

White Mountains of New Hampshire. Commencing at Cape Gaspé, this barrier ranges along the southern shore of the Gulf and Estuary, in a graceful curve, three hundred miles, to the neighborhood of Quebec, where it leaves the river, by slowly diminishing the radius of its curve, towards the south. Crossing the Chaudiere and St. Francis, the waters of which drain back valleys, it skirts the great plain, and enters the State of Vermont, which it traverses under the name of the Green Mountains, three thousand feet high. It is continued as the Berkshire Hills in Western Massachusetts, and as the Taconic Hills in Eastern New York; crosses the Hudson as the Highlands of West Point, and the Delaware as the Durham, or Easton Hills. Lost for a few miles between the Schuylkill and the Susquehanna at Harrisburg, it re-emerges from beneath the New Red plain as the chain of the South Mountains of Southern Pennsylvania. In Maryland, it crosses the Potomac at Harper's Ferry, to form the Blue Ridge of Virginia, and the Smoky Mountains which divide Tennessee from North Carolina; where the Black Mountain group, a little east of the line, attains elevations ranging between six and seven thousand feet above the sea. Traversing Georgia, the chain sinks beneath the Cretaceous plain of Middle Alabama, and is seen no more, after having a geographical range of not less than sixteen hundred miles.

The geological cause for the shape and position of the estuary and lower river of the St. Lawrence must not be overlooked. It is to be found in the presence of a remarkable fault or fissure in the crust of the earth, running close along the southern shore from Gaspé to Quebec, thence through the middle of the plain up the east shore of Lake Champlain, and down the Hudson River into New Jersey. All the rock formations on the northern and western side of this fault, both in Canada and in New York, are thrown down to a depth varying from five to ten thousand feet. The top of the lower Silurian system in the west wall of the fault, is brought down to a level with the bottom of the same system in the east wall. In these soft Hudson River slates, as they are called, have therefore been excavated, all along on the west side of the fault, the estuary of the St. Lawrence, the Lakes St. Peter and Champlain, and the Hudson River valley; for the same agency brings abruptly to an end in the Catskill Mountain, three thousand feet high, on the west bank of the Hudson River, the Alleghany Mountain system coming up from the southwest through Middle and Northern Pennsylvania.

Passing now to a description of the basin of Lake Ontario, its limits are of quite another order. Its eastern end abuts against the Laurentian rocks of the Adirondack Mountains of New York, and its outlet is over the low and narrow barrier of the same forming the Thousand Islands. The lake itself is excavated out of the soft lower Silurian rocks described. The northern limit of the basin is an east and west line, about fifty miles back from the northern shore; the western continuation of the Laurentide Mountains in their course from the Thousand Islands to the foot of Lake Simcoe. Its southern limit is made by three remarkable escarpments, ranging in parallel east and west lines from the

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