

It is interesting to note that, as one ascends the Ottawa, the lower beds of the Palæozoic series fail to appear. Thus, in the lower portion of the river and as far west as the foot of the Chats Falls about thirty-five miles west of Ottawa, the lowest formation of the series, viz., the Potsdam sandstone, rests directly upon the Archæan rocks. This is succeeded upward by the higher members of the series. But even in early times there must have been heavy breaks and uplifts, since, on the crest of the ridge of crystalline rocks which extends eastward from Arnprior to within a few miles of Ottawa on the south side of the river, a deposit of the Potsdam sandstone is seen several hundreds of feet above the beds noted near the river bank at Quyon, while a couple of miles further south, this part of the series has been thrown down again by a heavy break, to about the same distance.

West of Arnprior the lowest beds seen along the river are of Calciferous age, and these are last observed at the west end of Allumette Island, above which no outcrops of this formation have yet been recognized.

Further up the river, above the Roche Capitaine, which is thirty-six miles below the Mattawa, the lowest beds are of the Chazy formation, while on several of the islands in Lake Nipissing beds of Black River age are found. On some of the islands in the northern part of Lake Temiscaming fossiliferous limestones of upper Silurian age occur which are about the horizon of the Niagara formation. The Black River beds of Lake Nipissing are at nearly one hundred feet greater elevation than the Niagara beds just mentioned, and about 100 feet lower than similar limestones seen in the vicinity of Clear Lake to the south of the Bonnechère.

In all descriptions of the country toward the height of land, north of the Ottawa, the occurrence of great areas of sand has been pointed out. The origin of this sand deposit has never been satisfactorily explained. The material appears to be largely the result of the decomposition, or breaking down to a fine state, of the underlying granite and gneiss which are the predominating rocks of the area. From the generally level character of the country along this height of land isolated peaks rise to considerable elevations, though over long distances these are rarely more than low hill features, scarcely exceeding a hundred feet in height, above the general plain.