

## 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 x 1/2 x 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