

tian axis of the Thousand
escarpment, over which there
in a vertical fall of 167 feet
330 feet in the general direction
the combined outcroppings of
Adirondaga and Corniferous for
twenty-four miles, between
Lake Erie. The Southern
Area is bounded on the north
Area. It occupies an interval
extending from the vicinity of
patches belonging to the
Lake Superior and in the
another similar area containing
49th parallel, between 96° and
the Arctic Ocean. Between
these areas occur around the
little is yet known with
on the geological map
include, in nearly all the
Palaeozoic series as recognized
highlands, which divide
towards Hudson's Bay.
these areas testifies to the
y in the South-Eastern
of earlier ages, did not
terior, or of the arctic.
practically limited in
rough of the St. Lawrence
already referred to as
t. On these grounds
geological diversities con-
which characterize the
Areas. These diversities
enhanced by local
variation of which abundant
evidence in

Eastern shores are, with the exception of Lake Erie, bounded by the
archæan rocks of the Northern Area, while their basins have been excavated
chiefly in strata of palæozoic age. The bottom of Lake Huron is
said to be in parts 1,200 feet, that of Lake Superior, 600 feet, and that of
Lake Ontario about 360 feet beneath the level of the Atlantic, while
the comparatively shallow waters of Lake Erie foreshadow the time
when this lake will become a broad river valley, and the cataract of
Niagara will then either be reduced to one half its present height, or
entirely obliterated.

3. THE NORTHERN AREA.

It is not easy to state precisely the extent of this great Northern Area. It embraces probably two-thirds of the whole area of the Dominion or more than two million square miles.

In the third chapter of the *Geology of Canada*, 1863, Sir W. Logan describes the southern limit of the Laurentian System with which that of the area now referred to may be said to coincide as follows: "With the exception of a narrow border of Silurian* strata on the Strait of Belle-isle, another at the mouth of the Mingan River and a third near the Seven Islands, with the addition of two narrow strips running a few miles up the Murray Bay River and the Gouffre, the north shore of the St. Lawrence is the southern boundary of this ancient series of deposits from Labrador to Cape Tormentine. The distance is about 600 miles." . . . In the next 200 miles the boundary turns about west-south-west, and is distant from the St. Lawrence about thirty miles in the rear of Montreal. Beyond this for a hundred miles it follows the Ottawa in a bearing more nearly west, with a narrow strip of Silurian rocks between it and the margin of the river for the chief part of the distance.

Turning southwards at the upper end of Lac des Chats,† an expansion of the Ottawa River, it runs in a very irregular line between that lake and the St. Lawrence which it again reaches at the Thousand Islands, presenting in the interval several points projecting into the Lower Silurian plain to the eastward.‡ The Canadian part of the boundary runs in a pretty straight line to Matchedash Bay, on Lake Huron, from the Thousand Islands whence the Laurentian expands into an area of 1000 square miles in the State of New York, forming the wild, rugged and rocky region of the Adirondack Mountains, which rise in some parts into elevations of 5,000 feet above the sea. Mount Marcy, in Essex county, is said

* Now called Cambrian and Cambro-Silurian.

† Near Arnprior.

‡ This is the Ottawa Valley Palæozoic basin of the Southern-and-Western Area.

Eastern-and-Western Area
water surface in the
50,000 square miles.
great River systems
and their northern and