

ARTICLE IX.

THE CROSSING OF THE RED SEA.

BY G. FREDERICK WRIGHT.

IN its very form the account of the crossing of the Red Sea by the Children of Israel invites criticism, and lays itself open to rigorous cross-examination. The geographical references are numerous and minute, while emphasis is laid upon the secondary causes which are made to contribute to the result. The miraculous elements in the events are sufficiently prominent without our embarrassing ourselves with difficulties which are not necessarily involved in the biblical story, but are clearly excluded by it. In Ex. xiv. 21 it is expressly said, that "the Lord caused the sea to go back by a strong east wind all the night, and made the sea dry land, and the waters were divided." The same appears also twice in the Song of Moses. In chapter xv. 8 we read, "With the blast of thy nostrils the waters were piled up," and in the tenth verse, speaking of the return of the waters and of the destruction of Pharaoh's host, it is said, "Thou didst blow with thy wind, the sea covered them." We are not at liberty to interpret this account without giving due weight to this express and repeated mention of the secondary cause said to be employed by the Creator in the production of the phenomenon. The Lord opened the sea before the children of Israel, but he used the wind as his instrument. That is expressly said. It is none the less his work, however, upon that account. Whatever a person does through use of an instrument, he does himself. When we say that a man used an ax to fell a tree,

we do not throw any doubt on the fact that it was the man who felled the tree.

One of the first writers to give prominence to the secondary agencies employed in connection with this miracle was Dr. Edward Robinson, who in 1838 made a careful study of the conditions about Suez, and propounded the theory that the children of Israel crossed to the east side of the Gulf over a bar which is still, at times, fordable, but from which, upon this occasion, the wind had blown the water entirely off. He fixed upon this point, because the conditions here seem to fit the account so perfectly. In the first place, Jebel Attaka rises precipitously to the height of several thousand feet a short distance back of Suez; while the desert extends for fifty or sixty miles to the west and northwest. These, with the narrow point of the Gulf of Suez upon the east, exactly fit the situation; so that Pharaoh would "say of the children of Israel, They are entangled in the land, the wilderness has shut them in." It was impossible for them to go much farther south between the mountains and the sea. Furthermore, south of Suez the sea is so wide that two million of people could not have crossed in a single night, as they are represented to have done in the account. But, even at Suez, Dr. Robinson is forced to admit a serious difficulty in the narrowness of the bar which would be available; for he confesses that half a mile in width is all that could be supposed. There would be room for a column of only a thousand abreast, which to include the two and one-half million must stretch out to more than two miles in length, even if packed together in the closest possible manner. The movement of such a column across the bar would be well-nigh impossible in the time at command.

Since the construction of the Suez Canal, however, and the light which has been shed on this whole region by explorations of the ruins in Lower Egypt, and by the work of the English hydraulic engineers who have

recently had charge of the irrigating canals, the whole transaction is better understood than it could be in Robinson's day. Robinson (and until the construction of the canal nearly all travelers) reached Suez by a direct route from Cairo across the desert, a distance of about sixty miles. Hence they did not have the advantages which the modern traveler has of passing over the ancient route leading along an old branch of the Nile extending from Rameses to Lake Timsah, and then south to the Bitter Lakes (Yam Suph).

The recent observations I have been permitted to make along this route do little but to confirm the views of the late Sir J. W. Dawson, whose map we reproduce.¹ It is well settled now that Rameses, from which the children of Israel started, is situated at the head of the Wady Tumilat, through which an early branch of the Nile flowed to Lake Timsah (Crocodile Lake), and thence southward, entering into the Bitter Lakes, which were then connected with the Red Sea. When this Nile branch ceased to flow of itself, a canal was dug to conduct the fresh water. Indeed, it is clear from the Egyptian monuments that this artificial channel was built some time before the date of the Exodus. The location of Pithom, where, as well as at Rameses, the children of Israel builded store-cities for Pharaoh (Ex. i. 12), is now definitely fixed at Tell el-Maskhûta, ten or twelve miles east of Rameses. From the vicinity of Pithom one can distinctly see the blue summit of Jebel Ataka, about twenty-five miles to the south, but he cannot also fail to notice that there is an intervening minor mountain elevation of considerable importance. This is called upon the maps Jebel Geneffeh, and runs northwest and southeast, terminating not far from the middle of the Bitter Lakes. The range consists of limestone strata dipping

¹ See *Egypt in Syria: their Physical Features in Relation to Bible History*, third edition, p. 50 *et seq.*

to the west, and presenting a precipitous face to the east about a thousand feet in perpendicular height. As they are approached from the north, they increase in relative prominence, so as to shut off the view of Jebel Attaka, making, on the supposition that the sea then extended to the Bitter Lakes, the situation exactly that which was described by Pharaoh. An army marching in that direction would seem, as Pharaoh expressed it, to be entangled in the land, and to be where the wilderness has shut them in. It would be utterly impracticable for him, however, with his chariots to approach them on either flank; for on the west they were protected by the mountains, and on the east by the sea. All that was left for him to do was to follow in the rear. The encampment at Pihahiroth (Ex. xiv. 2) is described as being "between Migdol and the sea before Baal-zephon." In the absence of precise information concerning these places, they may as well be near the Bitter Lakes as near Suez. A precipitous mountain mass of rock about five hundred feet high (Jebel Shebremet) here stands out very prominently, and fits the general conception suggested by the name Migdol (tower); while Baal-zephon may as well have been on the low eminences plainly in sight east of the Bitter Lakes as anywhere else, but there is no direct evidence bearing on its location, except what is in the text.

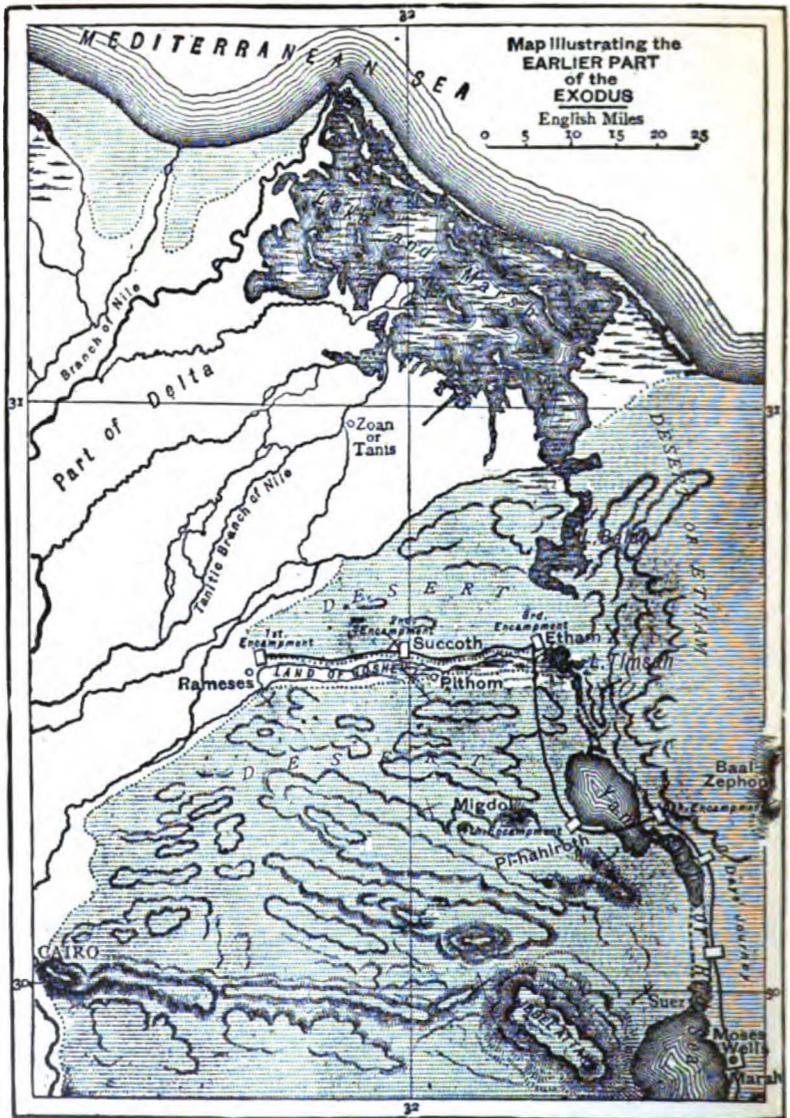
With the host encamped south of this pass between Jebel Geneffeh and the Bitter Lakes, the natural place of crossing would be somewhere between them and Suez.

The evidence that the gulf may have at that time extended up to Lake Timsah is both general and specific. A subsidence of the land, amounting to only twenty-five or thirty feet, would now permit the waters in the Gulf of Suez to extend through a narrow valley as far north as Lake Timsah, and would provide the exact conditions that are described in Exodus. That the land in all this region has been slowly rising is established by the clearest geolog-

ical evidence. All around the southeastern shore of the Mediterranean and the northern part of Egypt, gravels and imperfectly consolidated rocks are found, from two hundred to two hundred and fifty feet above the present sea-level, containing the shells that are now living in the Mediterranean. These exist in abundance at Beirut, at Jaffa, in the vicinity of Suez, and upon both sides of the Nile near Cairo. They are of peculiar interest near the great pyramids, where there is an elevated beach containing gravel and numerous large pebbles, with oyster and other recent shells intermingled and attached to the crevices of the adjoining rocks. This makes it evident that the whole region is slowly rising.

This is in analogy with what is going on in many other parts of the world. Probably there are few portions of the earth's crust that have been absolutely stable during the historic period. The coasts of Norway and Greenland are rising at the rate of a few feet in a century; while the coast of New Jersey is sinking at a little slower rate. The eastern half of the basin of the Great Lakes in America is slowly rising; so that, after a few thousand years, the water will be turned from Niagara over the Chicago Drainage Canal into the Mississippi Valley. It is against all geological probabilities to assume that the land level at Suez was the same three thousand years ago that it is now. On the contrary, from the land movements which we know to be going on in that region, it is altogether probable that at the date of the Exodus the level was such that the Red Sea extended as far as Lake Timsah. At an earlier period Africa was entirely separated from Asia, but the highest point of land north of Lake Timsah is now about one hundred feet above the sea, or about four times the elevation of the neck between the Bitter Lakes and Suez. This land route from Egypt to Palestine was in existence, therefore, long before the land between Suez and the Bitter Lakes was

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Map of the probable route of the children of Israel as delineated by Sir William Dawson. What is here called Yam Suph is the Bitter Lakes. The only change which I would suggest is to place the crossing somewhat farther south. The ancient Pelusium is near the upper right-hand corner of the land area shown. The changes of level are evident from the discontinuance of the old Pelusic branch of the Nile.

dry. In addition to this indirect evidence of the former extension of the sea to the Bitter Lakes, is the fact that the deposits along the narrow valley all contain modern Red Sea shells. The depression is also indicated by the extensive amount of Nile mud deposited along Wady Tumilat, showing that, at a former time, the gradient was such as to draw from the Nile a pretty large body of water into the Bitter Lakes.

Supposing now the children of Israel to have been encamped near the south end of the Bitter Lakes, with Pharaoh and his six hundred chariots in their rear, the situation would seem to be hopeless but for the divine intervention described in the sacred record. The strong east wind, however, which the Lord sent at this time would open the way of escape, and account for all the phenomena that are described; for this would press the water against the west side of the Red Sea, causing a resultant current to the south, and thus raise the water in the south end of the Red Sea and lower it at the north end. The extent of the effects produced by such a wind are amply illustrated in modern experience. For example, Lake Erie is 250 miles long, with its major axis lying nearly in the direction of the strongest winds. It is no unusual thing for a west wind to lower the water at Toledo seven feet below the average level, and at the same time to raise it seven feet above the level at Buffalo; while a change in the wind will exactly reverse the conditions, producing in a comparatively short time a difference of fourteen feet in the water levels at those two places.

An experienced lake captain tells me, that at one time, when he was anchored off the mouth of Saginaw River, which empties into a westerly projection of Lake Huron, a strong wind lowered the lake level so much that large areas of the shallow bay were made dry, and even the bottom of the river was exposed, so that visitors came in great crowds

to witness the spectacle. Similar phenomena are occasionally reported from Lake Menzales and the upper part of the Gulf of Suez.

Supposing, therefore, the water to have been seven feet deep over the low land now separating Suez from the Bitter Lakes, the wind would easily open a passage several miles wide, across which the children of Israel could easily get in one night; while the returning current, on the cessation of the wind, would be amply sufficient to overwhelm the tardy chariots of Pharaoh in their reckless pursuit.

Nor is this explanation at all derogatory to the miraculous character of the event. It simply brings the miracle into conformity with the natural conditions implied in the narrative. If the wind was one which had been foreordained from eternity, and originally involved in the mechanical operation of the meteorological forces of the world, it still would have been a miracle of foreknowledge which brought the children of Israel into such a position that they could avail themselves of the opportunity afforded. There was then no weather bureau to foretell storms; and, if there had been, it would not have ventured to foretell one more than a few hours in advance, while the children of Israel had turned to the south two days previously. Besides, the weather bureau even now does not expect more than seventy-five per cent of its prophecies to be correct. No uninspired sane leader would have conducted an army into such a pocket as that which Moses found himself in on the eve of that momentous event.

In reference to the expression "and the waters were a wall unto them on their right hand, and on their left" (Ex. xiv. 22), it is sufficient to say, that the word "wall" may here naturally be taken to mean a wall of protection. The Bitter Lakes on their left flank would prevent any adverse movement by Pharaoh from that direction. This figurative use of the word "wall" is frequent. For example, in

Prov. xviii. 11, "The rich man's wealth is his strong city, and as a high wall in his own imagination"; in Isa. xxvi. 1 we read that God will "appoint salvation for walls and bulwarks"; and in Nahum iii. 8 Egypt is described as she "that was situate among the rivers [^{margin.} canals], that had the waters round about her; whose rampart was the sea [^{margin.} the Nile], and her wall was of the sea." So the passages in the Song of Moses must be interpreted in accordance with the highly rhetorical nature of the whole composition. Where we read in Ex. xv. 8, "And with the blast of thy nostrils the waters were piled up, the floods stood upright as an heap; the deeps were congealed in the heart of the sea," it should be noticed that this is represented as accomplished by the "blast of his nostrils," which "congealed the deeps," while later, in the twelfth verse, it is said, in reference to the same scene, that not the water, but the earth, swallowed them. Such rhetorical phrases ought not to be pressed literally.

An objection to this theory of the extension of the Gulf of Suez to Lake Timsah within the historical period has been urged with much plausibility by Professor Sayce, who maintains that the canal would never have been excavated through a waterless desert by the side of the Gulf as far as Suez if the Gulf then extended up to Lake Timsah. But there is clear evidence that even before the time of the Exodus such a canal had been built. This objection has been satisfactorily answered by Major R. H. Brown, the English engineer who has been inspector-general of irrigation in Lower Egypt for many years,¹ who points out that a sheet of water from Suez to the Bitter Lakes so shallow that the wind would occasionally blow the bottom completely bare would not be favorable to navigation; so that any considerable commerce would demand a more reliable

¹ See *Land of Goshen and the Exodus*, London, 1890, p. 39.

channel; and, as they did not have dredging machines in the early days, they could not, as the Suez Canal Company has done, dig a canal through the shallows, but must dig it through the dry land along the sides. The necessity, also, of getting fresh water to Suez would have been as great in former times as now. But even now "it has been found necessary to make fresh-water canals (in connection with the Nile by the Ismailiyah canal) from Ismailiyah to Port Said and Suez parallel with the salt-water ship canal; and what is more, to adapt the fresh-water canal to Suez for navigation with locks at both ends and at intermediate points. . . . Future professors might argue that the Suez ship canal could not have existed at the end of the nineteenth century, because there is clear evidence that, at that time, a fresh-water canal from the Nile flowed past Ismailiyeh to Suez."¹

Upon going over the ground along the route which is now opened by the railroad from Ismailiyeh (Etham) to Suez, one cannot but be impressed with the remarkable conformity of the conditions to those described in the book of Exodus. There is, however, no necessity for locating the place of crossing so far north as is done upon Mr. Dawson's map. The opening made by the wind would more naturally be over the portion that is between the Bitter Lakes and the Red Sea. Naville and some others have placed it north of Lake Timsah; while others place it just south of Lake Timsah. But those routes lack the necessary bordering mountains on the west which are found about half way to Suez, and also would bring the children of Israel to the east side of the sea at points more than three days' journey from Marah. The geologists who have visited the region seem to be unanimous in support of the general views here presented.²

¹ Land of Goshen and the Exodus, p. 40.

² See Edward Hull, Mount Seir, Sinai, and West Palestine, p. 37, 185.

In conclusion, it is proper to emphasize the fact that the prominence which is here given to the secondary causes through which these events were brought about does not dispense with the miraculous element connected with them, but only recognizes the prominence given to the secondary causes in the narrative itself, and brings us back to the question of the nature of the determining cause which produced the wind at that opportune time. The complications of the situation are such that no reasonable person can regard them as accidental, and we have no objection to the view that the wind was caused as directly for that purpose as is the case when a mechanic shifts a pulley which sets in motion a rotary fan to increase the draft in a furnace. It is absurd to affirm that the Creator is shut off from directly influencing the forces of nature, when we have constant illustrations of the fact that the free-will of man so uses them. This discussion, however, does show that the narrative in Exodus so conforms to the physical conditions existing in the neighborhood, and is so free from the grotesqueness and indefiniteness of myths and legends, that it can but be looked upon as a piece of genuine history.

Carl Ritter and Mr. Reginald Poole of the British Museum had also at an earlier period advocated this general view.