Hudson River to Lake Erie, caused by the broad outspread and almost imperceptible southern dip of the whole Paleozoie system, from the Potsdam sandstone at the bottom of the Silurian, to the coal beds at the bottom of the Carboniferous rocks. This dip being towards the south, and away from the great lakes, the basset edges of the formations necessarily front the north, and form a series of steps or terraces facing the north, while down the southern slope of these strata flow all northern subsidiaries of the Delaware, Susquehanna, and Ohio Rivers, almost from the margins of the lakes themselves.

The lowest escarpment is that of the Niagara or Middle Silurian Formation, which commences at a slight elevation between Albany and Utica, along the Jouth side of the Mohawk Valley, and crosses the Niagara River at Lewiston. Back of this runs the escarpment of the Helderberg or Lower Devonian limestones, forming high hills south of the Mohawk, but dying away as it approaches Lake Erie. Still further south, and at a still higher elevation runs the high escarpment of the upper Devonian sandstone, from the base of Catskill Mountain, on the Hudson, to Lake Erie, along the southern shore of which it ranges away beyond Cleveland into Bouth-western Ohio. On the summit of this uppermost platform, and at an elevation of fifteen hundred feet above the sea, and one thousand feet above Lake Erie, lie outspread the broad, flat shallow basins of the bituminous coal field of Pennsylvania and Ohio, constituting the great Appalachian coal basin. From the northern part of this coal field the Genesce River cuts down through all the escarpments into Lake Ontario.

Across the soft Lower Devonian terrace between the middle and upper escarpments, lie in parallel north and south, cut valleys, the deep and narrow lakes Canandaigua, Cayuga, Sencea, Crooked Lake, Auburn, and Skaneateles, all of them, with Lake Oneida at the foot of the lowest escarpment, drained by the Oswego River into Lake Ontario. But the principal drainage of Southern New York, even from the edge of the Niagara escarpment, is the other way southward, through the upper escarpment, and by deep gorges in the Alleghany Mountains of Pennsylvania, by the Susquehanna River and Chesapeake Bay, into the Atlantic. In Western New York, the same set of the waters away from Lake Erie carries the drainage into the Alleghany, the Beaver, and other affluents of the Ohio, the head waters of which, therefore, overlook Lake Erie, a thousand fect, from a distance of scarce a dozen miles. There is one spot in Potter County, Pennsylvania, where the same cloud will shed its waters by the Genesee into the Gulf of St. Lawrence, by the Susquehanna into the Cheapeake Bay, and by the Alleghany into the Gulf of Mexico. Following the lowest or middle Silurian escarpment across the Niagara River, we see it become the constant limit of the basin of Lake Ontario.

At Lewiston Heights it is three hundred and sixty feet above the lake. Rising slowly as it enters Upper Canada, it sweeps close around the head of the lake, runs northward, and then northwest along the southwest shore of Georgian Bay, and projects into Lake Huron at Cape Hurd; casting off southwestward

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