

Third Fragment from the work of Hermann Samuel Reimarus (Drittes Fragment. Durchgang der Israeliten durchs Rote Meer, G. Koehn trans.)*

Passing of the Israelites Through the Red Sea

§26. When we consider the other miracle, namely the passage through the Red Sea, the self-contradiction of affairs makes their impossibility almost more palpable still. 600,000 armed Israelites moved out of Egypt in battle order. They had with them women and children, and a multitude of common folk who had gathered together.¹ Now, in keeping with normal human relationships we must count at least four others for every battle ready man: in part women, in part children, in part elderly, in part servants. Hence the total in the Exodus, according to the number given of those who were battle ready, has to be reckoned at a minimum of 3,000,000. They all drove their flocks and herds, and therefore many cattle, with them. If we now count only 300,000 households, and one cow or ox and two sheep for each, we get a total of 300,000 oxen and cows and 600,000 sheep and goats. But we must also count at least 1000 cartloads of hay or feed for the cattle, plus many wagons for the gold and silver vessels which they had appropriated; not to mention the usual baggage and tents for such an enormous army, which we will reckon at only 5000, that is one wagon for sixty persons.

They came finally to the Red Sea and in this area set up camp by the shore. Pharaoh followed with 600 chosen chariots and all the other chariots of Egypt, along with the whole group of horsemen and infantry, and set down not far away, as night had come.² Josephus reckons this army at 50,000 horsemen and 200,000 infantrymen. It must certainly not have been small, to want to go up against a force of 600,000 armed soldiers. But we will count only half, namely 25,000 horsemen and 100,000 infantry, along with chariots. The pillars of cloud and fire positioned themselves throughout the night

* Text is taken from that published by Gotthold Ephraim Lessing in 1777. This is apparently not the final and most complete version that Reimarus composed, but it is the version that became famous. Those who wish to read more of this remarkable man's work may find a selection of translated writings on the New Testament, edited by Charles H. Talbert and published with a useful Introduction as *Reimarus: Fragments* (Philadelphia: Fortress Press, 1970). Further texts in German may be found online at: <http://rz-home.de/~ahipler/kritik/reimarus.htm>

¹ *Exodus* 12:37, 38.

between the Israelites and Egyptians. Then God sent a strong East wind, which drove away the sea all night long and made it dry. Whereupon the Israelites went in with dry feet and the Egyptians after them, so that the former all passed completely through, while the latter were altogether in the middle of the sea. At the morning watch God looks upon the army of the Egyptians and lets the water return, so that before morning it flows back and thus all the Egyptians drown so that not one survived. This is what is in part stated explicitly, in part necessarily entailed by the biblical narrative.

§27. I will set aside here all the other circumstances and consider only the enormous march in comparison with the short time, the number of people and cattle, the inconvenient road and the dark night. Since the east wind blew all night in order to make the sea dry, it can certainly not have become dry before midnight. Now after 3 a.m., in the morning watch, the Egyptians, with horse and chariot, are already in the middle of the sea. Here towards morning comes the water, flowing back. The Egyptians flee, but into the water and they drown. It follows that in the time from midnight till 3 or 4 a.m. not only all the Israelites but also the Egyptians are all together marching through the sea toward the opposite shore. Now whoever has—I won't say experienced—but just heard or read about an army's march, can easily grasp that such a rapid flight, especially by such a crowd of people and animals and under such conditions, is a true impossibility. The crowd consists of 3,100,000 people; then there are 6000 Israeli wagons with feed and baggage, to which the above mentioned oxen would have been yoked. The Egyptians had many war chariots harnessed to two, four and even more horses, and thus at least 100,000 horses in addition to the horsemen. Then come the cattle of the Israelites: 300,000 oxen and cows and 600,000 sheep. When such an enormous group of people and cattle set up camp it will require an area tens of kilometers in length and width³: as not only modern day experience but also the style of ancient camps teaches us.

² *Ibid.*, 14:2-9

³ Reimar says 'von vielen teutschen Meilen' in length and width. A German mile in Hamburg at that time was about 7.5 kilometers. [GK]

The camp of the Hebrews, as can be seen in the tabernacle⁴ and in the cities of the Levites, was four sided. And the facts tell us that for protection against enemy attack an army must not extend itself in a weak and scattered length, but must hold together; for which purpose a square is most convenient, which both the Romans and other nations preferred. If we now bring ten persons into one tent, the number of 3,000,000 people yields a total of 300,000 tents. These could not be more comfortably positioned in a square than if they kept the baggage, wagons and cattle protected in the middle. If we now consider what kind of enormous space is required by 300,000 oxen, 600,000 sheep, and so many thousands of baggage wagons; and how far around them 300,000 tents must stretch: then we are being very modest when we claim, that they must altogether fill up over 15 kilometers in length and breadth, be their arrangement ever so orderly and efficient. Now since between the armies of the Israelites and Egyptians there must necessarily be a large intervening space, it is further obvious that we are not too cautious in calculating that the last Egyptian troops were another seven and a half kilometers from the furthest Israelites, and therefore over 22 kilometers from the sea. The sea itself, if we measure it according to this narrative, would also have had to be at least seven and a half kilometers wide if Pharaoh's whole army, with so many horses and chariots, in the most central and deepest course, found at once both a place and a grave. Consequently, the last and furthest Egyptians would have had approximately 30 kilometers between their camp's position and the place of their drowning: and so similarly would the last and furthest Israelites have had about thirty kilometers from their camp's position to the place on the other side of the sea.

§28. Now one might rather think, that it would still not be so impossible for someone fleeing to cover 30 kilometers in four hours. But, anyone in the habit of forming even a slightly distinct mental image of the circumstances with all their difficulties, particularly the oriental manner of marching and the bottom of the sea, will realize without difficulty that such a march is a true impossibility: so many people with their baggage and cattle

⁴ Cf. *Exodus* 25-31 and 35-40.

traveling 30 kilometers in four hours of nighttime darkness, over a seabed which allows only a few to pass together.

To make it completely clear, I want to describe first the normal movement of oriental and Hebrew processions, insofar as I have been able to ascertain it from ancient sources and without taking the flight of the Israelites into consideration beforehand. The Hebrews followed an order when moving, such that one tribe moved before another, and within each tribe each family under the leadership of its fathers. Insofar as I posit this order in the present march, I am not holding people back. We know that order assists a march, while disorder hinders it mightily. Now there were among them those who led groups of 1,000, of 100, of 50, indeed of 10. Since they had leaders of 10 men as corporals, it is very likely, that in normal order no more than 10 men marched in a unit: which would also seem to be required by the narrowness and unevenness that would at least sometimes be noticeable in the road. Hence even today we find caravans in no other form than in a long procession, which is required simply by the impossibility of the route. For it would otherwise be an advantage to bring along many men together: they would then be able to resist robbers with a more unified strength.

For exactly this reason the Hebrews, as other caravans in ancient and more recent times, had a leader who went before with a burning and smoking pot on a pole, in order to be seen from a great distance by day and night, and thus so that those in the rear might not go astray. Such an orderly procession of 3,000,000 persons would yield 300,000 ranks or members. If we now assign a place of only three paces to each rank, taking account of the cattle and baggage wagons, then the whole train would stretch for 900,000 paces, or 1,350 kilometers.⁵ Now since a nimble fellow cannot go faster than 4000 paces in an hour, the procession, without an order in place and without counting rest days, would take 225 hours, or 9 days and 9 hours before the hindmost could have trod in the footsteps of the leaders. I am not exaggerating things at all here, but actually saying too little, according

⁵ "180 teutsche Meilen". Reimarus is reckoning 5000 paces per German mile, one pace equal to about 1.5 meters. This is similar to a Roman pace, which was measured from the heel of a foot to the heel of the same foot when it strikes the ground again, hence after two steps. [GK]

to modern experience as well as the history of the Hebrews. I would highly praise a modern general who with the developed military organization of today could manage a march of so many kilometers with 100,000 men in 8 to 10 days, so that they all arrive at the destination. And whoever pays attention to the marches of the Israelites will find how slowly they moved from one place to another, as when they first arrived at Mt. Horeb in the third month, where according to the first estimate of Moses they should have been in 3 days.

§29. It may be asked, however, how much time the Israelites could win under the conditions of a flight to the Red Sea. I will grant everything possible, so long as the Israelites and their oxen and carts aren't given wings; and the sea is not taken to be otherwise than it was and still is. One might wish to suppose that this Israelite army of 3,000,000 people didn't camp in a square, but rather in a line along the shore of the sea, and was therefore not only closer to the sea, but also passed over the dry sea bed in broad ranks. But this would be to suppose something that in part would not contribute much to the speed, and in part goes against the nature of the facts and the biblical story. I say that in part it would not help much by way of speed. For, suppose as many in a row as you wish, the row would become so long that Moses would need more than the whole night in order to let those at the very end know that they should break camp. The people had not counted on Pharaoh with his army; no one had thought about passing through the sea. When they lifted up their eyes and saw the Egyptians, a number of them came to Moses saying that they must all die. Then for the first time Moses told them what should happen.⁶ The pillars of cloud and of fire did not go ahead, so that they could thereby have perceived that it was time to break camp; instead they positioned themselves all night long behind the army between them and the Egyptians. That would otherwise be a sign for them to reverse and go up against the Egyptians, because the preceding pillars of cloud had turned in that direction. And the Egyptians should have done so too, according to this stratagem. If instead the Israelites were supposed to think differently, they would have to have been directed; not indeed by loud trumpet sounds, but rather through

⁶ *Exodus* 14:10-14

messages, since it was supposed to be an escape taking place in the stillness of night, without the Egyptians noticing.

The more we spread the Israelites out on the shore, the longer the time needed before everyone could know of the message to break camp. Positing 10 in each row gives 300,000 rows and a length of 1,350 kilometers, so it would follow conversely that if one assumed only 10 rows one would have a width of 300,000 in one row. This, while not 1,350 kilometers, would stretch out over a good third of that, namely 450 kilometers, in which one pace is allotted to each man. But the whole “Sinus Arabicus”, the Red Sea, isn’t even that long: and no one will think that the whole body of water out to the great sea is supposed to have been dried out: indeed, the Bible itself obviously describes it only as a moderate stretch which the wind made dry, such that the water was supposed to have stood like a wall on both sides. If one now assumes a medium number of ranks in order to shorten the extension then we come back closer to a camp of the usual square shape, but further from the sea; and thus more time would be needed before Moses could communicate the message to break camp, since even the most advantageously situated camp must have extended fifteen kilometers.

But place your 3,000,000 people as long or as wide by the Red Sea as you like, let them all know beforehand that the sea will be dried by a wind, so that everyone is prepared for the crossing in advance with tents and baggage packed. All this, I say, is of no help at all failing something else, because the sea floor is not such that many people at the same time, or even a few, can come through unhindered. I will prove this with irrefutable witnesses.

§30. We have as exact a description of the Red Sea, or “Sinu Arabico”, as we could wish in Diodorus Siculus⁷, who is that much more credible because the other ancient and modern reports agree with him. Namely, the sea according to these reports is not very deep, but has everywhere a green appearance from the many mosses and grasses of all

types that grow from the bottom. In most spots it is muddy, especially in the bays and at its farthest ends. In many spots it also has loose sand at the bottom, in which passing ships, if they go too deep, get stuck at low tide so that they sink deeper and deeper and cannot be helped unless a severe flood lifts them out. In this sea there are also many islands, between which the flood flows with great force and thus hollows out a deep passage way. Scattered here and there are hidden reefs and rocks, so that ships, especially at night, cannot cross over without great danger of being broken on a rock or stuck in mud or sand. Frequently there are also bushes growing, rather like laurels or olive trees except that they are petrified like corals, as indeed red and white corals are also often to be found. Hence Christoph Fürer, when he wanted to bathe in this sea during his travels, cut his foot dangerously on a similar sharp coral.⁸

These are truths which cannot be evaded by any inventions of an unbridled imagination. Let me have here so many hundreds or thousands in a row hurriedly walking or driving across in the dark night. Won't one of them be stuck in the deep mud, another be blocked by grass, moss and reeds, a third have to climb over the high bank of an island, a fourth bump up against a rock, a fifth sink into the sand, a sixth stumble over the bushes and coral or injure his foot? Won't the wagons get stuck, broken apart or overturned? It is quite an accomplishment to find a small path through such a sea, such that a few people in a row can travel over safely; how is a sea bottom like this supposed to allow many thousands or hundreds to pass freely at once?

In his dissertation "De maris Idumaei traiectione", Mr. Clericus has for the most part noted these features of the Red Sea's bottom. But he fixes the problem very nicely. Because he is eager to get the Israelites across, the sea is initially not at all wide and deep, so he doesn't think about the obstacles of the bottom. He mentions neither the multitude of persons, vehicles and cattle, nor the time they would need for such a journey, nor other

⁷ Reimarus here quotes and translates several excerpts, which I have omitted, from Diodorus Siculus, Theophrastus and Strabo describing the rocky, sandy and weedy nature of the Red Sea. [GK]

⁸ See the *Itinerar* of Christoph Fürer, p. 35 and the *Travels* P.I. letter XI, of Pietro Della Valle, who himself fished out many corals along with mussels and snails and sent home a good number of trunks full of them.

difficulties: he simply places his Israelites in wide ranks and lets them slip quickly across. Pharaoh too comes in speedily and unhindered. When he wants to flee, however, then the sea becomes wide, then his wheels cut too deeply into the sand and mud, then he runs into rocks and coral, then he can't get away from the spot. The flood overtakes him, and the poor Pharaoh must drown in the Red Sea with all his armies, horse and wagons. All the mud and sand, all the rocks and reefs, all the bushes and corals, all islands and high places, first seem to have sprung up for Pharaoh at the time when the Israelites are across and Pharaoh is brought in. So greatly can a prejudice in favor of what he wants blind an otherwise very reasonable man!

§31. It is therefore obvious enough that along this bottom of the Red Sea no crossing in broad ranks took place, and that on account of this as well as the numerous obstacles and hindrances a crossing would have to have taken many days. But let us also take the other hindrances into consideration. It was towards evening when they saw Pharaoh's army. Thereupon they ran to Moses in great dismay and reproached him for having led them out of Egypt. Moses soothed and encouraged them. At this the pillar of cloud was brought from the forefront of the army through the whole camp to the rear and placed between the Israelites and the Egyptians. The command to break camp was communicated to the whole army, presumably not through the pillar of cloud since it was positioned behind, not through a trumpet blast, because they wanted to flee in secret, but rather through messengers. At this, of course, the tents must have been taken down and packed with the baggage on wagons to which oxen were yoked. The army itself must have come to order, with the camp followers, the baggage, the cattle either sent on ahead or taken into the middle, or at least sheltered. How much time passes in the meanwhile? For one thing, how could so many cattle, young and old, heavy and light, have been driven a distance of twenty to thirty kilometers? Because nature and experience teach, and scripture itself remarks, that cattle like to be driven very slowly. The Israelites had, moreover, no horses with them, as the whole story indicates, and hence had to harness their wagons to oxen. At an ox pace like this it takes at least four hours to cover seven and a half kilometers. If we wish to subtract the cattle feed and all the hindrances of the sea floor, each wagon

would still take no less than twelve hours to reach the destination; and if they have to wait for each other, as would obviously be necessary, then a procession of several thousand ox drawn wagons would by itself require whole weeks of time.

Weren't there also sick, crippled, lame, blind, pregnant, or decrepit folk in a multitude of three million people? And could they keep pace with the battle worthy men? Assume that, through a incredible and unheard of miracle, no such human weaknesses were present among the Israelites; still there were surely some hundred thousand children in the population, many of which had to be carried and would have made the travel of their mothers that much harder; or, if already able to walk, would not have been able to endure for such a long way. Now let us consider in addition the impassible sea floor, the mud, the moss, the sand, the islands, the rocks bushes and coral, the heights and depths which all together stand in the way. We have a dark night before us, where one soon runs into this and soon that, and occasionally into another obstacle. In this dark night we have to bring through all the obstructions of the sea not just 600,000 battle ready men, but also some 100,000 small children, the elderly, sick, crippled, lame, blind and pregnant, 300,000 oxen and 600,000 sheep, and 6,000 covered wagons; and there is no more time than one night watch to do it in.

Certainly, I am sure that we would a thousand times rather deal with Pharaoh and all his armies than to undertake such an impossible thing. But our Mosaic history writer is not at all abashed: he thinks and writes them across in three hours, before you know it.

§32. Now since it is apparent to everyone that these miracles are self-contradictory and truly impossible, they cannot have occurred. They must therefore have been made up and indeed so noticeably and crudely that one easily sees they come from an author who neither himself experienced this migration and saw everything that it would entail in the context of the Red Sea, nor had any clear conception adequate to what experience and the facts would require. He makes all the cattle in his narrative die in a plague, and then supplies new cattle from the reserves in his imagination. He has no worries about where

they come from. He lets them perish again from boils, and lo, they survive once more to be killed by hail. Then he harnesses them anew to wagons and sets riders on them. He leads 3,100,000 people, including women, children, sick, the halt and the lame, the blind, the pregnant and the aged, with so many thousands of tents and baggage wagens at an ox pace, with 300,000 oxen and 600,000 sheep over an obstacle course in the dark, through mud, bog, sand, bush, rocks, islands, down banks and up banks, for many kilometers to the other side of the sea in one night watch. See how little understanding and reflection it costs to make miracles! So little is also needed in order to believe them!

These two examinations of alleged miracles suffice then for us to judge that the others too are invented by the human brain, and neither happened in fact nor provide evidence of anything divine. Thus in the future I will allow myself to stick closer to my purpose and avoid dealing with all the mosaic or following miracles at such length: it will happen in due time. This investigation has already done enough to show that occasional divine interventions should not prevent us from considering how the bare intentions and actions of Moses appear in and of themselves. Accordingly, in what follows we will consider the miracles of Moses only in passing, and will mainly see what Moses did and how the people of his time, who saw everything with their own eyes, passed a thoroughgoing judgement on him.