

line formations have been elaborated at many successive periods, both secondary, tertiary, and still more modern. We need go no farther, indeed, than the valley of the St. Lawrence, now under consideration, to find wide areas covered with marine shells of *recent* species, at the height of 500 feet above the sea, and where all the rocks can be shown, both to have sunk and to have been again uplifted bodily, for a height and depth of many hundred feet, since the deposition of these shells.

But however firmly we may be convinced that subterranean causes, connected with the development of internal heat, have operated with great, and perhaps nearly uniform intensity, at each successive geological period of equal duration, we must still be prepared to find that by far the largest portions of the visible hypogene rocks are of high relative antiquity to the fossiliferous deposits. This must happen, if we are correct in assuming that the crystalline rocks, whether stratified or unstratified, have been formed originally at considerable depths in the crust of the earth. For in that case, a long period of time must have elapsed after their origin before they can have been brought up within the sphere of human observation. There must have been great upheaval and denudation to cause them to emerge, even in a single district; but it must require a series of geological epochs before those formed at a given era of the past can have become generally exposed at the surface. A repetition of one series of elevatory movements after another must have taken place in different areas, accompanied by denudation; and while such forces are acting, the deposition of new strata is going on.