

heard but the bellowing storm or the rushing waves—nought but the solemn hum of deep waters above. Strange though this may be to think of, yet nothing can be more truly proved by facts, as plain as the noon-day sun; than that thousands of years ago, in remote antiquity, the ocean rolled over the greater part of North America, and washed into hillocks and sand banks all the plains of the western States. In travelling over the interior of Illinois, we have seen the same evidence of the existence of deep waters, that we see all over Canada, and the eastern American States. Illinois is at least 500 feet higher than Toronto, and the waters must have been thousands of feet above that tract of country. The lands ascend from Illinois and the Mississippi as we go towards the rocky mountains. There are vast tracts of land inhabitable beneath the rocky mountains which are perhaps a mile higher than we are. Some parts of the rocky mountains rise to the height of the Alps of Europe and even higher. One peak of the rocky mountains is 16,000 feet high. This peak is called mount Brown. Mount St. Elias in Russian North America is 17,900 feet high. That is over three miles high. The mountains having these extraordinary high lands lie to the west and north of us. A part of them for a thousand miles or more rise to the height of 10,000 feet above us; that is near two miles higher than we are. Mexico city to the south again is 7,470 feet above the ocean, and a mile and upwards higher than we are. In South America the mountains rise to the height of 25,000 feet, that is nearly five miles high. In Asia, mount Chumularee in Thibet is 29,000 feet, or over 5 miles and one eighth of a mile high. The highest mountain in the settled parts of the American States is mount Black, of the Blue ridge in North Carolina, which is 6,476 feet or a mile and over a quarter high. Mount Washington of the White mountains of New Hampshire is over a mile high, as is also Mount Marcy in New York State. The waters at one time covered, no doubt, the highest of the mountain ridges of North America excepting the highest land towards the rocky mountains. Now it will be asked what evidence is there of this, and where are the foot marks of the olden ocean. If the waters were bounded to the west and north by the high lands of the rocky mountains, and on the south west and south by those of Mexico and California, where was their boundary in Europe and Asia. The latter question we cannot answer at present. Suffice it to say, that we know from unerring marks whose testimony cannot lie, that the waters of an immense ocean rolled above our country. How long this was the case, and how long it is since the waters receded from our country are matters of conjecture. Thousands of years must have elapsed

whilst the waters were flowing over it; and thousands of years have elapsed since the land was left dry. The only way that we can see to estimate the time elapsed, since the recession of the waters to their present level, is by the falls of Niagara—the ravines running into our lakes worn by annual floods—the floods on river banks and the thickness of the alluvial soil or made earth lying above the original blue clay that formed the bottom of the ocean. All the evidences that we see go to prove, that the fall of the waters has been gradual, at least from a certain height in Canada. The five lakes, Ontario, Erie, Huron, Michigan and Superior were once higher than they are. For instance, Ontario once covered the site of the city of Hamilton, Dundas, all the low lands towards Niagara and Rochester, and all the low lands to the ridges above Richmondhill. The expanse of the lake was then double what it is now. It has receded to its present level. We have often noticed the sand, on the spot where the Hamilton court-house stands, and the action of the waves on the sand appears there as plainly marked, as upon the present beach of the lake. The Burlington heights are a solid bank of small stones thrown up a hundred feet high, by the action of the water, flowing east and west. The land between Niagara and St. Catharines has all the appearance of a lake bottom. So also is the appearance of the land inland from Toronto. Whilst the lake was getting gradually lower the ravines during ages were deepening. When going down the lake lately, towards Cobourg, in the distance of fifty miles; dozens of deep ravines are seen to indent the shores, which have been worn to their present depth, during the period it took the falls of Niagara to wear their way, through seven miles of stone and clay. The great North American fresh water lakes have as before said all lowered during passed centuries. What however caused the disappearance of the ocean from our land is another question, At what period that took place is also matter of dark conjecture. It has often seemed to us that the valley formed by the mountains or rocky hills, which run from Dundas and Ancaster north east, and south east for near a hundred miles; on the one hand to Lockport and beyond in the State of New York; and on the other through East Flamboro, Esquesing, Erie, Caledon, and so on to rice lake; was formed by some great earthquake; causing the sudden sinking of the earth. It might have been done whilst the ocean rolled over the country or after it left the earth. The most striking monument, which we see, by which, to indicate the time elapsed since the ocean left us, are the Falls of Niagara and the river from Queenston to the lake. The river has worn its bed deep in countless ages, and the Falls have receded many miles from the place where they first tumbled over into the lake. The valley that lies between these two ranges of hills is filled, as well as all the upland country, with stone boulders; consisting of all kinds of stones and rocks. This would seem to indicate, that the valley was as it is, whilst the ocean was here. It may be asked what certain proof there really is that all of the upland and western country above the Mississippi has been once covered by an ocean. Of this there is proof as strong as our senses can make it. There cannot be a doubt of the fact. The only doubts

that exist are when it was, and what were the boundaries of that ocean, and the then position of the dry land of the earth. We know there was some years ago, a theory set a float by a German Geologist, whose name we do not now recollect; which maintained that all the stony boulders we see scattered over our land, and in Europe in the same way, could be accounted for, upon the supposition, that all of America and Europe were once covered with vast fields of ice, deep as the ocean. And that these fields of ice gradually in the course of ages melted by a change of climate, or the change of the position of our earth towards the sun. That the ice melted towards the sea and became slanting, and as it melted it detached time and again, vast masses of stones, which were in countless ages carried down icy rivers and ravines and deposited in various places and localities, as the ice retired towards the northern and western mountains. This theory was applied more particularly, to the European mountains, and their valleys in which rocky boulders are found. We believe that boulders, somewhat similar to those found in North America, are found in all countries in Europe. What we see in North America cannot be thus accounted for, and the more easy and truthful way, for accounting for the millions of stones, some of which weigh thousands of tons, scattered everywhere; is by supposing the existence of a vast ocean, once flowing over us, between Asia and the rocky base of the the Rocky and Russian American mountains to the north in the winter. At that season vast mountains and fields of ice would be formed in the extreme north. In the summer the heat would set the fields afloat, and they would detach myriads of stones with them from the mountains and hills, against which the icebergs rested. The western winds would drive them south and east over North America, and as they came into a milder climate, the stones would drop, one by one, and sometimes in clusters, as we see them, and sink into the ocean's mud, there to remain. As the ice floated south it would entirely melt. We are told it is a fact that boulders are less common down the Mississippi and in the Southern States than with us, and in the Northern American States. All these boulders rest on the top of a hard blue clay, the original bottom of the ocean, and are sunk only into the alluvial soil, and earth made by sea and fresh deposit. The stones are of all kinds of rock. We will resume this subject.

#### THE LITTLE BROWN WREN.

This, after the humming bird, is the most diminutive bird we have in Canada. It is also one of the neatest and most prim in shape, as well as nimble in all its movements. The first spring bird of Canada we notice is this lovely little creature hopping among the dry brush of our forests. Its body is round and tail short, and generally held erect. The length of the body does not exceed two inches, and the tail one inch. The colour is of a deep chesnut on the upper parts, and of a lighter hue on the lower parts of the body. We never found its nest. In the