

its jerking character, becoming soft, full, and less frequent. During this time his speech became more and more impeded, and the drowsiness augmented. He was now placed between two men, and was walked about during the night. At half-past eleven o'clock we took our leave, Dr. Scott promising to come in between one and two, and I leaving directions to be sent for if sleep should overpower him. At half-past five o'clock, A.M., I saw him; all symptoms had disappeared, except the contraction of the pupil and difficulty of speech, which did not completely wear off till the following day. For about three hours in the night, it was only by the most assiduous attention that he was prevented from falling asleep.

It appears that he had been suffering for two or three days with colic, which on that day was peculiarly severe; a friend advised the Tr. of Rhubarb. Unfortunately laudanum had been put into a phial, labelled Tr. of Rhubarb, and he swallowed the quantity I have mentioned. We know that severe colic is one of the cases in which there is great tolerance of opium; and, moreover, in this case there was probably some irritation of the mucous membrane of the stomach, which diminished its power of absorption, because a large portion of the laudanum swallowed was thrown up, as was easily ascertained from the circumstance of his having taken only a little tea during the day. The fluid evacuated contained much gastric juice, so that the slow effect of the poison was partly to be referred to digestion of the opium having commenced, a fact supposed to explain the tolerance of opium in delirium tremens.

OBSERVATIONS ON THE HYPOTHESIS OF THE FORMER EXISTENCE OF A GREAT FRESH-WATER INLAND SEA WITHIN THE CONTINENT OF NORTH AMERICA.

BY THE REV. W. T. LEACH, A. M.

(Continued from page 12.)

Occasion was taken, in the course of sundry observations respecting the hypothesis of an inland fresh-water Sea within the central regions of North America, to offer what might seem a probable account of the elevation of the continent by successive upheavings corresponding with the marginal lines denoting the action of ancient waters, and of the conditions under which the formation of the Great Canadian Lakes seems to have taken place. According to this account, these Lakes are regarded as merely *intercapedines* of the general law of elevation—*quasi remissione natura languesceret*—their beds respectively maintaining the depression more or less of their primary position, in consequence, as was assumed, of an unequal application of the subterranean

force or the different degree of resistance which their substrata opposed to it.

This hypothesis is certainly more probable than that which supposes them to have been scooped out by the agency of water, inasmuch as in very few cases are there circumstances which show such a possible application of water as would indicate a power adequate to such an effect. Assuming it possible that a rush of waters over the Queenston heights scooped out the bed of Lake Ontario, whence, it might be asked, came the waters that could form the bed of Lake Superior? And yet the lowest parts of the beds of these lakes are nearly at the same level below the tide water of the Sea.

The occasional falling and rising of the waters of the Canadian Lakes, at divers intervals, while it demonstrates the parsimonious action of the subterranean forces at the present time, is a fact which shows that the application of these forces is still made under the like difference of conditions, or with the same inequality that seems to have regulated it from the commencement of the process of elevation. A partial elevation of the land surrounding the lakes would be marked by an apparent depressure of the surface of the water, while a partial subsidence of the same would be marked by an apparent elevation of the surface. It is not to be supposed that a trifling variation in the relative level of an extensive land should be perceptible to the senses, but through such an instrument as the one referred to; and it is obvious enough that those partial upheavings, indicating rather the mere existence than the acting of the subterranean force, cannot partake of that permanent character, which we find formerly to have attended the exertion of it in its mightier and prolonged periods of activity. These elevations and subsidences of the lower degree, are not therefore contradictory to the general theory. They are the evidences of an existing, though not a charging host.

The melting of the snow is usually assigned as the cause of those risings and fallings of the waters of the lakes which take place occasionally, or as it is termed with popular latitude of expression, periodically. Seven years, according to the almanac of the Indians, is the time of the periodical recurrence of the phenomenon in question; but this term may be regarded as a remnant of their oriental superstition—a proof of their emigration from the Yenesai, in Asiatic Tartary, to the Genesee of Lake Ontario, rather than a fact ascertained from their observation of nature. However, the recurrence of the phenomenon cannot certainly be accounted for by the melting of various accumulations of snow. This cause, as it would operate with little irregularity, would exhibit a constant recurrence of the like effect, year after year. Nor is it conceivable in what manner the melting of a variable