as now prevails in the living creation." Since Sir Charles wrote the above remarks it has been ascertained on a more minute investigation that the number of species common to the Silurian rocks on both sides of the Atlantic is between thirty and forty per cent.; and it is a most interesting fact that those which are identical are precisely those which are found most widely diffused both geographically and in the order of superposition, and consequently seem to have been most capable of surviving many successive changes in the earth's surface.

Professor Sedgwick, at the recent meeting of the British Association in Aberdeen, in speaking of this order of geological formations, characterized them by a figure quaint and graphic, though derived from modern feminine usages. He speaks of the limestone formations as a great girdle, or (in plain terms,) "hoop," over which Dame Nature had spread her "glorious palæozoic petticoat." Certainly nowhere on the face of the globe has this skirt attained a greater expansion, or been more gorgeously bedecked with the forms of ancient life, than in the locality now under notice.

Details of the Rock Formations.—A very complete and most interesting section of the strata in a line running north and south, is afforded by the cutting on the line of the Niagara Falls and Lewiston Railroad, and by the ravine itself through which the great river flows.* Taking the section at this most interesting locality as the basis of our future enquiries, I shall proceed to describe briefly the component parts, and shall take occasion while it is under review to recapitulate the arguments of Lyell and others, to prove the fact of the retrocession of the Falls from Queenston Heights to their present site.

The strata in ascending order consist, first, of a soft red shaley and purely argillaceous marl, partially striped and spotted with green, seen in the bank of the river at Queenston and extending thence to Lake Ontario, and attaining a height of about one hundred and ten feet at the escarpment at Queenston. This formation, which is entirely devoid of calcareous matter, is regularly stratified, and interspersed with thin veins of a light green rock of similar composition though somewhat harder, the colors being evidently derived from the presence of iron. The traces of organic remains in this bed are

* This section is represented graphically in Sir Charles Lyell's *First Visit to the United States*, 1841-2, Vol. I. page 36, to which we would refer our readers.