thick in the Helderberg Hills, near Albany, are scarcely forty feet thick in the Niagara district; and on the other hand, the rocks over which the cataract of Niagara is precipitated, dwindle away to such insignificant dimensions when followed eastward to the hills S. W. of Albany, that their place in the series there can scarcely be recognised. Another interesting fact may be noticed as the result even of a cursory survey of the fossils of these North American rocks, namely, that while some of the species agree, the majority of them are not identical with those found in strata, which are their equivalents in age and position on the other side of the Atlantic. Some fossils which are identical, such as *Atrypa affinis*, *Leptæna depressa*, and *L. euglypha*, are precisely those shells which have a great vertical and horizontal range in Europe,—species which were capable of surviving many successive changes in the earth's surface, and for the same reason enjoyed at certain periods a wide geographical range. It has been usually affirmed that in the rocks older than the carboniferous, the fossil fauna in different parts of the globe was almost every where the same; but, judging from the first assemblage of organic remains which I have seen here, it appears to me, that however close the general analogy of forms may be, there is evidence of the same law of variation in space as now prevails in the living creation.

A few years ago, it was a fatiguing tour of many weeks to reach the Falls of Niagara from Albany. We are now carried along at the rate of sixteen miles an hour, on a railway often supported on piles, through large swamps covered with aquatic trees and shrubs, or through dense forests, with occasional clearings where