

The subject of erosion is of interest in another way. The channels last referred to, together with the coastal sections, afford, with the exception of borings, almost the only information obtainable as to the nature and arrangement of the rocks of the district. Erosion valleys.

The details of these sections in the gray rocks will be discussed in the sequel, but it may be pointed out here that in no case is any considerable thickness of strata revealed, and it is probable that all in the centre and eastward represent nearly the same horizon. Among them, as affording a nearly complete natural section, albeit a shallow one, across the larger part of the central basin, may be mentioned those afforded by the Nashwaak and Miramichi valleys, traversed by the Canada Eastern Railway, along the sides of which, and often for considerable distances, the cut edges of the strata are exposed in nearly vertical bluffs, sometimes 100 feet in height or more. In eastern Queens county similar bluff exposures characterize the Newcastle and Salmon river streams, while in western Queens and Sunbury they are repeated in the tributaries of the Oromocto, in the Otnabog and elsewhere. In most instances the eroded beds are those of the coal-measures (gray sandstones and conglomerates, with thin seams of coal), but on the Newcastle river the underlying Lower Carboniferous and volcanic rocks are revealed, while on Coal creek and some of the tributaries of the Canaan river, still older Palaeozoic rocks have been brought to view. At no one point is a thickness of more than 150 feet of Carboniferous rocks exposed, though, even with a slight inclination, a lengthened series of exposures may represent much more than this. Natural sections.

The coast sections illustrate the same features, though in a different way. By far the most instructive is that afforded by the shore of the Baie des Chaleurs east of Bathurst. Here for a distance of fifteen miles or more, especially between the villages of Clifton and Grand Anse, the shore presents an almost continuous series of nearly vertical bluffs, from twenty or thirty to nearly one hundred feet in height, while in places, as at Grand Anse, small adjacent islands exhibit the same precipitous character. Here too the inclination varies so little from horizontality that only by following some easily recognizable bed for a considerable distance can the fact of inclination be made evident. At various points along the gulf shore, as at Carraquette, Church point Coast sections.

NOTE. 1.—The term coal measures as used in this report signifies no more than the series associated with the small seams of coal in the province.

2. Clifton station is 119 feet and Grand Anse 79 feet above sea level.

3. The whole thickness represented in the coast section between Clifton and Shippegan has been estimated at about 400 feet.