

The Potsdam
ancient quartz,
nel of the St.
reen the azoic
in the political

as the north-
amental rock.
thrown down
or conglomer-
nating beds of
illaceous, sili-
e limestones.
e exhibit the
of metamor-
ous outburst.
sses of horn-
which often
ede from the

and a refer-
e and extent
een, occupies
they stretch
ounded by
om the main
ownship 48,
ntersects the
nge 30. It
parated from
the length of
les.

s nearly due
river. Its
n miles. It
d the other
of specular

th extends
shoots off in
s low down
Wisconsin.
ghty town-
tion of the
ged coast.
while the
d the pro-

es are stri-

king. It is diversified by bold, rocky cliffs and narrow and intricate valleys, with lakes and water-falls, with luxuriant forests and natural meadows. The culminating points reach nearly twelve hundred feet above Lake Superior or eighteen hundred feet above the ocean-level.*

We commence our description of the local phenomena of this system of rocks where they intersect the lake shore between Riviere du Mort† and Chocolate river. The sketch entitled "View near Carp river" forming the frontispiece may serve to convey an idea of the contours of this region better than a written description. The lake here forms a spacious bay with gently-curving shores. A range of quartzose hills rising to the height of six hundred feet terminates abruptly by the coast and forms the background of the picture. The extremity of the point consists of sand-dunes rising to the height of fifty or sixty feet, with rounded outlines and highly inclined slopes towards the lake. Along its margin are to be seen the remains of ancient terraces which indicate its former limits. The middle ground is occupied by a range of trappean rocks interlaminated with the slates. The settlement here represented, has been named Marquette, in honor of the early missionary, and has already become the main outlet of the Iron region. The foreground is composed of another rocky promontory which projects for some distance into the lake, and serves as a shelter to vessels against a west and north-west wind; while by the shore, vestiges of the Silurian sandstone are seen reposing upon the upturned edges of the azoic rocks. It would be difficult to select another spot, along the whole coast, where the rocks of so many epochs, from the oldest to the most recent, are represented. It contains an epitome of nearly the whole geology of the district.

The quartz zone exhibits two distinct ridges, where it approaches the lake, hemming in the valley of Carp river with rocky walls, from two to six hundred feet in height. As we trace it westwardly, it presents but a single ridge, and after having passed Teal lake, sinks down and becomes lost. Where exposed by the lake shore, it exhibits lines of bedding and obscure traces of ripple marks. These lines bear east and west, and dip 86° to the south, while the Potsdam sandstone abuts against the quartz, in a nearly horizontal position. Some of the quartz beds in this vicinity enclose fragments of jasper and slate, showing that they contain vestiges of prior-formed rocks. The southern ridge—using the notes of Mr. Hill—presents a number of conical knobs rising from two to three hundred feet above the surrounding country. In section 2, township 47, range 25, a granite boss rises above the quartz, over which the strata are folded like a mantle. In the north-east quarter of this section, a band of slaty limestone, somewhat silicious, is seen beneath the quartz, bearing north-east and south-west, with an inclination of 44° to the south-east. In the northern part of section 3, the quartz is observed, with another band of limestone interstratified, bearing nearly west north-west. The protrusion of the granite has displaced the beds and broken their continuity; one portion shifted to the south, was traced as far as the line between sections 9 and 10, while

* For a list of heights determined barometrically, see Appendix, C.

† This river is generally called *Dead* river. It cannot be from the sluggishness of its current, for in the distance of thirty miles, it falls more than a thousand feet, abounding in rapids and cascades. Its true name is the River of Death. There is a local tradition as to some act of violence here perpetrated, which we cannot now recall, and from which the river derives its name.