

proceed farther east, we find it approach within nine miles. With the exception of the Niagara River, no streams of any importance empty themselves into Lake Ontario throughout this region, as might naturally be expected from the proximity of the ridge to the shore; and that remarkable river itself, as I shall hereafter show presents anomalies and peculiarities perhaps nowhere else to be met with in nature.

The geological structure of this region is remarkably simple, exhibiting no faults or distortions of the strata; but it is far from being less interesting either to the geologist or the general observer on that account. The rocks immediately underlying the superficial deposits consist of various members of the Silurian or oldest fossiliferous strata. They belong to those divisions of the Silurian system called the Middle and Upper Silurian, corresponding to, and no doubt contemporaneous with, the Carradoc, Ludlow and Wenlock groups of England. Nowhere do we find a more interesting region in a geological point of view. Referring to it, or rather to the continuation of the same formations in New York State, Sir Charles Lyell remarks:—"If we wish to see in perfection the oldest monuments of the earth's history, so far at least as relates to its earliest inhabitants, we must look here. Certainly in no other country are these ancient strata developed on a grander scale, or more plentifully charged with fossils; and as they are nearly horizontal, the order of their relative position is always clear and unequivocal. They exhibit, moreover, in their range from the Hudson River to the Niagara, some fine examples of the gradual manner in which certain sets of strata thin out when traced to great distances, while others become intercalated in the series. Thus, for example, some of the limestones which are several hundred feet 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 south-west of Albany that their place in the series can scarcely be recognized." Sir Charles adds "that a comparison of the fossil remains found in those ancient strata with those of a corresponding age and position on the other side of the Atlantic, shows that while some of the species are identical the majority are not, and that however close the general analogy of the forms may be, there is evidence of the same law of varieties in space.