)](#), [Exodus Decoded](#), [archaeology](#), [television](#)

Sunday 15 Oct 2006

## [\*\*\*The Exodus Decoded: An extended review, part 13\*\*\*](#)

*Note to readers:* It's been some time since my last *Exodus Decoded* post. On the one hand, I've been very busy offline. On the other hand, I am by no means one of the cognoscenti when it comes to Mycenaean artwork, so I have had to do a lot of research for this installment. It's taken a lot of time, but here it is. Those of you who do not normally follow the comments might be interested in the comments attached to installment 12.

Just after *The Exodus Decoded* (excluding commercials) hits the one hour mark, the program takes a bizarre twist. Okay, I know: bizarre twists are not exactly unheard-of in the first hour either, but this one takes the cake. *The Exodus Decoded* opened with some snarky asides about scholars who think of the exodus story as a "fairy tale" (though almost none would actually use such a phrase). The whole tone of the program has been one of trying to demonstrate that the biblical story of the exodus is historically reliable, although Jacobovici actually fails in this regard because so many of his reconstructions don't actually match the biblical narratives. Two-thirds of the way through *The Exodus Decoded*, however, Jacobovici departs *completely* from the biblical narrative *or* any credible historical reconstruction by claiming that "some of the people



that followed Moses across the parted sea, and later to Mount Sinai, did not follow him to the promised land. They boarded ships, and sailed in an unknown exodus to Greece.”

To prove this *prima facie* implausible contention, Jacobovici first presents a Minoan wall painting that, according to Jacobovici, presents a “map” of sea travel from Egypt to Santorini. According to Jacobovici, the city depicted in this wall painting is Avaris, and Minoan-style artwork has been excavated from Avaris. Jacobovici believes that this data gives him “intimate contact between Greece and Egypt at the time of the exodus.” Of course, whether Jacobovici has the “time of the exodus” right is precisely one of the issues, since his date agrees with *no one else’s*, but let’s leave that issue aside for the moment since I’ve explored it at some length in earlier installments of this series. Instead, let’s focus on Jacobovici’s next leap: “As a result, it’s perfectly reasonable to assume that some of the followers of Moses came from the area of ancient Greece, and it’s quite possible that some of these people returned to Greece after the exodus.” This isn’t reasonable; it’s *ridiculous*. See if you can follow the chain of illogic any better than I can: (1) Minoan-style artwork has been excavated from Avaris; (2) therefore, there were Minoans living peaceably in Avaris; (3) therefore, we are entitled to assume that some of them followed Moses out of Egypt. The link between (1) and (2) is weak—the artwork might have been imported, rather than the work of a “Minoan enclave” living in Avaris. I do not know enough about this artwork or the context in which it was found to know, and I don’t have easy access to Bietak’s excavation reports in my local library. The link between (2) and (3), though, obtains only in Jacobovici’s fevered imagination. Despite the biblical narrator’s comment that a “mixed multitude” accompanied the Israelites out of Egypt (Exodus 12:38)—which Jacobovici, for whom biblical details seem not to matter very much, doesn’t actually mention—we are certainly *not* entitled to assume that *every* non-Egyptian ethnic group living in Egypt was represented in that “mixed multitude.” Moreover, it doesn’t make a lick of sense to think that Minoan traders (as Charles Pellegrino characterizes them for Jacobovici) living in Avaris, with enough wealth and leisure time to paint pretty decorations in their houses, would have joined up with a slave revolt, nor that they would have been kicked out along with the despised Hyksos. The presence of any such Minoans among Moses’s followers would be, in a word, inexplicable. I am also perplexed as to *where* these hypothetical exodus-ing Minoans would have boarded those ships, and why they would have gone to Mycenae, as Jacobovici posits (see below), instead of back home to Crete.

In an effort to prove that some participants in the exodus ended up in Greece, Jacobovici goes to Greece looking for “Israelite swords and Egypt’s golden treasures.” Here again Jacobovici goes in for a nice bit of, well, pure invention. According to Jacobovici, “The Bible says that Moses and his followers left Egypt with great quantities of swords and Egyptian gold.” *No, it doesn’t!* Anyone familiar with the exodus story knows that Jacobovici is *partially* correct; the book of Exodus does claim that the Israelites “borrowed from the Egyptians objects of silver and gold, and clothing.” But the exodus story in the Bible says nothing about “great quantities of swords.” The story does indeed refer to some Israelites having “swords” later on, during the attack by Amalek (Exodus 17) and the golden calf incident (Exodus 32), but there is no emphasis on the Israelites leaving “Egypt with great quantities of swords.” Yet Jacobovici apparently *needs* for the story to emphasize swords, and so he invents a biblical claim that doesn’t exist and pairs it up with one that does. Slick.

Jacobovici next takes viewers to the “shaft graves” at Mycenae, first excavated in Henry Schliemann in 1876. These graves are located inside a circular enclosure, and the whole site is appropriately called “Grave Circle A.” “Surprisingly,” Jacobovici says, “they contained a treasure-trove of swords and Egyptian gold.” Schliemann himself connected these treasures, as Jacobovici correctly informs viewers, with Agamemnon and the heroes of the Trojan War. But then Jacobovici pulls another chronological sleight-of-hand, claiming that “scholars soon discovered that the people who were buried in the tombs lived about 300 years before Agamemnon. They lived around 1500 BCE.” There’s that date again. At the risk of telegraphing the punch a little, I’ll go ahead and tell you what I’m sure you’ve already guessed: Jacobovici will soon try to draw a connection between the corpses interred Mycenaean shaft graves and his (imaginary) Minoans who left Egypt with Moses “around 1500 BCE.” Unfortunately for Jacobovici’s scenario, he has the cart before the horse. According to William Taylour, *The Mycenaeans* (Praeger, 1966), p. 78, “The *last* interment in Grave Circle A is dated to about 1500 BC.” Oops. If the *last* shaft grave interment dates to around 1500 BC, then the entombed corpses *predate* Jacobovici’s 1500 BCE exodus. Jacobovici also fails to tell his viewers that *another* group of shaft graves—this one called “Grave Circle B”—was discovered in 1951, and although its tombs are in the same style as Grave Circle A, they are *older* than those in Grave Circle A. The grave styles obviously represent a local tradition that dates back significantly *before* 1500 BCE. Once again, Jacobovici ignores pertinent facts and treats chronology like Silly Putty, and the results are unconvincing when the actual facts are considered.

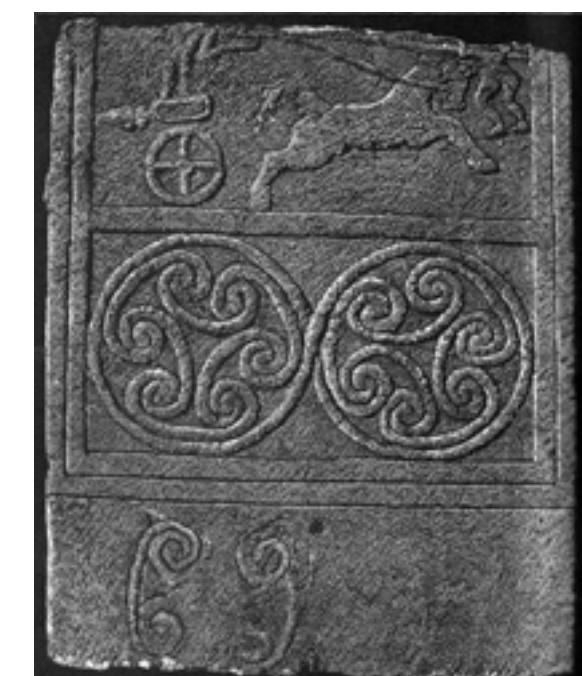
In order to connect the dearly departed in Grave Circle A to followers of Moses, Jacobovici ventures an idiosyncratic interpretation of the artwork found on some of the stelae associated with the shaft graves. Jacobovici grandly claims that “The meaning of the images on the gravestones has never been deciphered—until now.” This would undoubtedly come as a shock to dear professor Schliemann, the original excavator, who devoted six pages of his massive excavation report to “deciphering” the images! See Schliemann, *Mycenae: A Narrative of Researches and Discoveries at Mycenae and Tiryns* (Blom, 1967 reprint of the 1880 edition), pp. 80–85; see also the work of one of Schliemann’s early admirers, C. Schuchhardt, *Schliemann’s Discoveries of the Ancient World* (trans. Eugénie Sellers; Aveland, 1979 reprint of the 1891 edition), pp. 167–176. By this point in the film, Jacobovici’s claims to be making unprecedented discoveries have grown quite tiresome.

When he actually turns to examine the stelae from Grave Circle A, Jacobovici examines only *one* of the *three* stelae treated by Schliemann himself. This remarkable selectivity is really quite important, because Jacobovici *dismisses* the standard interpretations of the *other two* stelae *as if* they were interpretations of the stela upon which he focuses his attention. Here's what Jacobovici has to say:

If you ask scholars, "What is it?," they say "Well, it looks like a a hunt"—but there's no animal. Or, "It looks like a battle"—but there's no two people fighting. Let's look at it and let's see what in fact do the grave stelae of Mycenae actually testify to if we just look at it very simply, without any prejudice and without any preconceptions.

Astute readers are no doubt laughing out loud by this point, or perhaps weeping, for there is *no reason at all* to look at the Mycenaean grave stelae in connection with the exodus unless you are doing so with some pretty incredible preconceptions. Even the idea that they "testify to" something—something other than the artist's skill and range—is itself a preconception. Jacobovici is no neutral observer! Note also the slippage between the plural "do the grave stelae ... testify" and the singular "it" in the quotation above. There is not just one grave stela from Grave Circle A; there are several. Schliemann famously found three of these in a row, north to south, above a grave that he labeled as Grave V, and for convenience I'll start on the north and call them Grave V Stela 1, Grave V Stela 2, and Grave V Stela 3, moving toward the south.

"They say, 'Well, it looks like a hunt'—but there's no animal." Well, there certainly *is* an animal worthy of a hunt—on Grave V Stela 1, which Jacobovici does not show on-screen. If you find it difficult to see the photo shown here, which I scanned from Schuchhardt's 1891 book, click on the photo to see a much larger version. The stela is framed by lines and swirls. On the left you can see a chariot wheel, and above that—above the large crack—the charioteer, who holds the reins in his left hand and a sword in his right hand. Directly beneath the chariot wheel, you can see an animal apparently chasing an ibex or some kind of deer. Schliemann himself thought the animal on the left was a dog, and interpreted the entire panel as a hunting scene. Schuchhardt demurred from this opinion, and more plausibly identified the animal on the left as a lion. Schuchhardt also disagreed with Schliemann's opinion that the entire stela showed a single scene; Schuchhardt thought that the lion and the deer were a separate scene—really just filler—from the chariot scene. Thus Schuchhardt preferred to see here a battle scene.



Jacobovici focuses the majority of his attention on Grave V Stela 2, but he does briefly show Grave V Stela 3 on-screen. Since Jacobovici knows about Grave V Stela 3, it is quite remarkable that he introduces the stelae with "'It looks like a battle'—but there's no two people fighting." Grave V Stela 3 (again, the photo is from Schuchhardt, 1891, and you can view a larger version by clicking on the small picture here) clearly depicts a charioteer racing headlong toward an infantryman wielding a longish spear. At least, that's clear to Schliemann, and to Schuchhardt—but not to Jacobovici, who sees not a spear, but a staff. Yes, you guessed it: *Moses's* staff, with which he parted the waters and then bid them return to their place.

In order to understand Jacobovici's chain of reasoning, we now need to focus a lot of attention on Grave V Stela 2. Grave V Stela 2 is the best preserved of the lot. On Grave V Stela 2, you can clearly see a bunch of whirligig patterns in the upper register, while the lower register features a charioteer pursuing—or accompanied by—a man holding something in his left hand. It is not very easy to see that thing in the small image shown here, but if you click on the small image to get a larger version (again from Schuchhardt, 1891), you can see that the object is curved on both sides, that it seems flat on the end where it touches the man's hand, and that it comes to a point at the top. This slim, "sharpened" ovoid shape led both Schliemann and Schuchhardt, and almost all other interpreters, to consider this object a sword. Whether the charioteer is pursuing or accompanied by the sword wielder is unclear, but Schuchhardt reasons thus: "There is nothing to show whether the second man wishes to attack the charioteer or is merely running along as an escort; but the analogy of the preceding relief, as well as the raised sword, leads us to look upon him as a foe rather than as a friend [to the charioteer]."



By the way, George Mylonas, "The Figured Mycenaean Stelai," *American Journal of Archaeology* 55.2 (1951), pp. 134–147, rejected both the "hunt" and "battle" interpretations, and argued that what is pictured on all three stelae is a chariot race in which the men on foot are umpires. Neither the identification of a hunt, nor of a battle, nor of race is absolutely secure,

but Mylonas's arguments ought to be considered (not lightly dismissed, as Jacobovici does on-screen when presented with the race scenario by one Constantinos Paschalidis of the National Archaeological Museum in Athens). Mylonas points out that we only see one charioteer and one horse, whereas chariots in battle would normally have two horses (in fact, when Jacobovici later animates the stela using computer graphics, he adds a second horse), and also two charioteers—one to guide the horses and one to fire his bow. Yes, as Jacobovici points out, the charioteer on Grave V Stela 1 is armed with a sword, but it is not brandished in a position to be used, and is a stupid weapon to try to use from a moving chariot in any event, especially against someone in front of your horses. The weapon of choice to be used from a moving chariot is a bow, as artwork from Greece, Egypt, the Levant, and Mesopotamia readily attest. See Mylonas for more on this point: the charioteers' swords, on all three of the stelae, are not ready for use.

Now that you have seen the three grave stelae for yourself, and have begun to form your own tentative opinions about them, and have read brief explanations of Schliemann's and Schuchhardt's interpretations (and an even briefer description of Mylonas's), let's turn to Jacobovici's reading of the stelae. I'm going to quote Jacobovici at length here:

I almost want to whisper, like it's some kind of secret, because nobody realizes that they have a 3,500-year-old movie, if you will, three frames of the parting of the sea. And they don't know it. They don't know it. But look at it. Just look at it. It's so clear. Frame number 1 [grave stela 2—RCH] we see waves on the top and waves on the bottom—we actually literally see the parting of the sea. And this guy is on a chariot, chasing Moses, who is holding a staff. [As he says the word "staff," Jacobovici is pointing to the reins in the charioteer's left hand.—RCH] That's frame number 1. And right over here, this have [at least, that's what it sounds like on the videotape—RCH] frame number 2 [grave stela 3] in the movie. The water is gathering into whirlpools, and look what's happened over here! Everybody thinks the man with the staff is the loser but he's actually turned around. He's turned around. He's facing his enemy. He's occupying higher ground, and this guy is occupying lower ground. And look, there's walls of water coming. In the third frame, which is in another museum, even more hidden, we see this guy's been overturned, the water is engulfing them, the horses are upended, and the story is complete. [Long pause while the camera fixes on "frame 3."—RCH]

*The Exodus Decoded* then illustrates Jacobovici's interpretation of the stelae using CGI wizardry. His special-effects team tilts a reconstruction of Grave V Stela 2 on its side, then treats the images like a "pop-up book," turning the two-dimensional relief into a three-dimensional diorama. Then, in Jacobovici's diorama, the figure who stands on the right in Grave V Stela 2—whom Jacobovici identifies as Moses—spins around to face toward the charioteer in a pose similar to that on Grave V Stela 3. The whole effect is really quite impressive and fun to watch, but the interpretation that Jacobovici gives to the stelae is bogus.



To begin with, the idea that Grave V Stela 2 and 3, and the other stela from "another museum, even more hidden" (a museum that Jacobovici doesn't bother to identify) form a three-part series is a wildly gratuitous assumption. Schliemann found *three* stelae above Grave V in Grave Circle A, but Jacobovici uses only *two* of these in his reconstruction. To these he adds a third that apparently comes from somewhere else (more on that later). But why should Grave V Stela 2, Grave V Stela 3, and this other stela *not* from above Grave V form a sequence? If there *is* a sequential narrative on the grave stelae, rather than just individual, decorative scenes, doesn't it stand to reason that the the three actual stelae from Grave V would go together? And if Jacobovici is correct that Grave V Stela 2 and Grave V Stela 3 tell a story in that sequence, then shouldn't Grave V Stela 1 be the first stela in the sequence? Yet Jacobovici completely ignores Grave V Stela 1; viewers would never even know that it existed, based solely on what is presented in *The Exodus Decoded*. Scroll back up and look at Grave V Stela 1; the top is broken off, but even so the charioteer and chariot wheel are clearly visible, as is some sort of deer or antelope and another animal that most interpreters seem to regard as a lion, though Schliemann apparently thought it was a dog. Why does Jacobovici exclude this stela from consideration? It was found right beside stelae 2 and 3—unlike his third "panel." Grave V Stela 1 is the one that Schliemann and others have interpreted as a hunting scene; if the three are a group, this would suggest that the others might relate also to hunting scenes. Mylonas disagrees; he thinks that the lion and deer/antelope on Grave V Stela 1 are just "filler," like the swirly patterns (more on that immediately below), and that all three stelae depict a chariot race.

Second, Jacobovici's interpretation of the stela requires one to suppose that the decorative swirls are meant to represent water, but there is no real basis for this claim. Decorative swirly patterns are exceptionally common in Bronze Age Mycenaean artwork. Licia Collobi Raghianti, *The Magnificent Heritage of Ancient Greece: 3,000 Years of Hellenic Art* (Newsweek, 1979), p. 38 refers to the spirals on Grave V Stela A as "the ancient motif of interlocking spirals." The art historians' notion that the spirals are simply a finely-wrought decorative motif is supported by the ubiquity of these patterns across the ancient Aegean, but even more specifically by the finds from Grave Circles A and B at Mycenae. Consider these two cups, recovered from inside Grave V (beneath the three stelae) and Grave VI in Grave Circle A (click on any picture for a larger image):





Cup from Grave V



Cup from Grave VI

The cup from Grave V has interlocking swirly patterns all over it that are almost identical, though more skillfully done (the Bronze Age Mycenaean artists were masters at metalworking, but less skilled with stone), to those on Grave V Stela 2. One might, I suppose, still try to argue that the swirls represent liquid, since one drinks liquid from a cup, but the cup from Grave VI puts this notion to rest, since one doesn't drink plants from a cup! The floral/herbaceous artwork on the cup from Grave VI and the swirly geometric artwork on the cup from Grave V are both *decorative*, not *representational*.

Take another look at Grave V Stela 1, which shows a charioteer, a dog (Schliemann) or lion (most subsequent interpreters), and some kind of deer or antelope. On the left and right of the main scene are skinny swirlies, exactly of the sort that appears to the immediate left of the charioteer's shoulder on Grave V Stela 2. Lions and antelopes have manifestly nothing to do with the exodus story; Mylonas also argued that they have nothing to do with the charioteer, but are just filler, while other interpreters take the whole central scene together as a hunt. The use of swirly patterns alongside nature patterns is further attested on a small box found within Grave V (with those three stelae above; again, click for larger images).



Box from Grave V



Another panel, same box

At least two sides of this hexagonal box were decorated with scenes of lions and game animals (the picture on the right). Another side of the box featured a swirly pattern. I suppose one could argue that it is supposed to be the animals' watering hole, but there aren't any animals "drinking" from this "water." Once again, the swirls are in fact just a geometric decoration beloved by the Mycenaeans. Two more exhibits should close this case (as usual, click for larger images).



Dagger handle from Circle B?



Pectoral from Grave V

The item on the left is a dagger handle that, if memory serves, came actually from Grave Circle B. From bottom to top (in the picture), the handle is decorated with swirlies that end in lions' heads where the dagger blade meets the handle. Here two popular motifs, geometry and nature, come together again as on the decorated box. It is unthinkable to suppose that the Mycenaean artists thought lions were made out of water; the swirlies are decorative, not representational. The item on the right was a pectoral (complete with nipples) "worn" by one of the corpses in Grave V — Schliemann believed the corpse to be that of Agamemnon, though others have disagreed with this optimistic assessment. In any event, the pectoral is covered with decorative swirlies. Surely the artist did not think the corpse was made of water; the swirls are not representational.



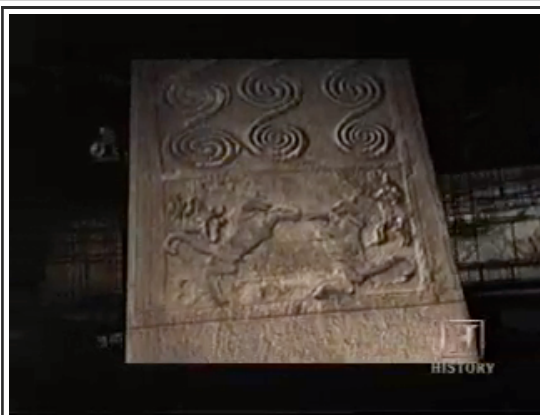
Incidentally, the Mycenaean were not the only ones fond of this motif. Consider this Hittite relief, executed with much greater skill than the Mycenaean grave stelae but exhibiting a strikingly similar scene. Unless we are to believe that the Hittite relief *also* depicts the exodus, the conclusion that the Hittite and Mycenaean reliefs both stand in a widespread Aegean artistic tradition of stereotyped chariot scenes is more or less inescapable. When you combine the use of swirls as a common geometric motif in Mycenaean artwork with the patent non-uniqueness of the scene on Grave V Stela 2, the idea that the stela specifically depicts the Hebrew exodus from Egypt becomes utterly implausible.

Third, Jacobovici's identification of the figures on Grave V Stela 2 and Grave V Stela 3 as the same people is a bit of a stretch. Unless you *presuppose* that the charioteers and the pedestrians are the same, there wouldn't be any reason to think this. Also, although Jacobovici wants the pedestrian figure to be Moses with his staff, the objects in the hands of the two pedestrians don't really look the same. The rightmost figure on Grave V Stela 2 holds something that looks rather like an elongated football, while the object held by the rightmost figure on Grave Stela 3 is much longer, thinner, and straight. Aegean archaeologists and art historians have usually interpreted the object on Stela 2 as a sword and the object on Stela 3 as a spear or staff. This is obviously an aesthetic judgment call, so click on the small images above and examine the larger images for yourself.

Finally, there is a smooth but ultimately deceptive bit of CGI trickery involved in Jacobovici's treatment of the third stela. Before I continue along this line, I should note that I have thus far been unsuccessful in identifying this stela or the museum in which it is housed. To my eyes, the stela certainly looks like it is carved in the same style as the stelae from Grave Circle A, and one of my colleagues who teaches art history and is actually a specialist on ancient Mediterranean art agreed but is not familiar with the specific stela or its provenance. I will proceed with this analysis on the assumption that the stela is genuine, and that it comes from Grave Circle A, though in the absence of additional information (which Jacobovici does not provide in *The Exodus Decoded*) I am not willing to assume that the stela was atop Grave V with the others shown above. Even so, it is telling that after first showing the stela—which for some reason has a large rectangular hole in it—Jacobovici later substitutes a CGI *reconstruction* that differs from the original in important respects.



Original stela



Reconstructed stela

The large rectangular hole in the middle of the original stela is quite odd, and since I have not been able to identify the stela and its history I have no explanation for it. The top register of Jacobovici's reconstruction, which simply fills in the central swirl pattern that has been obliterated by the big gap in the stela, is indisputably correct. His treatment of the animals, though, is a problem, on two counts. First, the *identification* of the animals as horses is almost certainly incorrect, and this identification is enhanced in the reconstructed stela by an *alteration* in the actual artwork of the real stela. In the original stela, the animals' front legs and faces are missing due to the large rectangular hold in the middle of the stela, but their *tails* are clearly visible, and they curve toward the animals' heads, over the animals' backs. (Click on the small images above for larger images that are easier to see, or visit [Scott Romesburg's web site](#) for a larger and better image than I was able to obtain—I assume that Scott's images are screen shots from *The Exodus Decoded*). In Jacobovici's reconstruction, however, the tails are turned outward, away from the animals, curling toward their hind legs. The reversal of the tails is not a mere incidental detail or an aesthetic *faux pas* by the CGI artists; rather, it is an absolutely necessary move if Jacobovici wants the audience to follow his reconstruction. Tails that curl toward the head, up over an animal's back, are characteristic of *lions* (and other leonine animals, like the mythical griffon) in Mycenaean art. To see evidence of this, just scroll back up and study Grave V Stela 1 and the decorated box from within Grave V (where the lions are quite stretched out in order to fit on the panels, but the curve of the tail is still evident). As further evidence, consider the lions illustrated on these daggers recovered from inside Grave V. Then compare to those lions' tails the horse's tail on Grave V Stela 2, as well as the tails of the deer/antelope on Grave V Stela 1 and the tails of the game animals on the decorated box from Grave V. The reversal of the tails on Jacobovici's reconstructed stela isn't just an innocent mistake; it completely changes the type of animal from a lion into a horse!



There is one more serious flaw in Jacobovici's reconstructed stela. Take another look at the bottom register of the "big rectangular gap" stela, just below the bottom of the rectangular gap (photo from Scott Romesburg's site, with better resolution than my little screen shots).



Just below the bottom of the big gap, you can see two marks that strikingly resemble the legs of the leftmost animal, strongly suggesting that the gap has mutilated a *third animal* that originally occupied the destroyed space. Jacobovici's reconstruction ignores this third animal. Most likely, this scene originally featured three lions, which Jacobovici's CGI wizardry transforms into two horses.

On balance, Jacobovici's suggestion that the grave stelae from Mycenae's Grave Circle A, Grave V (plus the third stela) depict the crossing of the sea in three panels, "a 3,500-year-old movie," does not hold water.

Read the whole series: [Part 1](#) | [Part 2](#) (with [addendum](#)) | [Part 3](#) | [Part 4](#) | [Part 5](#) | [Part 6](#) | [Part 7](#) | [Part 8](#) | [Part 9](#) | [Part 10](#) | [Part 11](#) | [Part 12](#)

[30 comments](#) [Christopher Heard](#) | [Bible \(specific texts\)](#), [Exodus Decoded](#), [Israelite and Judean history](#), [archaeology](#), [television](#)

Thursday 05 Oct 2006

## [\*\*\*The Exodus Decoded: An extended review, part 12\*\*\*](#)

Two-thirds of the way through *The Exodus Decoded*, viewers find filmmaker Simcha Jacobovici attempting to pin down the location of the Yam Suph, the biblical "Sea of Reeds" through which, according to the book of Exodus, the Israelites passed on dry ground to escape the pursuing Egyptians. Jacobovici proposes that the now-drained (mostly) Lake Balah is the body of water—much fuller and more extensive in ancient times—that the Israelites crossed. He may well be right, but he might equally well be wrong. James Hoffmeier, interviewed in *The Exodus Decoded*, has been a proponent of this view for some years. On the other hand, other scholars have proposed other sites; Otto Eissfeldt and Martin Noth would identify the Sea of Reeds with Lake Sirbonis, north of Lake Balah, and Umberto Cassuto would identify it with the Bitter Lakes, south of Lake Balah. It's fair to say that there is not, and has not been for a hundred years, any *consensus* on this question. Of course, that doesn't make Jacobovici's identification wrong. Like I said, he might be right.

Even if Jacobovici's (following Hoffmeier, Kenneth Kitchen, *et al.*) identification of the Yam Suph with Lake Balah is correct, some of his other claims with regard to the lake and the biblical episode of the crossing of the Yam Suph are, well, screwy. First, earlier in the program, he stated that the el-Arish inscription specified the location of the parting of the Sea, but it doesn't. In part 11 of this series, I detailed many problems with Jacobovici's treatment of the el-Arish inscription, so here let me just point out that *at most* what Jacobovici can get from the el-Arish inscription is the place name "Pekharti," which Jacobovici pronounces as "Pi-haroth" and connects to the biblical "Pi-hahiroth." The el-Arish inscription says nothing about this particular body of water (or, at the very least, not by any *name* that can be connected to Lake Balah). Second, Jacobovici once again makes a silly error by mistransliterating transliterated Arabic into erroneous Hebrew. On-screen captions in *The Exodus Decoded* claim that "Lake El Balah ... in Hebrew means ... the Lake Where God Devoured." Of course, it is absolutely preposterous to suppose that the name "Lake el-Balah"—which designated this body of water before the construction of the Suez Canal—preserves a *Hebrew* term. If there is a "meaning" to be found in the lake's name, we

undoubtedly should be looking for an *Arabic* term underlying the name “Lake el-Balah.” As it turns out, there is a perfectly good Arabic word بلح—*balah*—that means “dates” (as in the fruit), and Arabic ال, usually transliterated *el* or *al* in English, is just the definite article “the.” Now I don’t *know* that the name “Lake Balah” derives from the Arabic word for “dates”—none of the sources I’ve been able to find seem interested in giving a translation—but it surely is more plausible than connected the name to a *Hebrew* source. Oh, by the way, Deir el-Balah, south of Gaza, is spelled دير البلح in Arabic and [is said](#) to mean “Convent of the Dates” (I haven’t been able to confirm the translation “convent” for *deir*). And even if we *did* connect “Lake el-Balah” to a Hebrew source, the key verb would surely be בלח (the Hebrew equivalent, phonetically, of Arabic بلح) or perhaps בלה. There is in fact a Hebrew verb בלה, “to frighten,” but no such verb as בלח is attested in biblical Hebrew. In order to get “devoured,” Jacobovici would need for the underlying Hebrew word to be בלע, which doesn’t seem plausible as a reverse-engineering of “Balah” or of Arabic بلح. Once again, Jacobovici’s penchant for hearing Hebrew words were they aren’t misleads his viewers. And speaking of words that aren’t there, no source I can find—other than *The Exodus Decoded* and blogs and wikis parroting the program—calls the lake “El Balah.” All the sources I can find call it simply “Lake Balah” in English (this in books about the construction of the Suez Canal). Of course, if you take out “El,” then Jacobovici loses the alleged connection to any divinity. And in any event, even if we *should* connect “el-Balah” with Hebrew אל בלע (which, by now, you can see that we shouldn’t), that *still* wouldn’t give you, syntactically, “Lake where God devoured.” You would need either a relative pronoun or another form of the verb—a participle or infinitive, let’s say, so that it could be something like “Lake of God’s devouring.” But this is idle speculation, since “Lake of the Dates” makes so much more sense.

Turning now away from linguistics to science, Jacobovici claims, “Identifying the precise location of Yam Suph means that we can finally explain the miracle of the parting of the sea.” According to Jacobovici’s scenario, the cascading seismic activity set off by the pre-eruption earthquake beneath Santorini now caused the Nile delta region to start sliding into the Mediterranean Sea. Taking this “burden” off of the African (tectonic) plate allowed the plate to rise by 1–1.5 meters, Jacobovici claims. “In other words, the sea parted.” Try to picture what Jacobovici is suggesting here: the Delta drops while inland areas rise, such that “Water would have cascaded from higher ground to lower ground, and drained from pools and sinkholes, creating dry land for the Israelites to cross.” Of course, this doesn’t explain the drowning of the Egyptians. For that, Jacobovici posits that “further seismic activity, or another collapse of the delta, would have sent a major tsunami crashing against the coast.” Once again, Jacobovici’s “expert” on this is Charles Pellegrino, who claims, “And that’s exactly the description that we do have in the Bible.”

I am not well-versed enough in plate tectonics and geophysics to know whether or not Jacobovici’s scenario of a falling delta and rising plain could drain off water from Lake Balah such that a horde of escaping slaves could cross on “dry land,” though I confess to being skeptical. (It is worth noting that Jacobovici does not bother to say anything about the amount of *time* all this would take.) However, I am an attentive enough viewer to note that Jacobovici has *no* actual geophysical *evidence* for any such earthquake or tsunami, or for the alleged earthquake storm that perpetuated it. As with his “scientific” explanations for all the other plagues, the logic is circular: “The biblical text describes such-and-such, which could be explained by thus-and-so; therefore, thus-and-so happened, causing such-and-such.” The only evidence for the scenario is the notion that the alleged phenomena could produce effects similar to those described in the Bible. Yet even this latter claim is fraught with difficulty, for—contrary to Pellegrino’s assertions—the picture painted by Jacobovici and Pellegrino does *not* in fact match the biblical description. Here’s how the Bible describes the miracle at the sea:

Then Moses stretched out his hand over the sea. The LORD drove the sea back by a strong east wind all night, and turned the sea into dry land; and the waters were divided. The Israelites went into the sea on dry ground, the waters forming a wall for them on their right and on their left. The Egyptians pursued, and went into the sea after them, all of Pharaoh’s horses, chariots, and chariot drivers. At the morning watch the LORD in the pillar of fire and cloud looked down upon the Egyptian army, and threw the Egyptian army into panic. He clogged their chariot wheels so that they turned with difficulty. The Egyptians said, “Let us flee from the Israelites, for the LORD is fighting for them against Egypt.”

Then the LORD said to Moses, “Stretch out your hand over the sea, so that the water may come back upon the Egyptians, upon their chariots and chariot drivers.” So Moses stretched out his hand over the sea, and at dawn the sea returned to its normal depth. As the Egyptians fled before it, the LORD tossed the Egyptians into the sea. The waters returned and covered the chariots and the chariot drivers, the entire army of Pharaoh that had followed them into the sea; not one of them remained. But the Israelites walked on dry ground through the sea, the waters forming a wall for them on their right and on their left. (Exodus 14:21–29, NRSV)

Jacobovici’s scenario does not allow for “walls” of water on the Israelites’ right and left. Jacobovici’s scenario involves an earthquake rather than a “strong east wind”—and I think the biblical writers were smart enough to know the difference between these two (see 1 Kings 19:11 if you are tempted to disagree). Jacobovici’s scenario involves a large *excess* of water pouring in from the north, while the biblical story has the sea “return[ing] to its normal depth.” The simple fact is that the phenomena described in Jacobovici’s scenario do not match up with the phenomena described in the biblical story. This is a particularly important fact in light of two factors: first, that Jacobovici claims precisely that his scenario explains the miracle *as described in the Bible*, and second, that Jacobovici’s *only* evidence for any such plate rising or tsunami or earthquake

storm is the biblical story itself, which of course provides no such evidence. Jacobovici starts from the biblical story, invents an explanation for a *different set of phenomena*, and then claims that his explanation exposes “the science behind the miracles.” Evaluating his “science” takes more geophysical knowledge than I command, but the disconnects between his scenario and the story he claims to be explaining are plain for anyone to see.

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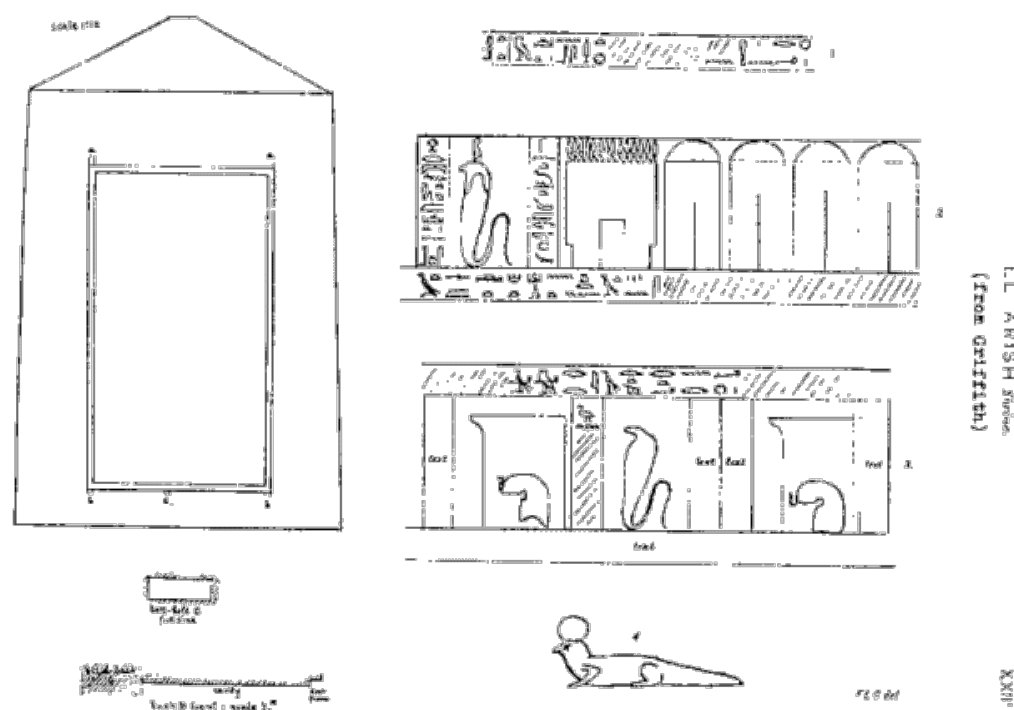
Wednesday 27 Sep 2006

## [The Exodus Decoded: An extended review, part 11](#)

I’m pleased to be able to begin this segment of my extended review of *The Exodus Decoded* with virtually unqualified praise for one of Jacobovici’s claims. As the program moves toward its third half-hour, James Cameron acknowledges that “Believers ... may feel that a scientific explanation of the biblical story takes God out of the equation.” Jacobovici then reappears and asserts, “But in the book of Exodus, God does not suspend nature. He manipulates it.” For the most part, this statement is correct. Most of the biblical plagues represent intensifications of phenomena the Egyptians may be presumed already to know quite well: swarms of frogs, insect infestations, diseases, hailstorms, and so on. However much I want to agree with Jacobovici’s statement, though, it must also be acknowledged that *some* of the biblical plagues, and the signs accompanying them—the water turning to blood, the death of the firstborn, and, earlier in the story, the “sticks to snakes” trick and Moses’s leprous hand—go well beyond a mere intensification of some natural phenomenon. And when Jacobovici then takes the next step to claim that “according to the Bible, we should be able to understand the science behind the miracles,” he’s really gone beyond what the biblical data will support. Okay, so maybe that praise wasn’t “virtually unqualified.” I wanted to say something nice, but I must acknowledge the limitations of Jacobovici’s approach and his claims, even when—as here—I tend to want to agree with them.

Another thing that Jacobovici gets right is his disconnection of the parting of the sea from the main body of the Red Sea as we normally think of it today. Jacobovici correctly notes that the biblical name for the sea that God parted for the Israelites is “Yam Suph,” more properly translated “Sea of Reeds” or possibly “Sea of the End.” (You’ll see it transliterated as “Yam Suf” in *The Exodus Decoded*; the transliteration “Yam Suph” is more common in modern scholarship, if only because it makes it a little easier for readers to perceive the final Hebrew letter ך in the transliteration.) The tradition of “translating” “Yam Suph” as “Red Sea” dates back to the Greek Septuagint, so it is a very old tradition. However, it’s virtually impossible to imagine the Israelites traveling from the Nile delta hundreds of kilometers south in order to cross over the main body of the Red Sea—in one night. Rather, if the Red Sea is involved, it would only be the northern tip of the western “rabbit ear” at the top of the Red Sea, known to us today as the Gulf of Suez. For many years, scholars have debated whether the Gulf of Suez or some other body of water was meant by the biblical writer who used the term “Yam Suph,” without any real resolution of the issue.

Now this is where Jacobovici’s typical methods start to resurface. “Using our dates for the exodus,” Jacobovici claims, “we tracked down an ancient artifact that records the precise location of Yam Suf. It also provides us with the first archaeological evidence for the parting of the Sea.” Using Jacobovici’s dates for the exodus is, as you know from earlier installments of this extended review, a very bad idea. There’s no need to rehearse all that here; go back and read the earlier installments if you need to. Instead, let’s focus on this artifact and its alleged revelations. For reference, I’ll be using [F. L. Griffith’s translation](#) of the inscription, as provided in Sean Mewhinney’s article “El-Arish Revisited,” *Kronos* 11.2 (1986).





Jacobovici claims that this artifact, the el-Arish inscription, “tells the entire story of the exodus from Pharaoh’s point of view.” Actually, it does no such thing. The text of the el-Arish inscription is a story about the gods, and it dates from Ptolemaic times, over a thousand years after Ahmose and Jacobovici’s date for the exodus. Moreover, on almost every point of interpretation, Jacobovici gets it wrong.

“The Bible calls Moses a king,” Jacobovici claims. “On this stone, Moses is called ‘the Prince of the Desert.’” He’s wrong on both counts. The book of Exodus does *not* refer to Moses as a king; the word “king” (Hebrew *melek*, מֶלֶךְ) occurs only 14 times in the book of Exodus, and in each case it’s referring to Pharaoh, never to Moses. I can’t find any other verse in the Bible that refers to Moses as a king, either. As for Jacobovici’s second claim, it makes it sound like Moses is unequivocally referenced in the inscription, though this is not true at all. Moses’s name does not appear in the el-Arish inscription. I also cannot find the phrase “prince of the desert” in the el-Arish inscription. There are references to a “great chief of the plain” and a “prince of the hills,” but it’s obvious from the context that these titles refer to a god, either Shu or Seb (Geb). Two big mistakes or misrepresentations, and we’ve barely gotten started on the el-Arish inscription.

“The Bible calls the Israelites ‘God’s people.’ The granite calls them ‘the evil ones.’” Well, if you have a reference to “God’s people” in one text, and a reference to “evil ones” in another text, those are obviously references to the same group, right? Once again, Jacobovici makes it sound as if the identification of the Israelites on the el-Arish inscription were as solid as the granite shrine itself, but that’s just not the case. The Israelites are not mentioned *by name* on in the inscription, and therefore any identification of the “evil ones” as Israelites must be justified on some other grounds, or must remain pure speculation. The el-Arish inscription *does* refer to “evil ones” or, in Griffith’s translation, “evil-doers.” However, it is clear from lines 24–28 of the inscription that these “evil-doers” are perceived as *invaders*, not as fleeing slaves:

Then the children of the dragon Apep, the evil-doers [of Usheru?] and of the red country came upon the road of At Nebes, invading Egypt at nightfall..... now these evil-doers came from the Eastern hills [upon] all the roads of At Nebes:

Also, lines 22–24 of the inscription make it clear that when the god Ra fought with (these? other?) evil-doers years later, he was *victorious*. This does not fit the story of the Israelites crossing the Sea at all. It’s not even close.

“And then,” Jacobovici intones, “the granite corroborates the miracle of the parting of the sea. The symbol can be read by anyone: three waves and two knives, ‘the parted sea.’” Exactly what the hieroglyphic symbols here—Jacobovici shows them on-camera—are unclear to me, insofar as I am very much an amateur when it comes to reading hieroglyphics. Neither F. L. Griffith nor Georges Goyon—two early translators of the el-Arish inscription, Griffith working in English and Goyon in French—seem to have quite known what to do with it. The three wavy lines are the sign for “water,” and can be used of a body of water; the function of the knife-like signs is unclear. Griffin apparently called it “the Place of the Whirlpool,” Goyon “the Hill of Two Knives.” Neither translated it “the parted sea,” which ought to be an indicator that Jacobovici’s glibness (“The symbol can be read by anyone”) is misplaced. To my surprise, Jacobovici has James K. Hoffmeier on camera opining that there could be a connection between the el-Arish inscription and the story of the parting of the sea in Exodus 14. How Hoffmeier can say this about a Ptolemaic-era text that clearly tells a mythological story about the gods Shu, Geb, and Ra is a mystery to me, and *The Exodus Decoded* doesn’t provide any additional details of Hoffmeier’s reasoning. Hoffmeier is well-known to biblical scholars as one who still tries to champion the historical reliability of the exodus, but I just don’t see how anyone who has read the text of the el-Arish inscription could come to this conclusion.

“To examine the text better, we got a pressing of the hieroglyphic. And as it turns out, the Egyptian text doesn’t just mention the parting of the sea, it also mentions a specific location next to where the sea parted. The place is called Pi-Harot, and today archaeologists know exactly where it was.” First, please recall that the text does *not* “mention the parting of the sea,” or at least not such that Griffith or Goyon recognized it. What Jacobovici and Hoffmeier see in the hieroglyphics is probably a result of wishful thinking. Second, note how Jacobovici makes it sound like the inscription associates the location that he calls “Pi-Harot” with the “parted sea,” whereas the actual inscription does nothing of the kind. According to the el-Arish inscription in Griffith’s translation, here’s what happened at “Pekharti” (Griffith’s transliteration of this place-name):

The majesty of Shu departed to heaven with his attendants: Tefnut was in the place of her enthronement in Memphis. Now she proceeded to the royal house of Shu in the time of mid-day: the great cycle of nine gods were upon the path of eternity, the road of his father Ra Harmakhis. Then the majesty of [Seb met her] he found her in this? place which is called Pekharti?: he seized her by force: [the palace was in great [affliction]]. Shu had departed to heaven: there was no exit from the palace by the space of nine days. Now these [nine] days were in violence and tempest: none whether god or man could see the face of his fellow.

The location “Pekharti”—Jacobovici’s “Pi-Harot,” proposed to be equivalent to biblical Pi-hahiroth—has nothing to do in the el-Arish inscription with any “parted sea” or any pursuit of “evil-doers.” In the inscription, “Pekharti” is the place where the god Seb (Griffith’s transliteration; usually transcribed as “Geb”) met and “seized by force” his mother Tefnut. The paragraph is entirely about conflicts between gods and does not in the slightest resemble the use to which Jacobovici puts it. As a side note, the word that Jacobovici pronounces as “Pi-Harot” appears only once in the el-Arish inscription. Goyon transliterated it as “Pi-Kharoti,” Griffith as “Pekharti.” Jacobovici wants this to be the Egyptian equivalent of “Pi-hahiroth” (פִּי הַחִירוֹת) from Exodus 14:2, 9, the name of a place where the pursuing Egyptians overtook the fleeing Israelites in the biblical story.

Unfortunately, I have not yet been able to find a good drawing or photo that clearly shows the hieroglyphic signs for this name, nor have I been able to find a transliterated transcription of the el-Arish inscription. Therefore, I can’t assess whether Griffith’s and Goyon’s *kh* represents the Egyptian equivalent of a Hebrew כ or a Hebrew ח, which would be important in assessing the proposed equivalence of this place name with the biblical Pi-hahiroth. But comparative phonetics is not the only deciding factor. “Pekharti” lies somewhere along a path from Memphis to “At Nebes” (Griffith; or “Yat-Nebes,” Goyon). Unfortunately, I don’t know, and haven’t been able to find solid information about, where this particular location lies.

In any event, place-names aside, the el-Arish inscription tells a story about the adventures of the god Geb. It has nothing to do with a human pharaoh faced with a slave escape, much less with any specific reference to fleeing Israelites. Consciously or not, Jacobovici repeats the same mistakes as Immanuel Velikovsky, many years before. Velikovsky also proposed to connect the el-Arish inscription to the biblical exodus, using the same alleged parallels as Jacobovici, plus a few others. The similarities between Jacobovici’s and Velikovsky’s treatments, and the disconnect between both and how the inscription actually reads, are such that Mewhinney’s comments about Velikovsky’s treatment apply equally well to Jacobovici’s:

[Velikovsky’s] interpretations of the el-Arish inscription are so obviously, blatantly wrong in so many particulars that it is hard to see why there should have been any controversy over the facts of the case, excepting only minor details. We find names altered and combined, words mistranslated, characters confused with one another or split into two, and events set in the wrong time and place. To permit Velikovsky to make the associations he does, one would have to take a sledgehammer to the shrine, smash it to bits, and reassemble the pieces in a different order.

It’s a pattern seen over and over again in *The Exodus Decoded*: Jacobovici grabs a few phrases from an ancient Egyptian text, pairs them up with snippets from the book of Exodus, and claims to have found “the same story” in both. In none of these cases, however, can Jacobovici’s claims stand up to an actual reading of the texts in question. Whether Jacobovici simply doesn’t know any better or is intentionally misrepresenting his “data,” *The Exodus Decoded* does a disservice to the viewing public.

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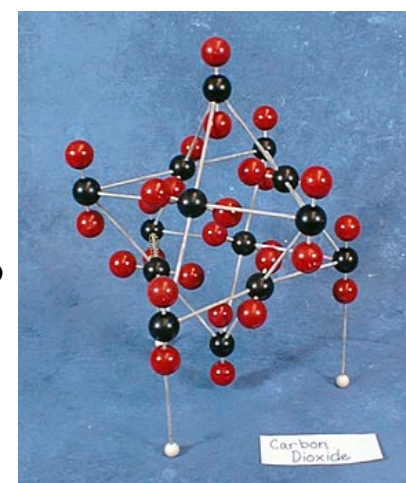
Saturday 23 Sep 2006

## [\*\*\*The Exodus Decoded: An extended review, part 10\*\*\*](#)

When I began this extended review of *The Exodus Decoded*, I had no idea it would go on this long or grow to these proportions. I suppose it’s appropriate, however, that the tenth installment of this extended review should deal with Jacobovici’s “plausible scientific explanation” (his words) for the tenth plague, the death of the firstborn.

Jacobovici explains the death of the firstborn as basically asphyxiation by carbon dioxide inhalation.

While the Israelites were involved in the Passover ritual, the Egyptians slept. And then it happened. Every firstborn male Egyptian died. Every house was affected. No one has ever been able to offer a plausible scientific explanation for the death of the firstborn. According to our scenario, at this point in the sequence of events that began some six months earlier, the gas leak that set the chain of plagues in motion would have finally erupted. Carbon dioxide would have seeped to the surface, and being heavier than air, would have killed animals and sleeping people before it dissipated harmlessly into the atmosphere.

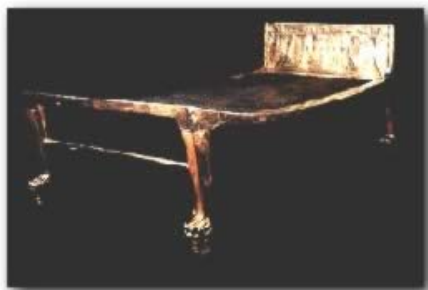


Once again, Jacobovici invokes the analogy of Lake Nyos in Cameroon. As other reviewers have pointed out, the Lake Nyos

analogy is very weak, as there is a significant difference between the still waters of a lake and the moving waters of a river. For the moment, let's set aside that problem—not to ignore it, for indeed it invalidates the entire analogy, but merely to see whether the *other* parts of the scenario work any better.

If one accepts the Lake Nyos analogy and the possibility of a carbon dioxide fog rolling across Egypt—implausibly filling *all* of Egypt, which is a lot bigger than Cameroon, although only a small part of Cameroon was affected by the Lake Nyos gas—the next big hurdle to overcome is the question of how this fog knew to selectively suffocate only the firstborn. Jacobovici has an answer ready for this objection, though:

Well, Egyptian firstborn males had a privileged position. They were the heirs to the throne, to property, title, and more. They slept on Egyptian beds low to the ground, while their brothers and sisters slept on rooftops, sheds, and in wagons. The Israelites, sitting up at their first Passover meal, did not feel a thing while the low-traveling gas suffocated the privileged Egyptian males sleeping in their beds.

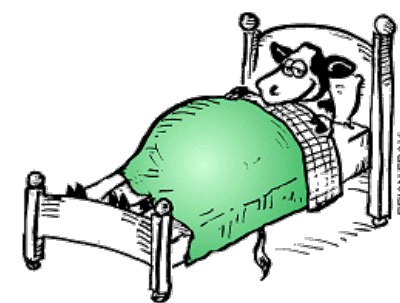


To begin with, I have been unable to definitively verify or falsify Jacobovici's claim about firstborn sons enjoying the "privilege" of sleeping on beds, to the exclusion of their siblings *and parents*; note that this addition of "and parents" is required in order for the scenario to work, for even eighth-born sons can have firstborn sons of their own. The inherent improbability of a firstborn son getting a bed—if a bed is considered a luxury—and his father and mother sleeping in less comfortable accommodations is a blow, though not a decisive one, to Jacobovici's claim. I have not been able to find much information on sleeping arrangements in ancient Egypt, but

the Egyptology Online page on [life in ancient Egypt](#) suggests that bedding differences were a matter of wealth and class, not of birth order. According to Bob Brier, *Daily Life of the Ancient Egyptians* (Greenwood, 1999), pp. 143–144, houses for "all but the very poor" included bedrooms on the ground floor, and these bedrooms "incorporated *raised alcoves* for sleeping" (emphasis added). Thus far, the preponderance of what I've found speaks *against* the claim. Some sources do put forward the idea that Egyptians might have slept on their rooftops in warm months, in order to catch the breeze and keep cool, but if so, it's hard to imagine the father saying to his firstborn son, "Sorry, everybody else gets to sleep on the rooftop because it's cooler up here, but since you are the firstborn son, you must sleep on inside, near the ground, on your bed. Don't you feel 'privileged'?" Since Jacobovici doesn't cite his sources for this claim about firstborn sons sleeping on beds while everybody else slept on rooftops, it's hard to check it out, but at this point I have to regard that claim as unproven at best (and I have a strong suspicion that it's just plain made up). Certainly, the firstborn sons of peasants would not enjoy the same privileges as the firstborn sons of wealthy families, or of royalty.

There are a couple of other problems with Jacobovici's scenario. If the Israelites were really "sitting up at their first Passover meal," it's improbable that their heads would have been that much higher than those of Jacobovici's imagined firstborns on their beds. Tables in ancient Egypt were low to the ground, no higher than the beds and benches, and diners would have sat on the ground—not on chairs as in modern restaurants. The food would have been at about the level of the body of someone lying on a bed.

But if Jacobovici wants to claim that his scenario can account for the tenth plague "exactly as the Bible describes"—a phrase he uses repeatedly for some of the other plagues—he's got yet a third big problem. According to Exodus 12:29, the plague affected not only the firstborn humans of all social classes (see above for social class distinctions), but also *firstborn livestock*. There's no way that *firstborn cattle* were sleeping "on rooftops, sheds, and in wagons," and no conceivable way for the carbon dioxide fog to discriminate between firstborn cattle and their younger siblings. (By the way, contrary to some popular misconceptions, cows do sleep lying down, and even if they *did* sleep standing up, a firstborn from a mother with more than one calf would be *taller* than his younger siblings, and thus less susceptible to the CO<sub>2</sub> posited in Jacobovici's scenario.)



Nor does Jacobovici's other "evidence" for the 10th plague prove anything. That "evidence" is a mass grave, excavated by Manfred Bietak's team, that contains only male skeletons. With very little comment or explanation, Jacobovici infers that these were victims of the tenth plague. Numerous problems attend this inference. In the first place, there is—obviously—no way to determine a person's birth order from their skeleton, so the assumption that all of these individuals were firstborn sons is completely gratuitous. Second, as documented by Bryant Wood in his [unfavorable review](#) of *The Exodus Decoded*, the graves post-date the Hyksos expulsion, the corpses seem to come from individuals only 18–25 years old (although there were undoubtedly firstborns both older and younger than this in Egypt at the time), and there are archaeological indicators that connect the graves to a military camp. Citing Manfred Bietak's own report of the excavation (in a journal that is, unfortunately, not carried by my university's library), Wood shows that Bietak concluded that these were corpses of "soldiers who died in the camps from diseases over a period of time" (Bietak, "The Tuthmoside Stronghold of Perunefer,"

*Egyptian Archaeology* 26 [2005] 13). And finally, why does Jacobovici keep connecting the tenth plague only with firstborn sons? The Hebrew word *bēkôr* is grammatically masculine, true, but in biblical Hebrew, the masculine gender is used for mixed or indeterminate groups. There is no reason to assume that the narrator of Exodus 11–12 thought that the tenth plague was limited to males. If anything, the narrator hints at gender inclusiveness in Exodus 11:5, “and every first-born in the land of Egypt shall die, from the first-born of Pharaoh who sits on his throne to the first-born of the slave girl who is behind the millstones; and all the first-born of the cattle” (JPS *Tanakh*).

Jacobovici’s data just don’t add up to the picture he wants to paint.

Jacobovici’s final “evidence” related to the tenth plague is the mummy of Ahmose’s son, prince Sapair. Jacobovici posits that if Ahmose were the Pharaoh of the ten plagues and exodus, then his son should have died young. Prince Sapair died young, apparently at age 12. *Voilà!* Of course, Sapair’s age proves *nothing*. Once again, Jacobovici’s reasoning is as circular as a hula hoop. *Lots* of Egyptians died young, including Pharaohs like Tutankhamen. There is no evidence to suggest that Sapair died of carbon dioxide asphyxiation, or in a miraculous plague. And, of course, all of this assumes that Jacobovici has correctly identified Sapair as the son of Ahmose. This is, in fact, a common identification, but some Egyptologists have argued that Sapair was one of Ahmose’s younger brothers (in which case he wouldn’t have been a firstborn at all; see Chris Bennett, “Thutmose I and Ahmes-Sapair,” *Göttinger Miszellen* 141 [1994], pp. 35–37, cited [here](#)), or a son of Amenhotep I (see H. Winlock, “The Tombs of the Kings of the Seventeenth Dynasty at Thebes,” *Journal of Egyptian Archaeology* 10 [1924], cited in Edward F. Wente, “Thutmose III’s Accession and the Beginning of the New Kingdom,” *Journal of Near Eastern Studies* 34.4 [1975], p. 271, n. 44).

At this point in *The Exodus Decoded*, James Cameron reappears and opines, “It seems that the Bible, geology, and archaeology are all telling the same story.” Not by a long shot, James. Not by a long shot. We’ll see if Jacobovici can do any better with the crossing of the sea in our next installment.

Read the whole series: [Part 1](#) | [Part 2](#) (with [addendum](#)) | [Part 3](#) | [Part 4](#) | [Part 5](#) | [Part 6](#) | [Part 7](#) | [Part 8](#) | [Part 9](#)

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Saturday 23 Sep 2006

## [\*\*\*The Exodus Decoded: An extended review, part 9\*\*\*](#)

Simcha Jacobovici’s attempt in *The Exodus Decoded* to connect the first seven of the ten plagues to disruptions caused by the Bronze Age Santorini eruption and a putative earthquake storm accompanying it fail to really correspond to the biblical accounts *or* to the *Admonitions of Ipuwer*, which Jacobovici invokes in the film. In fact, as Keving Edgecomb’s comment on part 8 of this extended review reveals, Jacobovici’s case is even farther from realistic than I first thought. Now it’s time to examine Jacobovici’s “scientific” explanations of the last three plagues.

### **8th Plague: Locusts**

Jacobovici posits that a drop in temperatures accompanying the biblical hailstorm would drive locust swarms to ground, and then the locusts would become active again as the temperatures rose. The first big problem with this hypothesis is that Jacobovici’s “scientific” reconstruction does not in fact produce a hailstorm, but a precipitation of accretionary lapilli. One of the experts interviewed in *The Exodus Decoded* describes accretionary lapilli as being “like a hailstone,” but this does not mean that they are *made of ice*! Jacobovici wants his “volcanic hail,” which consists of small balls of volcanic ash, to be *real* hail, which consists of small balls of ice. But in reality, off the soundstage, you just can’t have this both ways. You can’t just claim that the hail was really accretionary lapilli, and that it was really hail, at the same time. They’re different phenomena.

Another big problem with Jacobovici’s purely naturalistic explanation of the eighth plague is that it is, well, purely naturalistic. Here’s how Jacobovici puts it, in his exact words:

Locusts migrate in swarms that can be between forty and eighty million adult locusts in each square kilometer. Cold weather produces a drop in their body temperature that makes them land *en masse*. The volcanic hail, and the weather disruptions caused by the Santorini eruption, would have forced great clouds of locusts, which are common in this part of the world, to suddenly land in Egypt. As the hailstorm cleared and the temperature rose, so did the locusts, exactly as the biblical account describes.

Now remember that Jacobovici’s only evidence for a locust plague at this time is the biblical account itself, so his closing “exactly as the biblical account describes” is a rhetorical flourish that wraps the whole thing into another circular argument. As you evaluate Jacobovici’s argument, constantly remember that if you listen to his reconstructions uncritically, they seem to have a “ring of plausibility,” but when you look for the actual evidence or data, it’s often not there at all. Jacobovici *needs* a locust plague in order to fit the biblical story. He has *no* nonbiblical *evidence* of a locust plague subsequent to the Santorini

eruption (and never forget that the volcanologists—you know, scientists who actually study and understand volcanoes—date the Santorini eruption on radiocarbon grounds to c. 1627 BCE, well over a century *before* Jacobovici’s c. 1500 BCE date for the exodus), just a scenario by which one might understand it.



For myself, I don’t even think the scenario makes good sense. I am not an entomologist and I don’t know much about locust behavior (though I’ve chased plenty of grasshoppers on the plains of north-central and western Texas), but on the face of it, Jacobovici’s reconstruction looks suspicious to me. Here’s what I mean. Jacobovici posits that migrating locusts “suddenly land[ed] in Egypt” because of a temperature drop there. Now it looks to me like what we have to imagine is a big swarm of desert locusts, moving at the rate of about 16–19 km per day, migrates through Egypt, all the while planning not to stop and eat the Egyptians’ tasty crops, but just to grab a quick fill-up at the local Conoco and then go on to hit those juicy fields over in the Sinai Peninsula. (You with me so far?) But it’s colder than normal in Egypt (says Jacobovici), so the friendly (they’re *Schistocerca gregaria*, after all) locusts decide it’s too cold to fly and settle down for a little nap. When the temperatures rise (and who knows how long that would take?), the locusts decide they can fly again, but now they’re *soooooo* hungry that they decide to ravage the Egyptian countryside. I’m being a little sarcastic, but come on. Don’t you think these alleged locusts would have ravaged the Egyptian countryside *anyway*—not just because they had to wait out a cold hailstorm (made up of fire and rocks, ejecta from the Santorini volcano, don’t forget)?

In the biblical story, the locusts aren’t there one day, then they are there the next day. Do you think it’s plausible that huge swarms of locusts could have just happened to have been migrating through Egypt but *nobody noticed* until after the hailstorm? Certainly that’s not plausible, and in conjunction with the biblical picture it becomes virtually impossible to believe. Moreover, according to the book of Exodus, the locusts were carried into Egypt by an unnatural east wind and carried out of Egypt by a miraculous west wind—in each case, *overnight*. If you thought that Jacobovici’s scenario was at all plausible, you might be able to buy that the biblical story reflects a distorted, mangled memory of entirely ordinary locust behavior, but it’s audacious and inaccurate to claim that this narrative about cold and warming weather is “exactly as the biblical account describes.”

## 9th Plague: Darkness

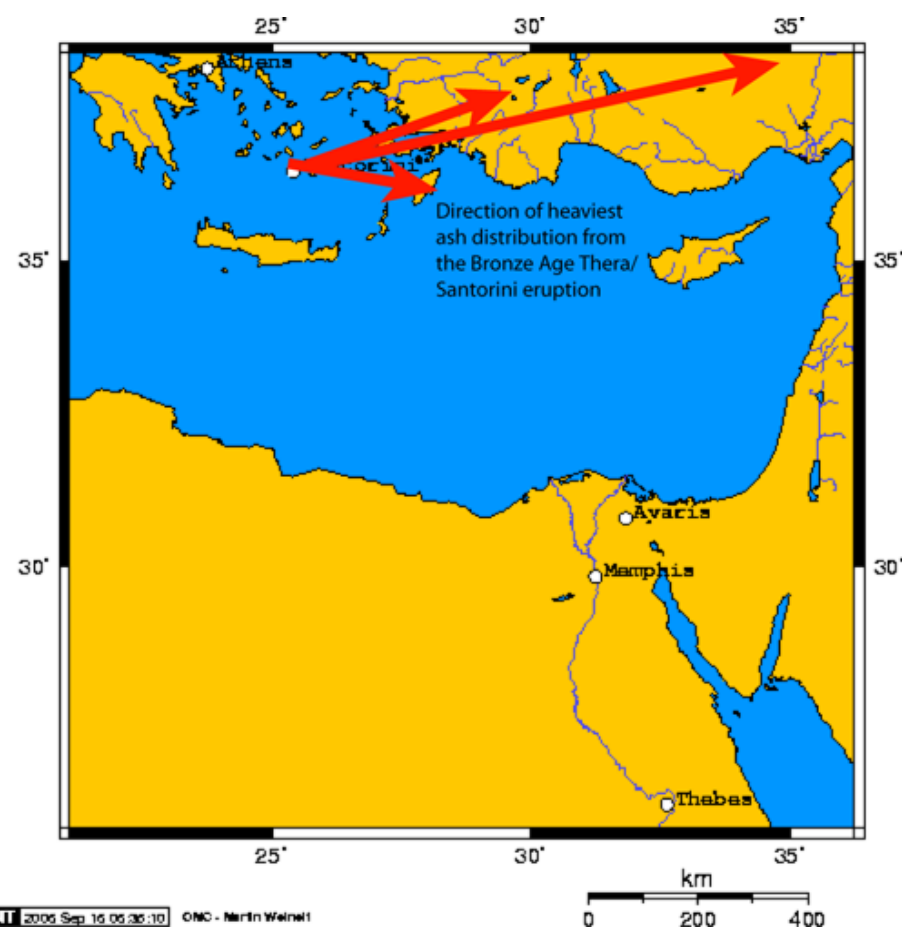
Undoubtedly you’ve guessed how Jacobovici will explain the ninth plague:

When the final eruption [of Santorini] came, it created an ash cloud almost 40 kilometers from top to bottom and 200 km across. When the ash cloud reached the Nile delta, it engulfed the Egyptians in what the Bible calls “a palpable darkness.”

Then Dr. Hickson (introduced to Higgsion readers in part 8 of this extended review) reappears on a floating screen and tells viewers:

In a matter of a few minutes they’re plunged into a black world. Ash is falling around them. They can’t see. They can’t breathe very well. The sun has disappeared. You have black overhead. And they have no idea what’s going to happen next.

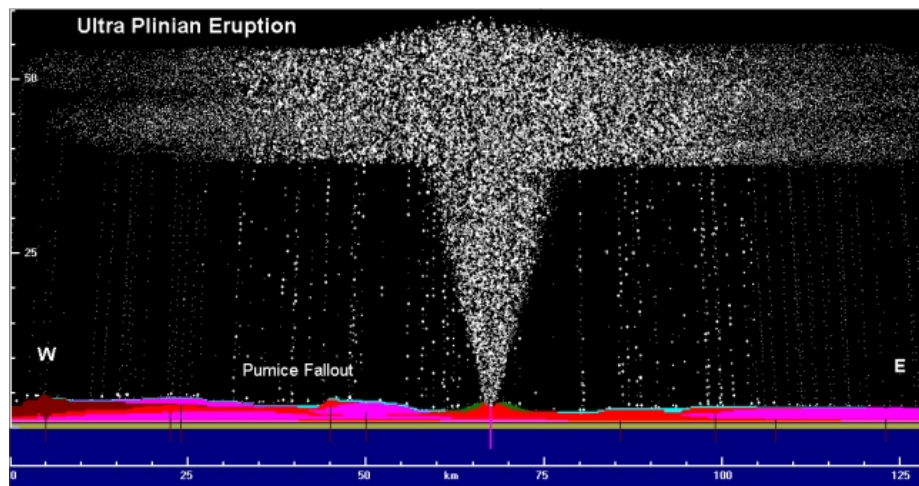
Dr. Hickson is undoubtedly giving an accurate description of what it is like to experience a volcanic eruption “up close,” close enough to experience a heavy “rain” of ash. Perhaps the people of Pompeii experienced something much like this when Vesuvius, 8 km to the north, erupted. According to the Michigan Tech volcanism primer that I’ve mentioned before, Dr. Hickson’s description might also be appropriate to the citizens of Yakima, 80 miles east—downwind—of Mount St. Helens, where the ash fallout reached 10 mm in depth, but not the experience of those in Vancouver, Washington, 50 miles south (off the prevailing winds) of Mount St. Helens, where there were no ash deposits. The way Jacobovici edits the footage and splices it together, however, makes it sound like Dr. Hickson is describing the experience of the *Egyptians* subsequent to the *Santorini* eruption—while she is speaking off-camera, an animated infographic shows the ash cloud from the initial Santorini eruption rolling over Egypt and the Sinai peninsula in a matter of seconds. But this is entirely implausible. The closest that Egypt and Santorini get to each other is about 715 km (in the film, Jacobovici rounds this down to 700). Avaris is about 870 km away from Santorini, close to a direct southeasterly line on a Mercator projection map. As discussed and documented in an earlier installment of this



series, the heaviest ash deposits from Santorini were in the eastern Aegean and in Anatolia, demonstrating that the prevailing winds were westerly (that is, coming out of the west and blowing toward the east) at the time of the eruption. It is just not plausible that *enough* ash from the Santorini eruption blew across Egypt—hundreds of kilometers to the south and off the path of the prevailing winds—to give the Egyptians the kind of experience that Dr. Hickson described. They're too far away from the volcano, in the wrong direction.

Jacobovici seems at this point to anticipate such objections, as he returns to footage of Manfred Bietak's right hand holding a piece of pumice that Jacobovici identifies as Santorini pumice. This pumice is rather large, perhaps twice as large as Bietak's hand. Jacobovici offers the Santorini pumice from Avaris as proof that the Santorini ash cloud reached Egypt, but this is a specious argument. Pumice doesn't hitch a ride on ash clouds, and as discussed in earlier installments of this series, the notion that Santorini pumice *flew through the air* some 870 km is utterly unbelievable. Jacobovici seems to anticipate this objection, too, for he acknowledges the objection that the pumice might have floated there on the water. However, Jacobovici suggests that the presence of Santorini ash in the Nile delta counters this objection. Nobody disputes that ash from the Santorini eruption reached Egypt, or that the ash was airborne when it got there. But the mode of travel of tiny grains of ash is not necessarily the same as the mode of travel of blocks of pumice 15 cm long! To think that just because the *ash* was airborne when it reached Egypt means the *pumice* was airborne when it reached Egypt is like finding a coconut in England and concluding that it was carried there by a swallow.

As to the ash itself, in an uncharacteristic moment of “full disclosure,” Jacobovic presents footage of Jean-Daniel Stanley of the Smithsonian Institution describing the Santorini ash finds in the Nile delta. What is uncharacteristic about this is that Stanley's data rather undermines Jacobovici's suggestion that ash from Santorini “plunged Egypt into the biblical [plague of] darkness.” In the footage shown in *The Exodus Decoded*, Stanley explains that he and his colleagues found *40 grains* of Santorini ash in the Nile delta. *40 grains*. Remember that ash grains are tiny, measured in millimeters or fractions of millimeters. Compare Stanley's 40 grains of Santorini ash in the Nile delta to the Santorini tephra deposits on Rhodes, which were 90 cm to 3 m thick; deposits at Kos, 170 km east of Santorini, were up to 12 cm thick, and deposits at Gölcük Lake in Anatolia, 330 km northeast of Santorini were also up to 12 cm thick (see Wiener—bibliographic details in part 6 of this review—p. 23, n. 33 for citations). Nobody can argue that Santorini ash didn't reach Egypt; clearly, it did. But the evidence does *not* support Jacobovici's contention that *enough* Santorini ash reached Egypt to account for the biblical “plague of darkness.” And it is telling that when Jacobovici wants a “talking head” to tell viewers that there is a plausible link between the Santorini eruption, the biblical plague of darkness, and the darkness mentioned in Ahmose's Tempest Stela, he turns *not* to volcanologists like Catherine Hickson or Jean-Daniel Stanley, but to Charles Pellegrino, who has also published books attributing the demise of Atlantis and the destruction of Sodom and Gomorrah to the Santorini eruption.



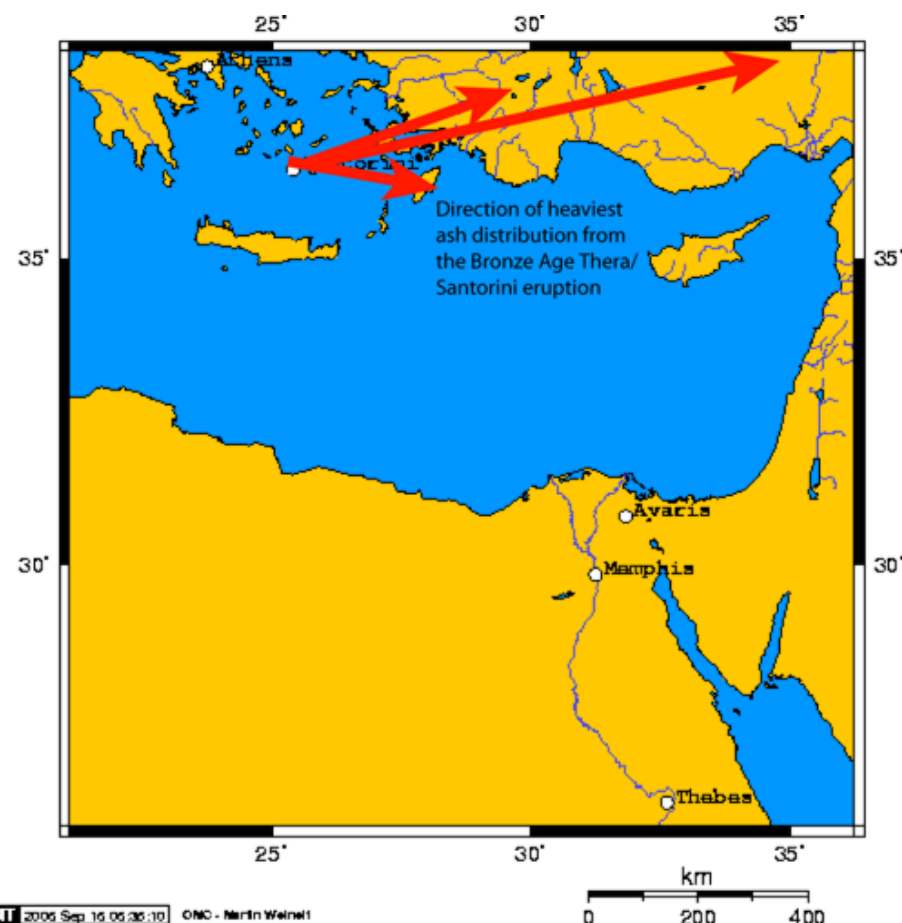
By the way, since I am not a volcanologist or geophysicist myself, I have been trying to get some help from volcanologists to assess my critique of Jacobovici's use of volcanology. I will report those results when I have responses—and permission—from the volcanologists I have queried. In the meantime, please consider this illustration from a paper on the web site of the Los Alamos National Laboratory Geology and Geochemistry Group. The paper, dated 2000, is by Ken Wohletz, a geophysicist who has been working on volcanology and other studies at the Los Alamos lab since 1983. In this paper, Wohletz is speculating about an “ultra-Plinian” eruption of “proto-Krakatau”

affecting climate and history in the past. What's interesting about this for our purposes is that an “ultra-Plinian” eruption would be many times more powerful than the Santorini eruption. Yet notice the pumice fallout pattern on the graphic (produced by Wohletz using his Erupt3 eruption simulator; click on the graphic to be taken to his paper, which contains a larger version). Even in this simulated “ultra-Plinian” eruption, the pumice fallout is mostly in a radius of 40–50 km from the volcano. Out to a distance of 60–70 km, the illustration still shows pumice fallout, but of much smaller pieces. Given this graphic showing the pumice fallout from a simulated explosion more powerful than Santorini by a factor of 10 or more, it just doesn't seem likely to me that Santorini pumice was thrown 870 km away from the volcano to arrive *airborne* in Avaris.

Speaking of the Tempest Stela, let's take another look at it in light (pun intended) of Jacobovici's take on the plague of darkness. Remember that Jacobovici claims that the Tempest Stela's reference to “darkness” parallels the “darkness” in the biblical plague story. Here's how the Tempest Stela describes the calamity:

[Then] the gods [made] the sky come in a storm of r[ain, with dark]ness in the western region and the sky beclouded without [stop, loud]er than [the sound of] the subjects, strong[er than ... , howling(?)] on the hills more than the sound of the cavern in Elephantine. Then every house and every habitation they reached [perished and those in them died, their corpses] floating on the water like skiffs of papyrus, (even) in the doorway and the private apartments (of the palace), for a period of up to [...] days, while no torch could give light over the Two

Note carefully that the darkness was observed “in the western region.” Other lines in the Tempest Stela make it clear that Ahmose was in Thebes, or shuttling between Thebes and nearby Karnak, at the time. Now take another look at the map of the prevailing winds as indicated by the tephra dispersal patterns from the Santorini eruption, and please realize that you can’t see Santorini from Egypt; it’s beyond the horizon. I’ve reproduced the map here for your convenience so that you don’t have to scroll up to find it. According to the Tempest Stela, from the perspective of someone in Thebes, the *western* sky was darkened. Rounding down to the nearest multiple of 10, Thebes lies about 1370 km southeast of Santorini, and the prevailing distribution of ash from Santorini was to the east and east-northeast of Santorini. It simply isn’t plausible that Santorini ash could be responsible for darkening the *western* sky from the perspective of someone in Thebes, an implausibility that Wiener uses to argue against any link between the Santorini eruption and the phenomena described on the Ahmose Tempest Stela.



Clearly, I find Jacobovici’s treatment of the 8th and 9th plagues, especially the 9th, unconvincing (to put it mildly). Like so much else in *The Exodus Decoded*, these treatments are characterized by selective misuse (“quote-mining”) of experts’ statements, textual misinterpretations, failure to take objections seriously, and a lack of critical thinking about actual geophysical possibilities. However, I *do* want to give Jacobovici props for noticing one aspect of the biblical darkness that often escapes attention in popular treatments, especially cinematic and cartoon treatments like *The Prince of Egypt*. Jacobovici describes the darkness in the ninth plague as “palpable.” He’s reflecting the wording of Exodus 10:21, where the narrator quotes God as telling Moses, “Hold out your arm toward the sky that there may be darkness upon the land of Egypt, a darkness that can be touched” (JPS *Tanakh*). For you Hebraists reading this, the final phrase is וַיִּמַשׁ חֹשֶׁךְ, literally, “and let one touch the darkness” (for any Hebrew students struggling to parse וַיִּמַשׁ, it’s the third masculine singular hiphil jussive form of מָשַׁח, “to touch, to feel”). Jacobovici’s attempt to connect this “palpable darkness” with ash from Santorini is misguided, but I think he’s on the right track to think in terms of particulate matter. Recall the wording of God’s instructions to Aaron at the third plague, “Say to Aaron: Hold out your rod and strike the dust of the earth, and it shall turn to lice throughout the land of Egypt,” and the sixth plague, “Each of you take handfuls of soot from the kiln, and let Moses throw it toward the sky in the sight of Pharaoh. It shall become a fine dust all over the land of Egypt, and cause an inflammation breaking out in boils on man and beast throughout the land of Egypt.” Since the first nine plagues are arranged in three sets of three, each set having a similar progression and its own particular emphasis, and since particulate matter is *explicitly* associated with the third and sixth plagues, it makes sense to me to expect the ninth plague to involve particulate matter as well. Most of the plagues—the first being the most notable exception—involve intensification and selective targeting of otherwise natural phenomena, my best guess is that the narrator was thinking in terms of the ninth plague being a supernatural sandstorm. Most movies and cartoons that I’ve seen just depict the darkness as God spilling a celestial bottle of India ink on the sky, and at least it can be said in Jacobovici’s favor that he doesn’t make *that* silly mistake (not that this excuses the other mistakes).

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Friday 22 Sep 2006

## [The Exodus Decoded: A conservative review](#)

Bryant Wood, one of the staunchest defenders of the historical accuracy of the biblical exodus story and of an early (15th-century) date for the exodus, has posted [a review](#) of *The Exodus Decoded*, organized according to Jacobovici’s “exhibits.” While I often disagree with Wood’s arguments regarding biblical historicity and the dating of the exodus (I would follow the 13th-century dating and a very tentative understanding of what happened historically), but he makes many of the same points that I would make in debunking *The Exodus Decoded*. Of course, I hope that you will continue to read my extended review, but if you want the basic facts in short compass, read Wood’s review. In fact, he brings in some data that I did not know, which demonstrate that Jacobovici is misusing Bietak’s data and quotations as well as Bimson’s, Redford’s, and others’.

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