EXODUS Details & the Bow Inlet

The historical biblical book of Exodus has recorded details that can differentiate true theories describing the real circumstances from attractive but false speculations.

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Newsletter

1. Route: Ex 13:17-18

"God <u>led them not</u> by

way of the Land of the

Philistines, although

that was near, but God

led the people about by

the Red Sea." At the

first stop, Succoth,

Israel was near the

way to the Land of

Philistines but turned

to the Red Sea. Pg 2

way of the wilderness of

2. Campsite: Exodus

14:2 "turn and encamp before <u>Pihahiroth</u>, (mouth of the canal)"



Num. 33:7 "from Etham turned again toward PiHahiroth Page 3F

3. East Wind: Exodus
14:21 "And Moses
stretched out his hand
over the sea; and the
LORD caused the sea to
go [back] by a strong
east wind all that night,
and made the sea dry
[land], and the waters
were divided." The
LORD used an east
wind all night to part

the sea. Page 10

4. The sea parted:

Exodus 15:8 "with the blast of thy nostrils the waters were gathered together, the floods stood upright as an heap, the depths were congealed in the heart of the sea."

Nostrils or nose suggests there were at least two channels of wind on both sides,

right and left. Page 18

5. A WALL of waters right & left: Ex 14:22 "And the children of Israel went into the midst of the sea upon the dry [ground]: and the waters [were] a wall unto them on their right hand, and on their left." Crossing theories need to agree with this text fully. Pages 10 - 23

6. Moses Song: "Thou stretched out thy right hand, the earth swallowed them." Exodus. 15:12 implies, and geography agrees, that a sand river bank collapsed and buried the Egyptian army at the Red Sea's closing, promising material evidence can be found. Pages 28-33

Issue No 1. January 2012

7. Evidence: An archaeological site identified herein should confirm where & how the sea parted in the Exodus. Chariots, armor, horses, soldiers, and Baalzephon remnants should be uncovered.

Testing the theories

The events of the biblical Exodus capture people's fascination to know just what happened. Major events like the sea parting and route details inspire conflicting theories and casting doubt on the reliability of the Bible and God. But the minor events tell a much more complete story and test which theories really match the text. Learning the truth opens new and deeper understandings of scripture and greater faith in the true person of God.



Theories A - N at Mediterranean Sea; and Lakes: Sirbonis/Bardawil, Manzala/Tanis, Ballah, Timsah, Bitter; and Gulf of Suez, Gulf of Aqaba

Analysis Overview:

Although this is but a brief analysis of Exodus Route and Red Sea Crossing theories it is enough to show the conflicts between bad theories and credible but lesser known texts. Examining the sea parting places and methods should provide an understanding and confidence to finally know what really occurred as God, via Moses, parted the Red Sea.

Would God supply many fine details of the first few days travel and Red Sea crossing (referenced herein) if it all happened by an unexplainable miracle that disagrees with those details?

EXODUS SEA PARTING THEORIES

Is Red Sea parting knowledge really needed? Faith, reason, spirit and truth, are complimentary not antagonistic. All scripture is useful, encouraging the unlearned to seek knowledge of the Holy. Seek! Find! Study to be approved, thoroughly furnished. Reject empty words and oppositions of false science contrary to truth. Avoid vain imaginations but pursue knowledge and understanding. Give reason for hope with the truth of God believing the wonders of God but not imagining thoughtless unexplainable mysterious simplifications. Does not even nature glorify God and teach us that we might learn the ways and ordinances of God that we might benefit ourselves, our fellow men, and bless and glorify God?

Since geography is not now as it was back at the Exodus and since we lack many old maps and records, every theory must imagine something. But the best theory needs to imagine the least and retain the closest agreement to scripture texts and precepts of truth.

A. Lake Sirbonis (Bardawil) - A thin strip of sand in the south eastern corner of the Mediterranean Sea is the crossing point of several theories.(1) Parting causes are an extra low tide or a tsunami from Thera volcano (above Crete) about 1446 B.C.. Neither of these is an East wind. This location's problems: An EAST wind has not been shown to work here and IT IS NOT by way of the Red Sea. In fact, with the Mediterranean

Sea on one side and a fresh water lake on the other side it can hardly be called a parting of the Red Sea. Other major problems are: the place IS NEAR "the way of the land of the Philistines." Scripture disagrees with water parted by a low tide or tsunami. The land strips proposed are not wide enough and sea parting mechanisms are not effective enough to accommodate the great masses of people and herds in the time suggested. Migdol, and Pihahiroth name identities are speculative. Good points are: ample fresh water in the lake for people and herds and timing identifying with Thera Volcano.



B. Lake Manzala (Tanis): A lake at Port Said, now north Suez Canal. The King James Bible in <u>seven verses</u> mentions the nearby city <u>Tahpanhes</u> or Daphne (Greek transliteration). Objections are similar to A above but an East wind could dry a patch of shore in a manner close to the biblical text, according to Carl Drews, using computer simulations. See Drews & Han (2,3) Wind Set Down, wind blowing water away from a shoreline, would kind-of work. However these locations violate details in scripture as analyzed by ABR, Archaeologists for Biblical Research (4). Further it violates the Beaufort Scale (5) in that wind causing A HIGH WALL of water would be difficult or impossible to walk into. Ex. 14:22 "went into sea on dry ground and the water was a <u>wall</u> on the right and left." Notice a critical item is that the wall of waters blown by the wind was

there at the same time as the Israelites were walking through it - at the same time, not later. Computer simulations of water parting either have wind too strong (62 mph, Beaufort Force 10) to walk into or too weak to make A WALL at the same time. Walking into a wind becomes fairly difficult at Beaufort Force 8 about 45 mph. Also objections same as A. above. R. Larry Overstreet (6) "If one accepts the inerrancy of the Bible, locating Israel's crossing of the Red Sea in Exodus 14–15 any place other than the northwestern arm of the Red Sea (i.e., the Gulf of Suez) is practically impossible." From the Bible and many non-biblical sources Overstreet opposes Red Sea crossing places based on Yam Suph meaning Reed Sea while strongly favoring the Upper Gulf of Suez as the only location agreeing with scripture. This then argues against crossing at any Mediterranean or northern lakes site and against any southern Sinai or Gulf of Agaba site.

- C. Ballah Lakes and Lake Timsah: These candidate locations depend on imaginative and speculative locations for campsite names Migdol, etc. Also, again the meaning of Yam Suph is doubtful. The water parted by wind would not have made A WALL, or, if making A HIGH WALL the retreating storm surge would have also piled the people into heaps. For more about Wind Set Down calculations see also, Brunt, Meteorologist's View: http://ed5015.tripod.com/BRedSeaCrossing.htm
- **D. Great Bitter Lake:** Same problem here. Water parting mechanism. wind set-down either is too weak to create A HIGH WALL of water or it will be too strong and blow the people into a pile. This is a fatal flaw of most proposals. "Wind Set-Down" is the term for the action of wind from a beach pushing the water up and away from that shore, and "Relaxation of Wind Set-Down" is the surge of the water returning. Reference: http://earth.huji.ac.il/data/pics/wind_set-down(jcp).pdf
- **E.** Little Bitter Lake: Timing and route turns fit scripture. Place names have imagined physical counterparts. Wind strong enough to make a wall of water on the right and on the left would still blow away the people.
- **F. Bow Inlet Little Bitter Lake to Bay of Suez:** Since 1869 the Lower Suez Canal has connected the south end of Little Bitter Lake to the Gulf of Suez. Previously it was sand and before that evidence of canals are shown on old maps. At the Exodus, about 1446 B.C., evidence indicates an arc of water, here called the Bow Inlet, existed at this location and appears to meet all biblical cri-

- teria of scripture, nature, faith and logic with evidence. See details in the Bow Inlet write up on Page 12 herein. Not only are ancient canals found in the lower Suez Canal area of old maps but recent maps also show specific Red Sea opening, crossing, and closing evidence. Archaeological digs are possible to confirm the Bow Inlet area as the actual Exodus Red Sea Crossing site. People and cattle had plenty of fresh water at the Bow Inlet until after the Red Sea crossing due to the Locust Plague discussed in the Bow Inlet write up. Bible place names are well indicated. A sandy ridge on the eastern shore fits Baalzephon the Egyptian 'Baal-Capuna' the site of pagan worship and Migdol fits as the large mountain Jebel Atiga. Pihahiroth means 'mouth of the canal' with exactly matching digs shown on old maps at Gulf of Suez. Nostrils are Mitla and Giddi Passes. Bow Inlets north and south match mountain passes that are north and south exactly east. An east wind is naturally strong at the sides causing A HIGH WALL of water on both sides. Wind is blocked in the middle by a mountain, thus shielding the travelers in the middle and not piling them up into heaps. Fifty+ parameters of geography are perfectly crafted to part the Red Sea and bury the army. "the earth swallowed them" Exodus 15:12. Now what is the chance of that? Meteorological and geomorphology software now has an ideal geography to test an ideal Red Sea simulation. Many crossing theories J - M in this list cross the Bow Inlet as a route but assume it is just sand as was the case from about 1446 BC to 1869 AD.
- **G.** Nile River at Giza: This theory by Matheny (7) holds that Goshen was West of Nile Delta and Route went initially west of Nile River and crossed at Giza. Problems: Nile too deep, no inlet bow, no trap, not Red Sea, Egyptians and Army Reserve on West side of Nile.
- H. Bay of Suez Upper Gulf of Suez: This area is a candidate of several crossing site theories using mechanisms of extra low tides, global warming lower water, tectonic plate shifts, and a cyclone or hurricane to lower the water. Tides, tectonic shifts, and global warming low water don't fit the Biblical "strong east wind" and again, cyclone winds strong parting the sea will pile-up people without a barrier in the middle.
- **HH. Mid. Gulf of Suez:** Like G, plus the added problem of much greater depth and steep coral sides to the dry sea floor. Coral walls are not dry land and so disagree with biblical texts.

Scriptural Criteria	A. Lake Sirbonis South- East Medit.	B. Lake Manzala Tahpahnes	C. Ballah & Timsah Lakes &	D. Great Bitter Lake	E. Little Bitter Lake	F. Bow Inlet Above	G. Giza Nile River	H. Bay of Suez	HH. Mid Gulf of Suez	
Yes = Good, No = Bad except yellow	Meait.	Gk-Daphne	Marshes	area	area	Suez	area	area	area	
1 Goshen in Egypt	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
2 Goshen near most Egyptians	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
3 Goshen on East Side of Nile	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
4 Goshen best Land	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
5 Goshen Near Israel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
6 Goshen near Library (House of Life)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
7 Seven days from Goshen to Rest	?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
8 Initial. Route not way to Philistines	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
9 Way to Philistines Near?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
10 Toward way of Red Sea	(Yes)No	(Yes)No	No	Yes	Yes	Yes	Yes	Yes	Yes	
11 Two turns only to Red Sea Camp	Yes	Yes	No	No	Yes	Yes	No	No	No	
12 Pihahiroth, Migdol, Baalzephon	No	(Yes)No	No	?	?	Yes	No	Yes	No	
13 Land Shut them in	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	
14 Nostrils plural	Yes	?	No	No	No	Yes	No	No	No	
15 Water parted by Strong East Wind	No	Yes	No	No	No	Yes	No	No	No	
16 Wind Mild in Middle	Yes	No	No	No	No	Yes	No	No	No	
17 Wall of Water on Right and Left	yes/no	yes/no	No	No	No	YES	Yes	no Tide	Yes	
18 EARTH swallowed army,	No	No	No	No	No	YES	No	No	No	
Man's Test, Not Scriptural	For the Criteria below #20 - #23 in only this yellow section Yes is Bad (man's criteria) and No is good (God's / scripture's criteria)									
20 Sea Parting must be unexplainable Miracle - NOT God-nature caused	No	yes	No	No	No	No	Yes	No	Yes	
21 Sea Parting must be totally natural No God involvement	Yes	No	yes	?	?	No	?	?	No	
22 Overlook Unexplained Questions	No	No	No	Yes	Yes	No	Yes	No	Yes	
23 added non-Biblical event required						No	Yes	Yes	Yes	
SUMMARY										
24 Agrees with lesser Bible texts	No	No	No	No	No	YES	No	No	No	
25 Agrees with Simulations, Nature, and Logic	Yes?	Yes?	Yes?	No	No	Yes	Yes	Yes	No	

Scriptural Criteria Yes = Good, No = Bad except yellow	I. Africa to Arabian Peninsula No Sinai	JJ. Eilat- Aqaba Marsh	J. Top of Gulf of Aqaba	K. Upper Middle Gulf of Aqaba	L. Nuweiba Beach Mid. Gulf Aqaba	M. Lower Mid Gulf of Aqaba	N. Bottom Gulf of Aqaba Strt Tiran	O. Undef. Reef Place?		
1 Goshen in Egypt	Yes	Yes	Yes	Yes	Yes	Yes	Yes	?		
2 Goshen near most Egyptians	No	Yes	Yes	Yes	Yes	Yes	Yes	?		
3 Goshen on East Side of Nile	?	Yes	Yes	Yes	Yes	Yes	Yes	?		
4 Goshen best Land	?	Yes	Yes	Yes	Yes	Yes	Yes	?		
5 Goshen Near Israel	No	Yes	Yes	Yes	Yes	Yes	Yes	?		
6 Goshen near Library (House of Life)	No	Yes	Yes	Yes	Yes	Yes	Yes	?		
7 Seven days from Goshen to Rest	No	No	No	No	No	No	No	?		
8 Initial. Route not way to Philistines	Yes	Yes	Yes	Yes	Yes	Yes	Yes	?		
9 Way to Philistines Near?	No	No	Yes	Yes	Yes	Yes	Yes	?		
10 Toward way of Red Sea	Yes	Yes	?	Yes	Yes	Yes	Yes	?		
11 Two turns only to Red Sea Camp	No	No	No	No	No	No	No	?		
12 Pihahiroth, Migdol, Baalzephon	No	?	No	No	No	No	?	?		
13 Land Shut them in	No	Yes	Yes	No	Yes	No	Yes	?		
14 Nostrils plural	No	No	No	No	No	No	No	No		
15 Water parted by Strong East Wind	No	No	No	No	No	No	No	Yes		
16 Wind Mild in Middle	No	No	No	No	No	No	No	No		
17 Wall of Water on Right and Left	No	No	No	No	No	No	No	?		
18 EARTH swallowed army,	No	No	No	No	No	No	No	No		
Man's Test, Not Scripture	For the Criteria below in only this yellow section Yes is Bad (man's criteria) and No is good (God's / scripture's criteria)									
20 Sea Parting must be unexplainable Miracle - NOT God-nature caused	Yes	No	Yes	?	?	?	?	No		
21 Sea Parting must be totally natural No God involvement	No	No	No	?	?	?	?	No		
22 Overlook Unexplainable Questions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
23 added non-Biblical event required										
SUMMARY										
23 Agrees with all Bible texts	No	No	No	No	No	No	No	No		
24 Agrees with Simulations, Nature, & Logic	No	No	No	No	No	No	No	Yes		

I. Egypt to Arabian Peninsula: This route has two positive characteristics and a number of negatives. The positives are if one requires Egyptian bureaucrats and Israel to live in upper Egypt to be near Pharaoh then Red Sea is closer. Arguments against are: 18th Dynasty New Kingdom has Pharaohs in, and protecting Lower Egypt. Also the Israelites were in the 'best of the land' and the Nile Delta is the best. Further, "the children of Israel went out in sight of all the Egyptians" (Numbers: 33:3) and the Nile Delta can always support more people to watch the Exodus. So Nu. 33:3 better agrees with Goshen in Lower rather than Upper Egypt.

Another proposed positive is avoidance of soldiers guarding mines in the Sinai Peninsula. But, the nature of mining at this time of early 18th Dynasty is not well known. Although the early 18th Dynasty, Hatshepsut and Thutmose III were rich, what mining and military were in Sinai is unknown. Strong Egypt needed few soldiers to control prisoners and guard mines. Mostly they would be lookouts to alert Pharaohs of border threats. Tens of soldiers could not match millions of slaves with the weapons Moses got from the banks of the Red Sea when the Egyptian soldiers drowned, as told by Josephus 1., as will be shown below.

Also problems: travel time to the Red Sea and no water before or at the Red Sea. A big problem is the several days required to cross a parted Red Sea 65 miles between continental Africa and the Arabian Peninsula and when crossing, how to repel down and back up steep coral shore edges hundreds of feet high. If the Bible mentions the Red Sea barrier and wilderness it should mention the coral cliffs. the sea parted by an extreme downdraft directly contradicts "a strong east wind blowing all night" (Exodus 14:21). And wind so powerful as to dry 1000 ft deep sea would kill men and cattle. This theory also violates the nostrils, the earth swallowing, and others. One might imagine a higher sea floor that dropped after the Exodus, but neither geology nor scripture even hints at such an event.

- **J. Top of Gulf of Aqaba:** Problems are same as other deep sea areas and too far from Goshen and Nile. Israel had just seven days of unleavened bread and then were going to have a feast. Egyptian Army would have had to set up supply lines. Too far from Goshen. Bible texts give two stops before Sea Crossing and many stops after Sea Crossing and before Mount Sinai but this site is exact opposite, requiring many stops before Crossing and few after.
- **JJ. Eilat Reed Marsh, El Yitm, Wadi Yitm,** This theory proposes Sea Crossing in marshes above Eilat and Aqaba. Problems are distance from Goshen, minimal water, many others. Positives are some water, the wadi and mountain El Yitm are similar in name to Etham.

KLMN: Gulf of Aqaba. Same flaws: Too deep for east wind and wind blowing water into high a high wall blows people into piles. Details of the Biblical Exodus are allegedly in the Arabian Peninsula at Jebel al Laws as Mt. Sinai but major questions remain. Nuweiba Beach is at the bottom end of a large canyon. The large beach is there because canyon rains cause flash floods that wash all debris down onto the beach and sometimes into the water. Chariot wheels in the Gulf are probably from chariots on the beach at the time of rains in the upper being surprised and washed into the Gulf of Aqaba. Gulf of Aqaba is too deep to cross here. Low cost depth sounder on small boat was inaccurate so popular graphics showing shallow underwater shelf are not accurate. Solomon said this was the Red Sea Crossing site but it could only have been a second crossing site followed by a tectonic plate shift dropping the water level. This was not the crossing of Exodus Chapter 14.

JKLMN: Crossing Sites, have no good sea parting mechanism. JKM and L, Nuweiba Beach, suggested parting by frozen parallel walls of water (1) could only work as a vertical downdraft, not east wind, (2) would not stay frozen for hours, or a continuous downdraft (3) would freeze the people. All JKLMN Sites are too deep to be dried by the biblical cause: "a strong east wind blowing all night" Exodus 14:21.

O: Unspecified Reef: which could allegedly be dried with East wind. This is a computer simulation by Russian researchers. citation yet to be relocated.

Notes: Analysis and comments of DREWS & HAN sea parting computer simulations:

Suez Canal 300m (982 ft) wide. Bow inlet canal 100 m ~327 ft across, maybe even smaller. Crossing Lake Manzala (Tanis) 4 - 5 km

Crossing time calculations, Lake Manzala Drews' Theory: Could the number of creatures make it? Note: These crossing time calculations would apply to any place with similar dimensions.

Summary of Below: Time and space is sufficient for the number of creatures described in the Bible to pass through the parted Red Sea. The Drews-Han time of 4 hours (scripture text is not specific) and the greater numbers of creatures (possibly 15 million) 2 to 5 times the numbers figured below could be tight.

Analysis:

Exodus 12:37, Numbers 1:46 and other verses say the travelers were about 600,000 men, beside children. ('beside children suggests men means adults). To be conservative (smaller) assume 'men' means men and women.

Assume 300,000 families, let's say 1/2 with children, assume 4 children per family.(maybe more.) That's $300,000 \times 1/2 \times 3 = 450,000$ children.

Thus, people were conservatively 1 million people, at least; plus flocks and herds and much cattle. Let's say at least two animals per person brings us to 3 million creatures, at least. It could be 5 - 10 million.

Three million creatures cross an area. Assume a 3 ft. (1 meter x 1 meter) or square meter per creature.

3 million creatures at one square meter each is 3 million square meters, or 3,000 x 1,000 = 3 million

Therefore we need 3,000 m wide and 1,000 m deep (or 3 sq. km) of creatures to cross a space.

3 million square meters is 3 square kilometers.

Drews at Manzala has 5 km x 4 km area to cross in 4 hrs. That's 20 sq. km. crossing space in four hours.

A man, an ox, or sheep walks about 2 miles per hr = 3.2 km / hr. But at parted Red Sea they walk into a 35 - 55 - 65? mph wind. If they cross 4 km it requires about 2 hours to cross. Those in back must get to the water's edge. And the group, if 3 million creatures (3, crossing 5 km wide space is *to be determined.*)

But the ones in front must cross and get out of the way and the ones in the back need to go from the back to the shore and then cross the shore. That's about 3 km plus 4 km = 7 km at 3 km per hour, maybe even 2 km per hour. They should just be able to make it but there isn't a lot of extra time for the mud to dry out initially or if the number of creatures is too conservative, or if they are slowed by the wind, all of which are probable.

Problem of Terms: Red Sea to Reed Sea and 'Wall' of water rather than 'Fence' or 'Border'.

Red Sea 'Yam Suph' in the Hebrew is said to be Reed Sea rather than Red Sea. All northern routes above lake Timsah use this hedging to change the sea to a shallow marsh area.

Concurrent with the above, the 'wall' of water is said to mean 'border' which does have some merit. It is said that in the Bible the same word "chowmah" is used for a border area for a sheep pen or when (1 Samuel 25:16) David's men were a 'wall' or 'border' for the men and flocks of Nabal. But David's men were an impenetrable, insurmountable barrier. A sheep fence is higher than the sheep can jump. "Chowmah" is usually used for a wall of a town, not for a low border but an impenetrable high fence. A shallow border of water caused by Drews' 62 mph wind is not the common idea of an impenetrable wall. Drews & Han must use a 62 mph wind to push the water back with the people walking directly into the full force of the wind, otherwise there is no wall on right and left. "Chowmah" is such a big wall that Chowmah is used for the wall of a city but not the walls of a house or building, a different word.

Conclusion: Drews & Han justify northern routes by minimizing words to make the effects minor to justify the desired result. A wind strong enough to make a real wall of water would be so strong that the people, flocks and herds could not walk through it. People are the same specific gravity, weight per unit volume, as water. People are essentially water. A person in a pool just barely floats with a deep breath. If he exhales, he sinks. People are essentially water. A

8

wind that will push water up into a wall will have a similar effect on people if they are walking into the main force of the wind. The only thing that can be done in the case of the computer simulations of the Exodus and Red Sea is to find a place where there is a mountain(s) in the middle so that the largest main force of the wind is blocked.

References:

Many more may be added.

- (1) The Route of the Exodus by A. G. Weld page 238 in The Expositor July 1883 Vol. VI, as edited by Samuel Cox, Sir William Robertson Nicoll, James Moffatt:
 - $\underline{http://books.google.com/books?id=eTo2AAAAMAAJ\&dq=sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+red+sea+crossing+exodus+-sirbonis+-s$
- (2) Drews and Han: http://www.bbc.co.uk/news/science-environment-11383620
- (3) Drews and Han:

http://www.plosone.org/article/slideshow.action?uri=info:doi/10.1371/journal.pone.0012481&imageURI=info:d

oi/10.1371/journal.pone.0012481.g008 Notes: Drews-Han Simulation at Lake Manzala

Strong Points: The computer simulation verified the scripture but only partially because what the simulation needed was a better geographic location. The simulation partly showed that the actions of a 62 mph wind on the water described in the scripture will cause walls fences or edges of water if there is a bow of water pointing into the wind. With a bow of water the water will be pushed back and become A WALL of water extending on the right and left of lesser or greater heights depending on the wind strength. It also dries out a wide area of shore at the center of the bow for a length of time.

Problems: The 62 mph wind is a Force 10 on the Beaufort scale which is above force 9 which is said to be very difficult to walk against. So the people could not walk into the wind of Drews-Han and therefore the wall of waters on right and left could not occur while the Israelites were walking on dry ground. This violates Exodus 14:22. Other objections, the geography and water level may well have been different when and where the Red Sea parted. The Drews-Han "wall of water" height is not stated but appears not to be a wall but low fences. The route violates scripture. The Red Sea was not the Red Sea but the Yam Suph, 'reed sea', marsh excuse used for northern routes. The place names are imaginary. The Drews-Han simulation has the right idea of a bow of water Israel in the middle and it has pieces of the right mechanism to part the water. It just needs the right location and a more complete scenario that matches more scripture.

- (4) Biblical Archaeologists Review:
 - $\underline{http://www.biblearchaeology.org/post/2010/09/24/An-Appraisal-of-the-2010-Drews-and-Han-Wind-Setdown-Models-of-the-Exodus-14-Sea-Crossing.aspx \#Article$
- (5) Beaufort Wind Scale: Royal Meteorologic Society http://www.rmets.org/weather/observing/beaufort.php
- (6) EXEGETICAL AND CONTEXTUAL FACETS OF ISRAEL'S RED SEA CROSSING R. Larry Overstreet TMSJ 14/1 (Spring 2003) 63-86 http://www.tms.edu/tmsj/tmsj14d.pdf
- (7) EXODUS The Route * Sea Crossing * God's Mountain by Gary Matheny http://www.xulonpress.com/bookstore/bookdetail.php?PB ISBN=9781613792971

Water Parting Discussion

Sea Parting Method Best Harmonizing with Scripture, Logic, Nature

People are the same weight per unit volume as water. This is called specific gravity. A person in a pool will float with lungs full of air, or will sink if air is exhaled. Wind has the same effect on water as it has on people and cattle. The term used in Exodus 14:22 and Exodus 14:29 (2 places) for wall (Hebrew 'chowmah' of water generally means a high, impenetrable barrier. And notice the singular 'WALL' is used, like it is a slight arc which continues from one side to the other, NOT two magic parallel walls as Cecil B. DeMille depicted in the film "The Ten Commandments". The Bow Inlet parting place produced just such a high 'wall' of water. The bow geography proposed by Drews - Han makes a similar alignment or design but not be an impenetrable high barrier like a city wall as the word 'chowmah' depicts. The word the scripture uses for a lesser wall of a house is 'qiyr' pronounced "key". God uses two verses Ex 14:22 and Ex 14:29, two witnesses, to solidify the concept of **A WALL** on the right and left. Interestingly also, most Bible Versions get singular 'wall' correct. Notice in both verses Exodus 14:22 and Exodus 14:29 that 'wall' is singular but 'waters' plural.

HEIGHT:

The word 'Chowmah' suggests height, as said. Exodus 14:20 says that Israel had light but there was no light for the Egyptians, presumably caused either by the wall of water, the pillar of cloud, or both. Exd 14:20 "So it came between the camp of the Egyptians and the camp of Israel. Thus it was a cloud and darkness [to the one], and it gave light by night [to the other], so that the one did not come near the other all that night."

An eastern full moon and an early morning eastern sun would be light all night for the Hebrews. A high wall of waters and a pillar of cloud above would block the light in front of the Egyptian army but provide light to Israel. A third reason suggesting the extended wall of waters was high is the returning surge not only drowned the army but washed them up on the shore, some distance. Evidence indicates it hit a sand riverbank to the east, which collapsed burying and washing up the army. Ex 14:30 attests to this in saying Israel saw the dead upon the shore not just at the shoreline. Moses after crossing the Red Sea was at an angle to the wall of water and able to see the light in the front and darkness behind, if darkness was due to the wall.

LOGIC: Natural or Supernatural: The water was parted either naturally, supernaturally, or by a combination of both. The Bible says the water went back "by a strong east wind blowing all night," (Exodus 14:21) indicating nature was the direct causal force, but many verses throughout the Bible give God the credit, indicating God was the primary cause using nature as the agent. About 50 Bible verses speak of God as being the God or Lord of heaven and earth.

So God supernaturally directed natural means to part the sea. Taking the Bible's words in Ex 14:21 "And Moses stretched out his hand over the sea; and the LORD caused the sea to go [back] by a strong east wind all that night, and made the sea dry [land], and the waters were divided."

Rodger Dalman Th. D. says: ¹ "While God can do very unusual things, He does seem to work through natural means more often then not. It is therefore appealing to see this event as a miracle of timing rather than a gross violation of the natural physical laws which God has written into His creation."

It is a miracle of timing and much more. The Red Sea opening and closing occurred in a natural geological theater having many features essential to the event's functioning. This theater was apparently a specifically crafted landscape for hundreds of miles in all directions, a miracle of creation. It is a miracle of all the sciences. It is a miracle of practically

every natural phenomenon - all biology, animals, insects, fire and hail, plankton bloom, sicknesses, etc. For the Egyptians would not have let Israel go if they were not so intimidated by all the terrible wonders. But they gave in and let Israel go. However when the Egyptians returned to their greedy, oppressive nature, the greatest Exodus wonder so far, parting the water, was forthcoming. And yet now, an even greater miracle, unknown to almost everyone will be witnessed, God has crafted the earth and seas not only to release the slaves and punish the greedy, but also to preserve evidence and show that the Red Sea was indeed parted by an act of God. In the near future that evidence can and will be dug up to show where the parting of the Red Sea occurred.

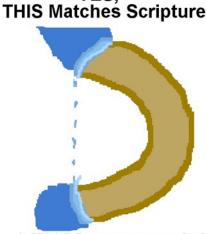
LOGIC Continued: What kind of natural east wind? "Compare scripture with scripture" preachers often say. So, the locusts were blown into Egypt by an east wind. Exodus 10:13 "And Moses stretched forth his rod 4294 over the land 776

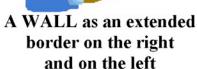
of Egypt 4714, and the LORD 3068 brought 5090 an east 6921 wind 7307 upon the land 776 all that day 3117, and all [that] night 3915; [and] when it was morning 1242, the east 6921 wind 7307 brought 5375 the locusts 697."

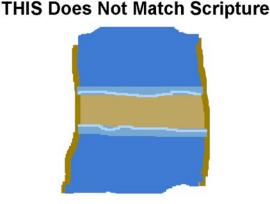
But when the locusts were blown out of Egypt it was a mighty strong west wind. Exodus 10:19 "And the LORD 3068 turned 2015 a mighty 3966 strong 2389 west 3220 wind 7307, which took away 5375 the locusts 697, and cast 8628 them into the Red 5488 sea 3220; there remained 7604 not one 259 locust 697 in all the coasts 1366 of Egypt 4714."

In the scripture, when the locusts are blown into Egypt it is by an east wind blowing all day and all night. It is not said to have any strength so this wind would probably be no

Looking down on Parting of Red Sea from Above YES, NO,







Parallel walls on the right and on the left

Hebrew 'Chowmah' = a high WALL extended border

more than 20 or 30 miles per hour. However the wind blowing the locusts out of Egypt was a <u>mighty strong west wind</u> so that it was a violent storm (Force 10 or 11 on the Beaufort Scale)² of probably no more than 73 miles per hour, or less. If over 73 mph it would be a hurricane, typhoon, or cyclone for which the Old Testament generally uses tempest or whirlwind or both.

Logically then, the strong east wind which blew all night and parted the Red Sea was between 35 and 55 miles per hour where Moses, the person writing the account, was standing and walking. People begin have difficulty walking into a Beaufort Force 6. At the Bow Inlet it would be stronger on the sides than in the middle. So by the Beaufort Scale it was probably a high Force 8 or Force 9 (about 40 - 50 mph) in the middle of the inlet because this is a strong wind which just makes walking somewhat difficult. But it may have been a force 10 or 11, 60 - 70 mph wind at the edges, through the Mitla and Giddi Passes that match ideally the top and bottom of the Bow Inlet. The Giddi Pass is just east of the neck from the Little Bitter Lake to the North end of the Bow Inlet. And the Mitla Pass is just east of the neck from the Gulf of Suez to the South end of the Bow Inlet.

¹ When the Rains Failed: Studies in Climatology and the Blblical Text: Rodger Dalman Chapter 6, page 44, copyright 2009 Books\When the Rains Failed\Ch. 6 - The Exodus and Climatology.pdf

² Beaufort Wind Force Scale http://en.wikipedia.org/wiki/Beaufort_scale

Bow Inlet Crossing Site

The parting of the Red Sea actually begins with the seemingly unimportant Locust Plague of Exodus (10:4 - 10:19). This plague has amazingly important functions in the Exodus and sea parting and it is also of great importance to us to-day. The Locust Plague and of the Red Sea opening and closing are powerful and complex.

Fig. 1 is a probable map of the Upper Gulf of Suez area at the time of the Exodus plagues. The horizontal blue line, "Canal of the Pharaohs" Wadi Tumilat, connects the Nile River to Lake Timsah. Early digging of this canal was in the 11th Dynasty but the Exodus was much later, like in the 18th Dynasty. Somewhere on the eastern side of the Wadi Tumilat, toward Lake Timsah was Heroopolis, probably called Pithom at this time. Heroopolis was at the top of the Heroopolitan Gulf, the name of the extension of the Gulf of Suez up to and past Lake Timsah. This Heroopolitan Gulf, a northern extension of the Red Sea was noted by historians Herotodus, Strabo and Pliny. (See references in Questions, pg 35 below.) The extension of the Red Sea this far north is well documented historically. At Lake Timsah the water channel turns south to the stomach-shaped Great Bitter Lake, down to smaller Little Bitter Lake, through the Bow Inlet, and out to the Gulf of Suez. R. Larry Overstreet (see above) gives an in depth discussion of Red Sea biblical and non-biblical references to say that the extended upper Gulf of Suez (the Bow Inlet) <u>must</u> be the site of the Red Sea Crossing.



Fig. 1. Red Sea area likely geography prior to the Locust Plague. Waterway Nile to Gulf of Suez. Pharaoh Hatshepsut, a strong candidate to be an Exodus Pharaoh, left temple pictures of ships showing she took an expedition from the Nile River, through the Bitter Lakes to the Gulf of Suez and down to the Land of Punt in Africa.

Fig. 1 above shows the geography before the Locust plague. The large mountain, bottom left, is Migdol (tower). The bottom of the BOW INLET next to Suez is PiHahiroth, literally meaning the "mouth of the Gorge (or canal)." The red arrow pointing at the BOW Inlet also points right at Baalzephon which matches the function of several other Baalzephons on high sea cliff ridges on the south eastern and north eastern Mediterranean coasts. The Baalzephons apparently functioned both as a worship center to Baal and as sailors' high point reckoning landmark fire lighthouse. Baalzephon high point site was at the center of the BOW in Fig. 1 and 2, and reckoning from present day maps, was 150 meters or 450 feet high and thus visible far down the Gulf of Suez.



Fig. 2 Red Sea Bow Inlet Center of Canal Geography Section at time of Moses, before plagues. Looking from the South toward the North at a section of the Red Sea crossing area from Egypt on the left to the Sinai Peninsula on the right. This is essentially looking northward up the Suez Canal from near it's beginning at the South at Gulf of Suez. It is Approximately 30 degrees 6 minutes North Latitude by 32 degrees 39 minutes East Longitude.

In Fig 2. above, the 450 ft. high ridge on the right of the graphic is the site of BaalZephon. The BOW Inlet canal waterway is shown on the left. This section is a horizontal cut in Fig. 1 from the point of the Red Arrow and extending through the green to the left. The exact width, depth, and are are unknown but this is expected to be fairly close.

It was not only ships that traveled up and down this waterway from the Gulf of Suez through the Bow Inlet to the Bitter Lakes, Lake Timsah and up through the Wadi Tumilat Canal to the Nile River, but also salt water went in and out the inlet shown in Fig. 1 and Fig. 2. and the Bitter Lakes and Lake Timsah could be sometimes salty and sometimes partly fresh water depending on the Nile River and winds. The Red Sea at the top of the Gulf of Suez is some of the saltiest open water on earth due to the heat and high evaporation rate. The water going in and out normally means the Bitter Lakes and the Bow Inlet would be too salty to water flocks and herds. This is probably why they were called Bitter. Moses and Israel would normally have a problem with the salt water (not having proper fresh water for the millions of creatures) if they were to take this route to leave Egypt.

The above geography existed at the end of Exodus Chapter 9 when there occurs the Plague of Hail mixed with Fire. (There is much more to say about the hail and fire plague at a later time.)

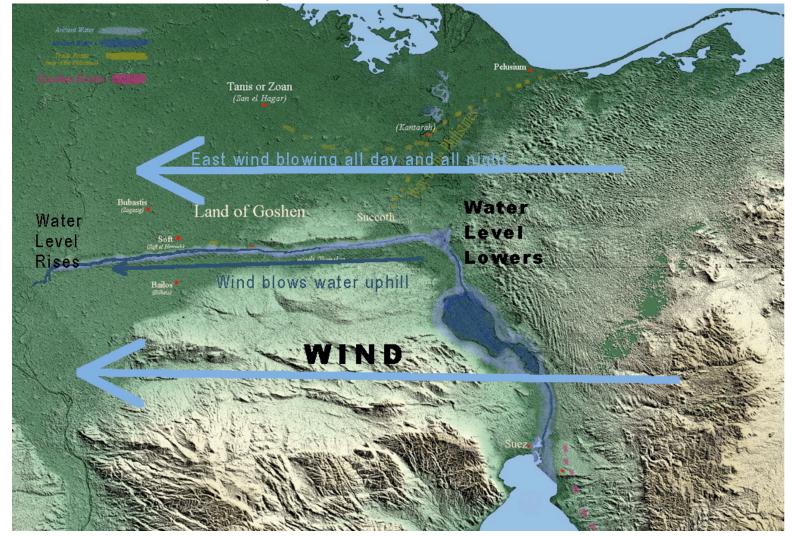


Fig. 3 Locusts are blown into Egypt with an East wind blowing all day and all night.

Exodus 10:13, And Moses stretched forth his rod over the land of Egypt, and the LORD brought an east wind upon the land all that day, and all [that] night; [and] when it was morning, the east wind brought the locusts.

In the beginning of Exodus Chapter 10 Moses warns and then brings the plague of Locusts. They are brought into Egypt with an East wind blowing day and night for about 24 hours. An interesting thing happens as the Locusts are blown into Egypt. The wind blows across the canal going across the Wadi Tumilat from Lake Timsah toward the Nile River. As it blows for about 24+ hours the water is blown up hill from Lake Timsah to the Nile River. Rather than the The Canal of the Pharaohs in the Wadi Tumilat having a slight drop in elevation from the Nile to Lake Timsah, there is now built up an abnormal difference in elevation.

This situation is shown in Figure 4 as Lake Timsah is practically dry and there is an over abundance of water in the west toward, and in, the Nile River. The horizontal blue line, the Canal of the Pharaohs, going from the Nile to Lake Timsah, the Wadi Tumilat, is "charged" to start to flow faster than usual.

Historians agree that the Canal of the Pharaohs existed, the only debate is whether it existed at the time of the Exodus. But Hatshepsut being a strong candidate for Exodus Pharaoh and her pictures of the same ships in the Nile and at Punt gives strong evidence that the Canal of the Pharaohs did exist then at the time of the Exodus and could even have been dug or re-opened and maintained by Joseph and the Israelites.



Fig. 4 Water Levels, abnormally high in the west of Wadi Tumilat and abnormally low in Lake Timsah.

At this point in the story the Locust Plague is in the coasts of the Nile and the water level in the Nile is extra high. But during the few hours that the locusts are in the land, the water momentum has a chance to naturally change from going up stream (as blown by the East Wind) to going downstream as would normally be the case. It has just changed direction and started back down when the Egyptian people and Pharaoh have had enough locusts.

Pharaoh finally is pushed to surrender and ask Moses for mercy and Moses prays to God and the Locusts are blown out with a MIGHTY STRONG WEST WIND. Notice the relative strength of the wind is very specifically mentioned.

Exd 10:16 Then Pharaoh called for Moses and Aaron in haste; and he said, I have sinned against the LORD your God, and against you.

<u>Exd 10:17</u> Now therefore forgive, I pray thee, my sin only this once, and intreat the LORD your God, that he may take away from me this death only.

Exd 10:18 And he went out from Pharaoh, and intreated the LORD.

<u>Exd 10:19</u> And the LORD turned a mighty strong west wind, which took away the locusts, and cast them into the Red sea; there remained not one locust in all the coasts of Egypt.

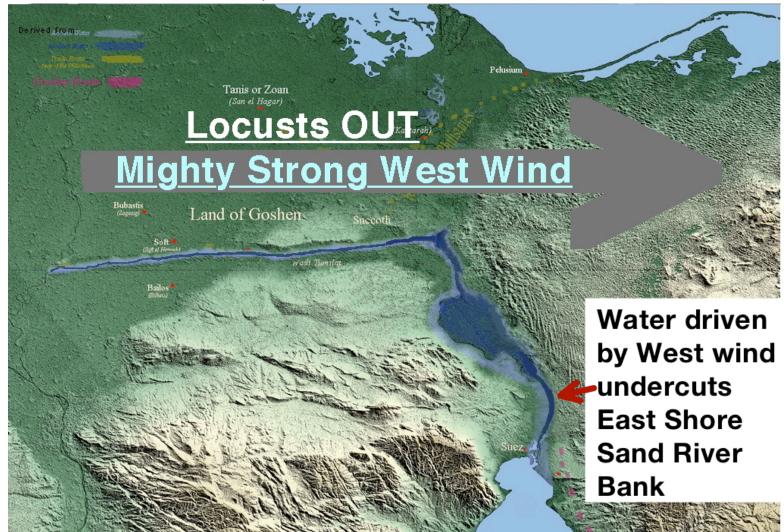


Fig 5. Mighty Strong West Wind blows Locusts out of Egypt and blows water down canal to Lake Timsah.



Fig. 6 Bow Inlet Center Section as Locusts are Blown out of Egypt by a Mighty Strong West Wind.

As the Mighty Strong West Wind blows the Locusts out of Egypt it does several very incredible things. It starts a strong current through the canal and waterways, cleaning out the salt water for the people and herds. The wind is also directed by the valleys in the mountain passes to the west to push the water out of Great Bitter Lake, the stomach shaped lake in the middle. This high current is forced by the wind through the mountain passes to the west and directed right at the middle of the BOW. It thus washes against the bottom of the 450 foot high sand river bank to the east and undercuts it and washes the sand away. The whole geography of the area for 100+ miles is designed to do this.



Fig. 7 High sand cliff on east shore after locusts go out of Egypt by a mighty strong west wind. The current wets the sand making it solid and shaping it approximately as shown.

Now the high sand river bank just sits there in peace and dries out in the intense mideast spring sun for (??) days.

Between Exd 10:19 and 10:20 there is an unknown amount of time, maybe several days when Pharaoh refuses to let Israel go. Then there is darkness for 3 days in Egypt and then passover at the beginning of the Exodus journey.

In the homes of the Egyptians there are three days while Pharaoh contends with God but the Israelites have three days of Light. The darkness can be felt and there is much more to be said about this later.

<u>Exd 10:22</u> And Moses stretched forth his hand toward heaven; and there was a thick darkness in all the land of Egypt three days:

<u>Exd 10:23</u> They saw not one another, neither rose any from his place for three days: but all the children of Israel had light in their dwellings.

Then in the first part of Exodus chapter 11 there is the borrowing of jewels in the morning and the preparation for the Passover in the afternoon. The first Passover is when the firstborn in every household of Egypt die but the Israelites which have the Blood of the Lamb on the lintel and the doorposts are saved. This is a figure or type of Jesus as the Lamb who shed his blood on the cross to provide forgiveness for sins to save those who believe on him, follow him, and take him as Lord and Savior. Now here is a question for your the reader. Won't you recognize Jesus as Lord and Savior and be saved for eternity right this minute. Just take a minute and pray to Jesus, confess that you are a sinner, (it's not news, we're all sinners), confess that you are a sinner, and ask him for forgiveness and to be saved from hell. This is the only way to get salvation from Hell. You can't imagine how bad it is. We all have sinned and done bad things and Jesus is ready to take you to be his own. Pray right now and be saved by Jesus.

After the Locust Plague Pharaoh was stubborn for an unknown number of days, but probably less than 1 whole day. When the Locusts were out Pharaoh probably then said that same day they could not leave. So the plague of darkness is 3 days, the borrowing jewels and passover is one day, and the Exodus travel to the Bow Inlet site is about 5, 6, or 7 days. So the sand is drying out for 1?+3+6=11, about 9 to 11 days. Sand sculptures are held together by the surface tension of the water between the sand particles. As the sand dries out it loses the force of the surface tension between the sand particles. This is why wet beach sand is hard but dry sand 'gives' and has no strength. The Red Sea area is some of the hottest and driest on earth making the Red Sea waters the saltiest open water sea on earth due to the limited water circulation and high sea water evaporation.

The sand river bank right under BaalZephon after drying for about 11 days in the hot sun is just about ready to collapse. Moses and the Israelites, and flocks and herds arrive and are "shut in" at the western peninsula of the Bow Inlet site. Because the Mighty Strong West wind caused the current of fresh water down the Wadi Tumilat and through the Bitter lakes for 11+? days there is plenty of good fresh water all along the route for people and flocks and herds.

Pharaoh has a change of heart and with the army pursues Israel and Israel is in a trap. A Strong East Wind starts and blows all night. The wind speed is specific. It is not Mighty Strong as when the Locusts were blown <u>out</u> and it is not just a wind as when the locusts were blown <u>in</u> to Egypt, but it is specifically a <u>Strong East Wind</u> that blows all night.

The geography is configured to specifically channel the wind in a very special way. A larger map is really best to show all the hills and how they channel the wind for the locusts and parting of the Red Sea but the colored map of Figure 8 illustrates the wind channeling through the passes against the BOW inlet. (Exact geography is unknown.)

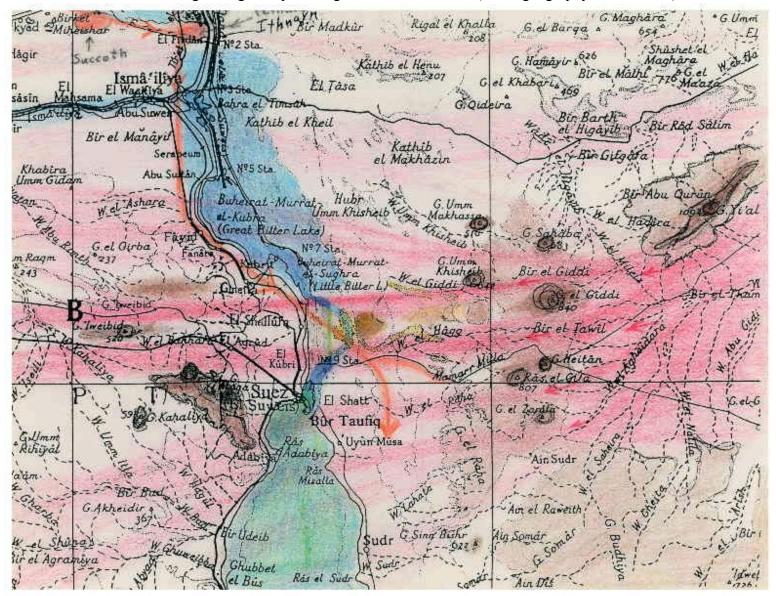


Fig. 8 Wind Channels (pink) through passes (Nostrils), against Bow Inlet, Bitter Lakes, & Gulf of Suez. The mountain passes in the Sinai very specifically channel the wind to be lesser in the middle, about 45 - 55 mph. Then at the two sides west of the mountain passes of the Giddi Pass and the Mitla Pass the top and bottom of the Bow Inlet meet the highest velocity winds coming down through the passes. These two wind channels pile the waters up in a wall on the right hand and on the left as Israel passes between.

The wind in the middle is blocked by mountains in the middle. A lesser velocity wind but a much greater volume is channeled to the bodies of water to the Northwest and Southwest. To the Northwest is the Little Bitter Lake and the Great Bitter Lake. To the Southwest is the top north Gulf of Suez smaller Lobe which matches the Little Bitter Lake and then there is the much larger lobe of the more southern Gulf of Suez. Lesser velocities but much greater volumes of wind are directed against these bodies of water and the water is "congealed" in the heart of the deeps.



Fig. 9 A Strong East Wind causes a Wall of Waters on Right (behind observer) and Left (shown).

<u>Exd 14:8</u> And the LORD hardened the heart of Pharaoh king of Egypt, and he pursued after the children of Israel: and the children of Israel went out with an high hand.

Exd 14:9 But the Egyptians pursued after them, all the horses [and] chariots of Pharaoh, and his horsemen, and his army, and overtook them encamping by the sea, beside Pihahiroth, before Baalzephon.

Exd 14:10 And when Pharaoh drew nigh, the children of Israel lifted up their eyes, and, behold, the Egyp-

tians marched after them; and they were sore afraid: and the children of Israel cried out unto the LORD. Exd 14:11 And they said unto Moses, Because [there were] no graves in Egypt, hast thou taken us away to die in the wilderness? wherefore hast thou dealt thus with us, to carry us forth out of Egypt?

<u>Exd 14:12</u> [Is] not this the word that we did tell thee in Egypt, saying, Let us alone, that we may serve the Egyptians? For [it had been] better for us to serve the Egyptians, than that we should die in the wilderness.

<u>Exd 14:13</u> And Moses said unto the people, Fear ye not, stand still, and see the salvation of the LORD, which he will shew to you to day: for the Egyptians whom ye have seen to day, ye shall see them again no more for ever.

Exd 14:14 The LORD shall fight for you, and ye shall hold your peace.

<u>Exd 14:15</u> And the LORD said unto Moses, Wherefore criest thou unto me? speak unto the children of Israel, that they go forward:

<u>Exd 14:16</u> But lift thou up thy rod, and stretch out thine hand over the sea, and divide it: and the children of Israel shall go on dry [ground] through the midst of the sea.

Exd 14:17 And I, behold, I will harden the hearts of the Egyptians, and they shall follow them: and I will get me honour upon Pharaoh, and upon all his host, upon his chariots, and upon his horsemen.

<u>Exd 14:18</u> And the Egyptians shall know that I [am] the LORD, when I have gotten me honour upon Pharaoh, upon his chariots, and upon his horsemen.

Exd 14:19 And the angel of God, which went before the camp of Israel, removed and went behind them; and the pillar of the cloud went from before their face, and stood behind them:

<u>Exd 14:20</u> And it came between the camp of the Egyptians and the camp of Israel; and it was a cloud and darkness [to them], but it gave light by night [to these]: so that the one came not near the other all the night.

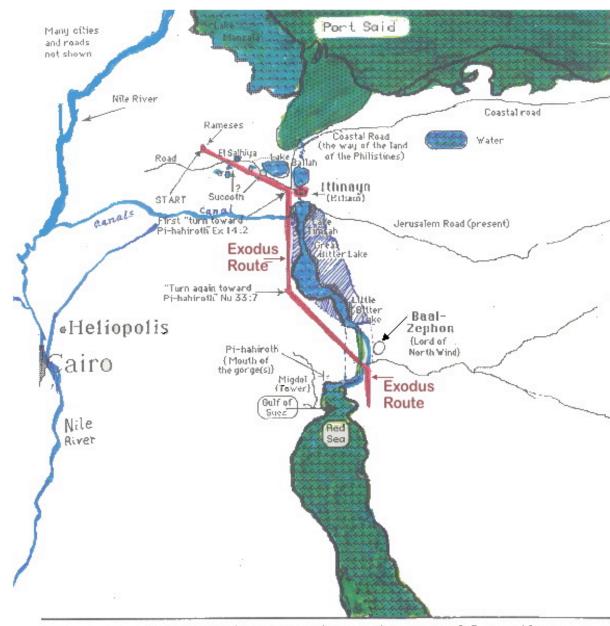
Exd 14:21 And Moses stretched out his hand over the sea; and the LORD caused the sea to go [back] by a strong east wind all that night, and made the sea dry [land], and the waters were divided.

Exd 15:8 And with the blast of thy nostrils the waters were gathered together, the floods stood upright as an heap, [and] the depths were congealed in the heart of

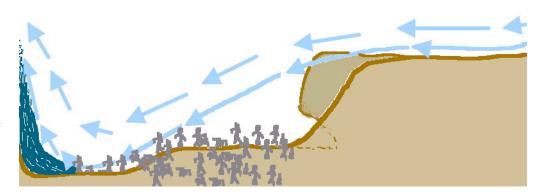
the sea.

Exd 14:22 And the children of Israel went into the midst of the sea upon the dry [ground]: and the waters [were] a wall unto them on their right hand, and on their left.

Israel is able to flee across Bow Inlet between wall of waters on right and left and proceed on beach south of high sand river bank. This crossing area is very close to Pi-ha-hi-roth which is the mouth of the gorge or mouth of the Bow Inlet canal from the Bay of Suez Red Sea into the Bow Inlet.



Proposed geography and route of Israelites at the time of the Exodus.



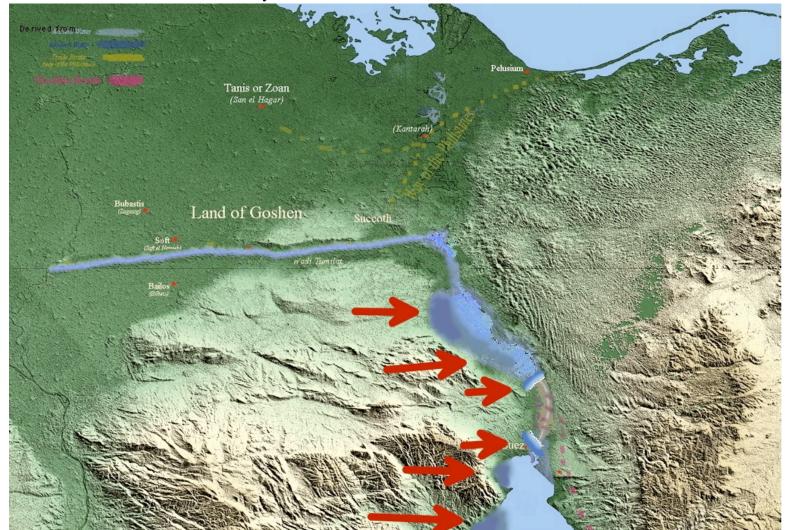


Fig. 10 Gulf of Suez, Bow Inlet, Bitter Lakes, Lake Timsah, Wadi Tumilat to Nile River. Exd 15:8 "And with the blast of thy nostrils the waters were gathered together, the floods stood upright as an heap, [and] the depths were congealed in the heart of the sea." Wind (not shown) is from right of picture. Red Arrows point to 'congealed' waters in six areas. Waters are "A WALL" on Right & Left ends of Bow and waters are also 'congealed' in the hearts of the deep. "Congealed" is common Hebrew qapha' pronounced kä·fä' (Strong's H7087). 'Congealed' is like to fold up one's knees, more like to heap up or to concentrate together. It is not, as some sea parting theories claim ice, Hebrew "qerach pronounced keh'·rakh (Strong's H7140). Nor, as other sea parting theories claim, is it a 4th state of superconcentrated water (citation?) which would probably be qapha' qapha'.

<u>Exd 14:23</u> And the Egyptians pursued, and went in after them to the midst of the sea, [even] all Pharaoh's horses, his chariots, and his horsemen.

Exd 14:24 And it came to pass, that in the morning watch the LORD looked unto the host of the Egyptians through the pillar of fire and of the cloud, and troubled the host of the Egyptians,

<u>Exd 14:25</u> And took off their chariot wheels, that they drove them heavily: so that the Egyptians said, Let us flee from the face of Israel; for the LORD fighteth for them against the Egyptians.

<u>Exd 14:26</u> And the LORD said unto Moses, Stretch out thine hand over the sea, that the waters may come again upon the Egyptians, upon their chariots, and upon their horsemen.

<u>Exd 14:27</u> And Moses stretched forth his hand over the sea, and the sea returned to his strength when the morning appeared; and the Egyptians fled against it; and the LORD overthrew the Egyptians in the midst of the sea.

<u>Exd 14:28</u> And the waters returned, and covered the chariots, and the horsemen, [and] all the host of Pharaoh that came into the sea after them; there remained not so much as one of them.

Exd 14:29 But the children of Israel walked upon dry [land] in the midst of the sea; and the waters [were] a wall unto them on their right hand, and on their left.

<u>Exd 14:30</u> Thus the LORD saved Israel that day out of the hand of the Egyptians; and Israel saw the Egyptians dead upon the sea shore.

<u>Exd 14:31</u> And Israel saw that great work which the LORD did upon the Egyptians: and the people feared the LORD, and believed the LORD, and his servant Moses.

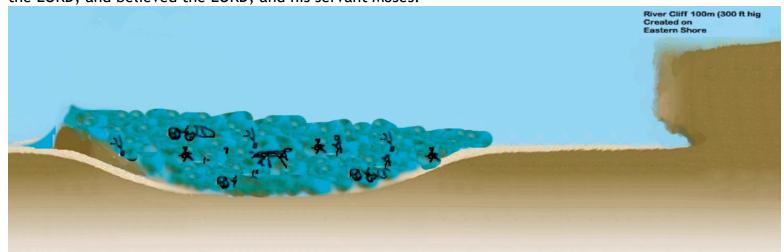


Fig. 11 Bow Inlet center section as army of Egypt is drowned in the sea. Now contradictions?

Problem: At this point there appear to be two contradictory scriptures in the sequence.

Exd 15:1 Then sang Moses and the children of Israel this song unto the LORD, and spake, saying, I will sing unto the LORD, for he hath triumphed gloriously: the horse and his rider hath he thrown into the sea.

Exd 15:2 The LORD [is] my strength and song, and he is become my salvation: he [is] my God, and I will prepare him an habitation; my father's God, and I will exalt him.

Exd 15:3 The LORD [is] a man of war: the LORD [is] his name.

<u>Exd 15:4</u> Pharaoh's chariots and his host hath he cast into the sea: his chosen captains also are drowned in the Red sea.

Exd 15:5 The depths have covered them: they sank into the bottom as a stone.

If the pursuing army sinks to the bottom and even "INTO the bottom" as a stone then the army is totally lost on the river bottom, out of sight. But a previous verse expresses a different thought which is against their sinking as a stone The verse in Exodus 14:30 below appears to contradict the verses that say they sank.

<u>Exd 14:30</u> Thus the LORD saved Israel that day out of the hand of the Egyptians; and Israel saw the Egyptians dead upon the sea shore.

So which is it? Either they sank as a stone or they washed up on the shore. One might say, well, some of each. But if it was some of each it should say "some sank" and "some washed up on shore." But it doesn't. The scripture specifically says they sank as lead and as a stone INTO the bottom but they washed up on the shore THAT DAY. And it takes three days for drowning victims' bodies to begin to decompose and rise to the surface and by then Israel was 40 miles away.

But hold on. By the way, some Egyptologists and theologians regard Hatshepsut as the Pharaoh which commanded the army and pursued Israel. See Exodus 14:10 above. Hatshepsut's mummy has been identified in Egypt. Assuming this is true, this says Hatshepsut ended up on the shore and was recovered by the Egyptians to be mummified.

Did they float or sink? Well they sank, as verse Exodus 15:10 agrees. How then did they get on the shore?

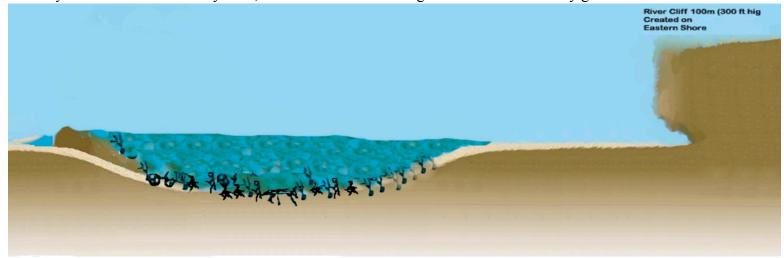


Fig. 12 Army sinks to the bottom like a stone, like lead.

<u>Exd 15:6</u> Thy right hand, O LORD, is become glorious in power: thy right hand, O LORD, hath dashed in pieces the enemy.

Exd 15:7 And in the greatness of thine excellency thou hast overthrown them that rose up against thee: thou sentest forth thy wrath, [which] consumed them as stubble.

Exd 15:8 And with the blast of thy nostrils the waters were gathered together, the floods stood upright as an heap, [and] the depths were congealed in the heart of the sea.

<u>Exd 15:9</u> The enemy said, I will pursue, I will overtake, I will divide the spoil; my lust shall be satisfied upon them; I will draw my sword, my hand shall destroy them.

Exd 15:10 Thou didst blow with thy wind, the sea covered them: they sank as lead in the mighty waters.

Consider again the situation with the army of Egypt at the bottom of the Bow Inlet waters.

Consider again a strong east wind blowing the waters into a wall on right and left and congealed in the hearts of the deep.



Fig. 10 again: Several waves of water from northwest and southwest head toward Bow Inlet.

Notice the dark blue 'congealed' waters on the west shores or 'lee' shore as mariners term it.

Greater volumes of waters have congealed in the hearts of the deep at the western sides of the Great Bitter Lake and the Gulf of Suez. When the wind dies for these second waters they also begin to return as tsunami waves from two directions toward the center of the Bow Inlet.

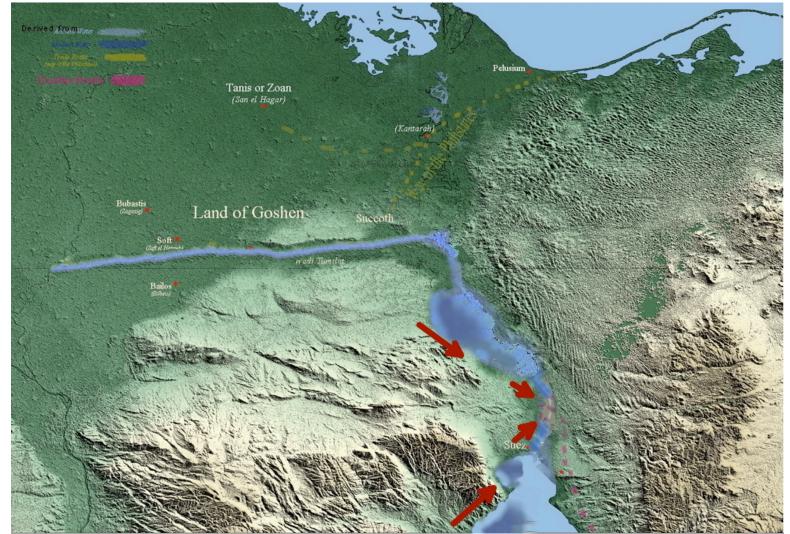


Fig. 13 Shows the progress of the four sets of water toward the Bow Inlet.

The high wall of waters (that Moses and Israel passed through) which are just at the edge of the dried out crossing begin to return and flood first, as has been shown.

When those waters hit together there is somewhat of a back wave which tends to go back towards the Bitter Lakes to the North, and toward the Gulf of Suez to the South.

As the waters from the main wall of waters hit together and form the back wave they hit the next set of incoming waters from the Little Bitter Lake and from the top semicircular curved area just in front of the high mountain which Moses calls Migdol.

This is what appears to be occurring, but the exact timing and strength and sequence will have to be determined by further research and modeling, and simulations.



Fig. 14 At this time the Army is drowned and fallen to the bottom but a second and third waves follow.

The wave of waters returns from Great Bitter Lake and Little Bitter Lake to the North, and from the South from the Top of the Gulf of Suez and the area just to the south of the top.



Fig. 15 Left: Undercut sand river bank (Sand River, SC USA) shows effect of current and partial collapse of the bottom. (mirror image)

Fig. 16 Below: Undercut river banks, and river bank collapses, are not unusual but rather normal for rivers and inlets. Image shows collapse and full 'TOE' (geomorphology term).





Fig. 17. The final wave (dual tsunami) has a much greater volume than the waters which first formed a wall on the right and on the left.

These two tsunami waves now approach from the large bodies of water, the Gulf of Suez on the Southwest, and the Bitter Lakes to the Northwest. When they hit the constriction or smaller Bow Inlet portion, as shown in Fig. 17 the only thing the great volumes of water can do is to intensify and increase in height while forming a high crest wave that approaches eastward from the north and south.

As the two tsunamis go toward the center of the Bow Inlet they also run uphill on the bottom, increasing in height. Now traveling with great force and velocity they also pick up the army from the bottom of the Bow Inlet. They have so great a volume of water and so much force that when the two northwest and southwest arms meet the combined tsunami doubles in size. When the two walls of water going southeast and northeast hit together the north and south momentum or vectors cancel and only the east vector force remains, but it's force is now doubled. With this doubled force the now very large eastward tsunami carrying the Egyptian Army heads eastward with great power and force toward the undercut High Sand River Bank. It goes possibly a mile or two inland and meets the high sand river bank which was undercut by the water when the locusts were blown out of Egypt.

The final large wave tsunami has such great volume and energy and force that it hits the undercut high sand river bank with a smack and shakes it. The tsunami hits the high sand river bank, now very dry, as the strong spring sun has been on it for about 11 days.



Fig. 18 All the force and volume of the third wave of water hits together from the west and pushes against the high sand river bank to the east.

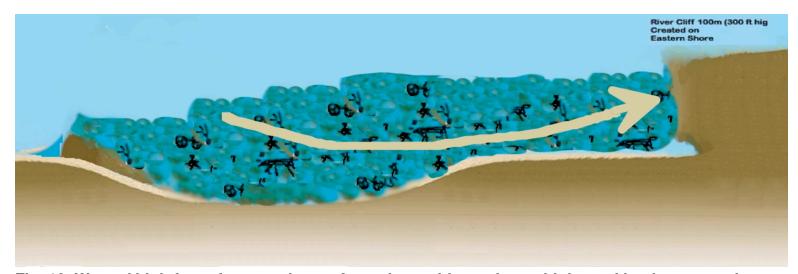


Fig. 19 Waters' high force from northwest & southwest hits undercut high sand bank on east shore.

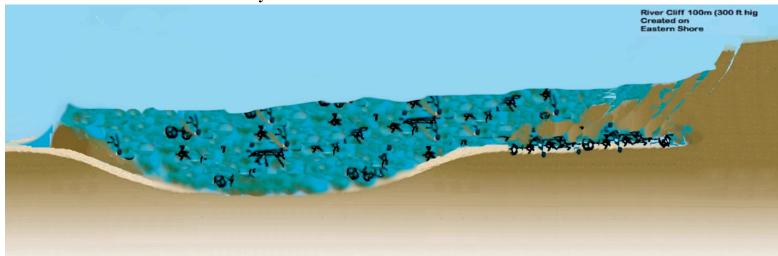


Fig. 20 Bow Inlet as full force of Waters hits undercut High Sand River Bank swallows the army.

The high sand river bank collapses.

<u>Exd 15:11</u> Who [is] like unto thee, O LORD, among the gods? who [is] like thee, glorious in holiness, fearful [in] praises, doing wonders?

Exd 15:12 Thou stretchedst out thy right hand, the earth swallowed them.

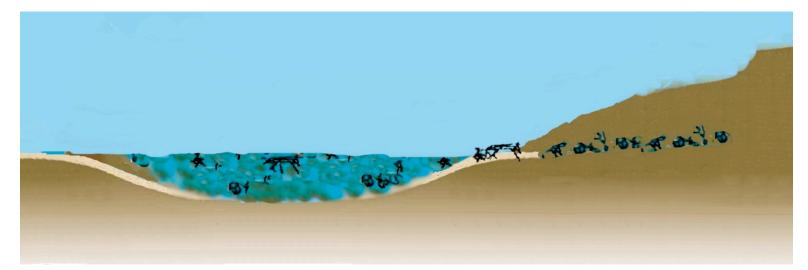


Fig. 21 Bow Inlet Center Section in the morning after army is washed up on the shore of Sand River Bank and Israelites gather weapons from army on the shore.

Again, the verse below telling that Israel saw the dead army upon the shore.

<u>Exd 14:30</u> Thus the LORD saved Israel that day out of the hand of the Egyptians; and Israel saw the Egyptians dead upon the sea shore.

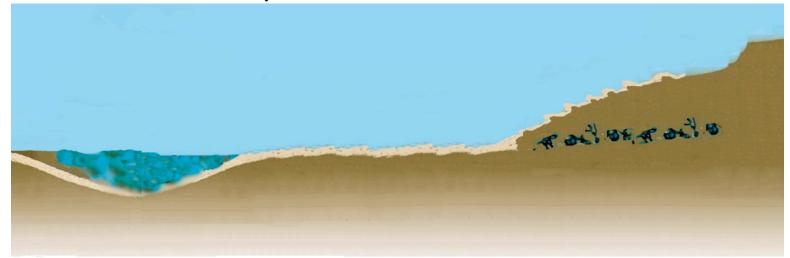


Fig. 22 Bow Inlet Center Section after sand river bank filled in Bow Inlet waterway and eventually Suez Canal was dug a mile or so to the West. Crescent Dunes can form only on the loosened sand.

The LORD went to all this geography design trouble for a very important purpose.

By using the mighty strong west wind to clear the Locusts out of Egypt and by crafting the seas and lakes and mountains and passes, the high sand river bank was undercut several miles inland. Now to reach the high sand river bank with the army it takes a large and grand design and great force of volume to now pick up the army and take them possibly several miles inland and bury them under the high sand riverbank.

And what is the reason to do this? There are several good reasons.

- 1. The buried army is now several miles inland under a very high sand river bank which nobody will disturb unless they have a very good reason, like to verify that this is all true. This verifies that the Bible is true and that God is.
- 2. By burying the army in sand it forces out all the oxygen and it is also a very dry environment so as to preserve the army and horses and chariots and weapons to be available to be excavated. This is a very dry area. They have been mummified.
- 3. By covering the army with a collapsed sand river bank it allows the identification of the anticipated excavation site by the loose sand.
 - a. The whole ridge line except where the high sand river bank collapsed is old, compressed sand. Those very same sand grains in the same locations, with the same sand grains touching them have existed there for thousands of years.
 - b. When wind blows against the sand grains it is very difficult to move them. They have been settled and compacted for thousands of years, except for the area where the sand river bank has collapsed onto the army.
 - c. Because the sand has been loosened especially well in only the one area, the wind can blow the sand into especially high crescent dunes in only one unique configuration or pattern or design.
 - d. The special arc and toe design of the crescent dunes is part of the key to identifying the site as the place where the high sand river bank collapsed and then the sand continued to run toward the Bow Inlet area in the west, thus making a unique crescent and toe design.
 - e. Below is a US government map showing the Bow Inlet area as it appears today, showing the crescent dunes identifying where the high sand river bank collapsed and buried the army. Topography altitude lines are in meters.
 - f. Small particles like sand stick together. Sand is silica and when heated enough sand melts together and becomes glass. Sand under enough heat and pressure will form sandstone rock. The sand grains actually begin to weld themselves together. When they sit together for long enough the crystals grow together. So when the sand is loosened up it now is easily blown by the wind to form large crescent dunes on only the area where it was loosened.



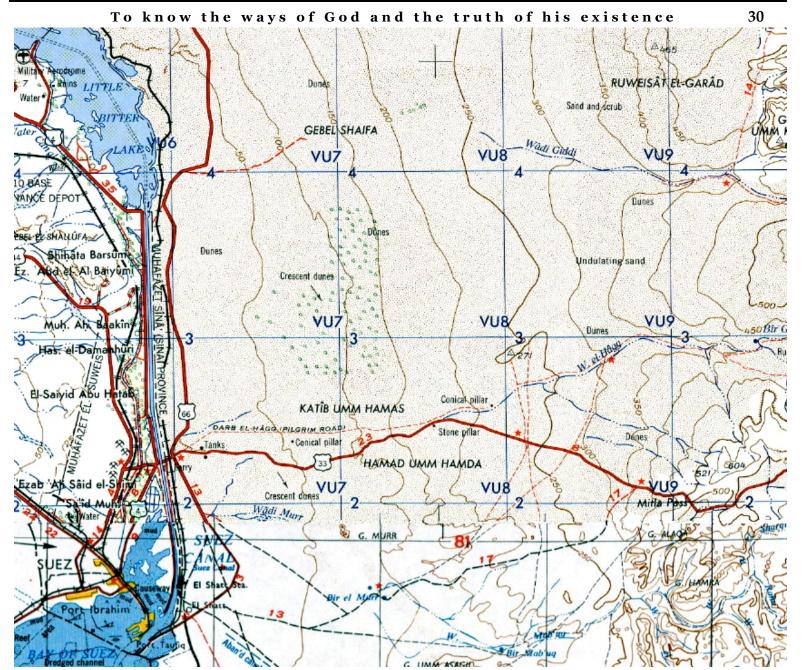


Fig. 23 Modern day map of the Bow Inlet area showing the Crescent Dunes at VU7-3 location.

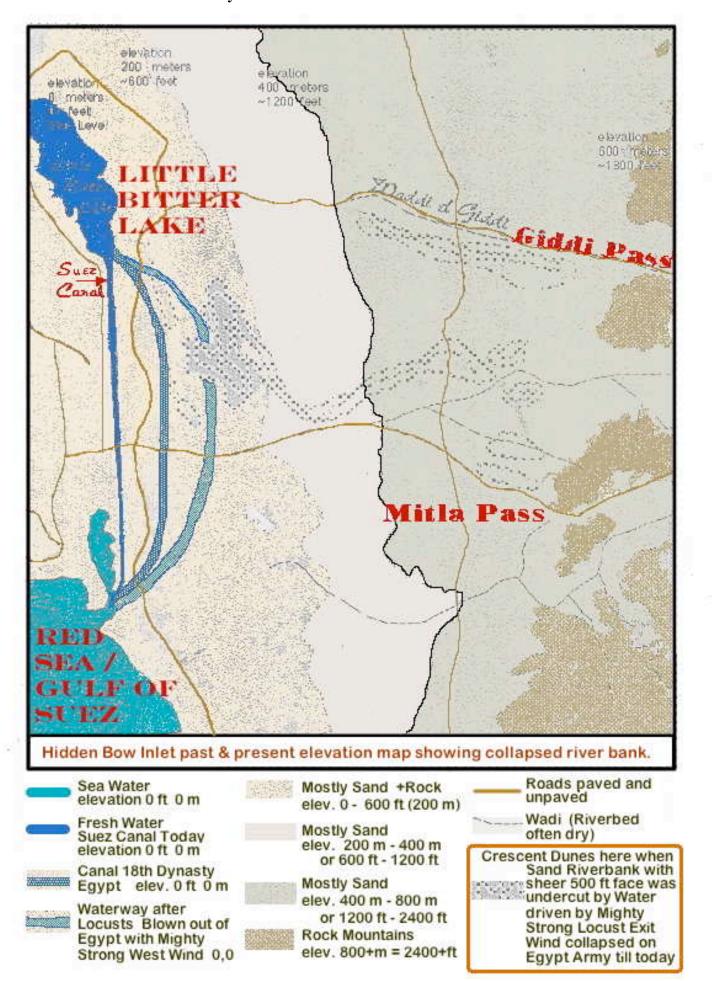
Notice that the Crescent dunes are identified by green dots. This special feature of dunes is identified on every topographical map of this area. The vertical (north south) arc of Crescent dunes identifies the area where the high sand river bank was undercut. The horizontal or left ward toe is the area of the top of the hill of sand which went first and farthest. This is a classic 'Toe' as nomenclature in geomorphology (the study of Earth Geography changes, especially from wind and water - How Geology Morphs). The brown elevation lines are every 50 meters (150 ft) of altitude above sea level.

The Crescent dunes are shown on all topographical maps of the Bow Inlet having good detail and scale.

Notice also that the Crescent Dunes area where the High Sand River Bank collapsed is just between the Giddi Pass on the upper right and the Mitla Pass on the lower right. The Giddi Pass is just directly east of the beginning of the bow at the southern end of Little Bitter Lake. The Mitla Pass is also just directly east of the beginning of the Bow Inlet on the south at the top of the Bay of Suez.

Fig. 24 Next page, is a Bow Inlet map showing possible canals, elevations, crescent dunes with 'TOE'

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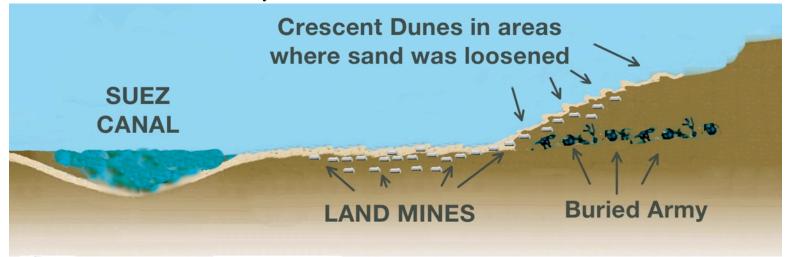


Fig. 25 Bow Inlet Center Section today with Suez Canal, Crescent Dunes where sand was loosened over Buried Army and Land Mines under sand.

Today land mines have been placed in the area east of the southern Suez Canal with the idea of protecting Egypt from Israel. But the consequence is that it requires big public interest before an archaeological dig can be initiated.

WARNING LAND MINES Stay in your vehicle! Stay off the sand! Stay out of this area!!

CONCLUSION: All the Exodus wonders, the Red Sea Crossing and the apparent crafting of the Bow Inlet were originated and orchestrated by God and obviously perfect, functional, and correct. The understanding, interpretation, and presentation herein is but a hopefully inspired yet albeit limited human attempt to transmit that incredible design and activation to the people of the world.

There may be errors in description, function, or quantities which can be determined by further research, computer simulations, or new evidence. Computer simulations or physical models may better disclose the Bow Inlet Red Sea opening and closing mechanism.

The exact design, dimensions, and operation are no doubt different than what has been described. But the description herein is expected to be close enough for understanding and verification by exterior satellite and radar probing and is close enough for computer simulation and for archaeological planning.

The whole Exodus event and the parting of the Red Sea took place about 3500 years ago. The parting of the Red Sea is certainly a miracle and it has been expressed that the expected actual way it happened in the Bow Inlet is an even greater miracle than the simple magic parallel walls of water.

Three thousand five hundred years ago God produced the miracle of the parting the Red Sea and inspired Moses to write the detailed record in scripture which would eventually guide today's generation to the evidence which should now uncover the proof. It is one thing for God to do a miracle. It is quite another thing for God to prove he did a miracle 3500 years afterward. It is not only the proof of the Exodus but also the proof of God. And it is also proof of the 'Logos,' the Word. It is God's proof of himself.

All Praise and Glory be to God. Offered for consideration and investigation.

Jonathan Novak

Note: Pages 33, 34, 35 Are incomplete.

Number of People, & Area Required

The Bible says the number of creatures in the Exodus was 600,000 People plus children, very much cattle and flocks and herds and a mixed multitude.

Exd 12:37

And the children of Israel journeyed from Rameses to Succoth, about six hundred thousand on foot [that were] men, beside children.

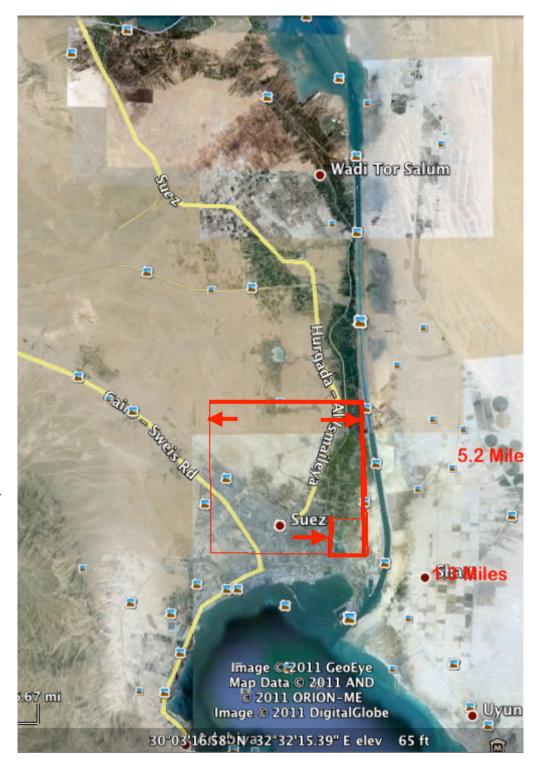
Exd 12:38

And a mixed multitude went up also with them; and flocks, and herds, [even] very much cattle.

If 600,000 are men and women adults, then estimate that children are 4 per family on average which means there are 6 per family rather than 2 adults so that this triples the size of the family or the population. Therefore, $600,000 \times 3 = 1.8 \text{ Million Israeli's}$.

Estimate 6 animals (cattle, sheep, goats) per family so number of creatures doubles again, or, 1.8 Mil X 2 = 3.6 Mil Creatures.

If each creature has 3 ft. X 3.33 ft. space, then 3 x 3.3333 = 10 sq. ft per creature. So using the number of creatures estimated above - 3.6 Mil Creatures X 10 sq. ft per creature = 36 Mil Ft. Sq.



36 Mil Sq. Ft. (to hold 3.6 Million creatures) = 1.29 Sq. Miles. - a square 1.3 miles x 1.3 miles on each side.

If we underestimated and the children and creatures were 4 times as much (4 x 3.6 Mil. = 14.4 Mil.){the cattle here might be as much as 8 Million cattle} then:

Let's say 1.3 sq. Mi. X 4 = 5.2 square miles of creatures.

A square 5.2 miles on a side can thus hold about 15 million creatures - people, cattle, flocks and herds. Thirty (30) Million would be twice as much or twice the size, still within the capability to be held in the area.

To know the ways of God and the truth of his existence Important remaining Questions:

- Q. What was height of "Chowmah", wall of waters on right and on left.
- A. Water height would be dictated by wind velocity and depth of seabed floor below river bank sides. The maximum height of the 'wall' of water in the Bow Inlet could not be higher than the containing borders which would be the river banks of the inlet. A wall which would be a "impenetrable" border or high "wall" one would think would be at least higher than the people. So it should be at least eight to ten feet high. The canal or "Bow Inlet" sea floor was probably at least that deep.

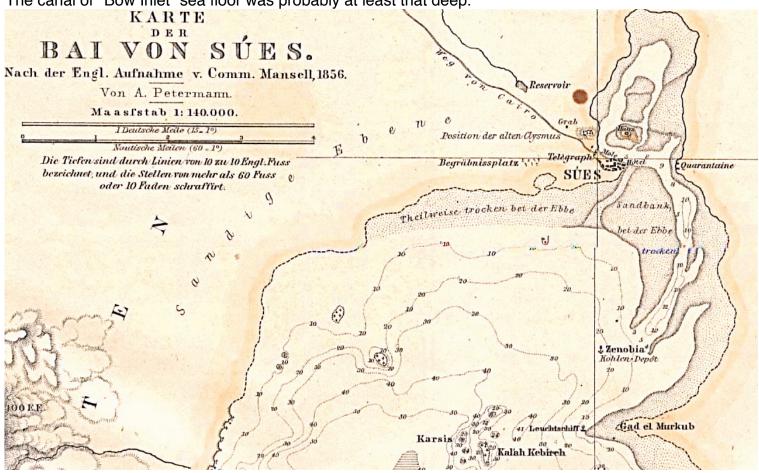


Fig. 27. An 1856, pre Suez Canal, map of the very north eastern Bay of Suez / southernmost point of the Bow Inlet shows depths of 10 "Fuss" (German for Foot") in an inlet channel south east of the city of Suez.

Q. What was the width of the Bow Inlet?

Q. Did the Nile connect with the Gulf of Suez via the Wadi Tumilat, Lake Timsah, Bitter Lakes & Bow Inlet.
A. Hatshepsut, a probable Pharaoh during the Exodus, took a famous expedition to Punt on the African coast. She wanted to re-establish Egypt as a trading nation. Her funerary temple at Deir El Bahari has painted wall carvings of the expedition showing the ships in the Nile River and in the land of Punt being loaded with exotic goods where they were returned to Egypt, mostly back to the Nile River. Fish specific to the Nile and the African Coast are shown with the identical ships. It is generally acknowledged that these are the same ships shown in the Nile River and in the land of Punt. Some suggest that the 5 ships were constructed and sailed in the Nile River, then disassembled and taken overland on donkeys to Quseir where they were reassembled. Quseir is an old port on the Red Sea Gulf of Suez near Thebes in upper Egypt. Earlier Pharaohs had build seagoing ships there. Why disassemble the ships back and forth? Why not just keep using the ships in the Gulf of Suez and off the Africa Coast? Why not just build the ships in Quseir to begin with, as earlier Pharaohs had done, and leave them off the African Coast? It is a lot of work to build a 60 ft ship and make it strong and light and water tight. And 5 ships is 5 times the work. Why do it two or three times? Why do 10 or 15 times the work. This makes no sense.

Historians Herodotus, Pliny, Strabo say that the Gulf of Suez extended up via a thin strip of water to the Egyptian City of Heroes, "Heroopolis" (Pithom?). This was called the Heroopolite Gulf, a northern extension of the Gulf of Suez going to Heroopolis, an eastern point on the Wadi Tumilat, near the top of the Red Sea.

There was a canal called "The Canal of the Pharaoh's" which went from the Nile River to the Red Sea above the Bitter Lakes and essentially connected the Gulf of Suez with the Nile River, and by extension with the Mediterranean Sea. Darius the Mede, Pharaoh Necho, and Napoleon all considered digging or re-digging this canal and some quit working on it mistakenly thinking the Red Sea was higher in water level than the Nile River. (They worried that the Gulf of Suez, Red Sea, salt water would run into the Nile River and would make the Nile River salty and ruin all Egyptian life.) This is a mistake because, as we know today, the present Suez Canal uses no locks and allows water to flow from the Mediterranean to the Gulf of Suez and back. But the Nile River is slightly higher in altitude than both the Mediterranean and the Gulf of Suez so the Nile flows out into the Mediterranean.

Joseph and the Israelites were canal builders and worked waterways. See the Canal of Joseph in the Fayum: http://hope-of-israel.org/josepheg.htm

Eighty-one miles S.S.W. of Cairo by rail, lies Medinet-el-Fayum

More references to be supplied.

Q. What was the Exodus Route after crossing the Red Sea at the Exodus Bow Inlet?

A. THe Bible says they were to go by way of the Red Sea. Some modern natural evidence agrees with this. Satellite infrared photographs indicate a very large group of people and or animals compacted the earth in a route around the Sinai Peninsula; a route that followed the border of the Sinai Peninsula along side the Red Sea. This is also matched by archaeological evidence of large campsites along this route.

Interestingly, recent satellite infrared technology has revealed ancient caravan routes in the Sinai. George Stephen, a satellite-image analyst, discovered evidence in the satellite photographs of ancient tracks made by "a massive number of people" going "from the Nile Delta straight south along the east <u>bank</u> of the Gulf of Suez and around the tip of the Sinai Peninsula." He also saw huge campsites along the route, one that fits the description given in the book of Exodus (Price 1997:137)