and in the fauna of their depths, as will be shown hereafter. That in the St. Lawrence Basin this inland sea graduated by a general elevation of the land and by local warpings of the strata into the more circumscribed fresh-water lake before referred to as including the area of the present lakes, there seems no question. That, however, prior to this an interglacial period prevailed, to be followed by a second glacial period, there is not in Eastern Canada very satisfactory evidence, whatever credence we may give to the vegetal deposits relied on by some American geologists to prove more than one interglacial period, and to the peaty remains in the Canadian superficial deposits towards the Rocky Mountains.

The grave difficulties which on general physical grounds stand in the way of the larger conception of a continental ice-sheet, need not be repeated here. It may be well, however, to allude to one circumstance—the immense mass of the superficial deposits—which has been relied on as necessitating a glacial theory for its explanation, and which has a direct association with the history of the St. Lawrence Basin. It has been usual to ascribe largely to glacial action what must be the effects of ages of subæreal and sub-aqueous erosion and decay in this great lake basin since the Carboniferous age. Whilst most sections were above water for vast periods prior to the Carboniferous, the whole of the immense area drained by the Great Lakes has, subsequent to that period, and as far onwards as quaternary times, been dry land, excepting to the extent that these lakes, or any of them, may have themselves been in existence during the immense intermediate periods—periods measured not by centuries alone, but probably by countless centuries of centuries. All of the agencies ordinarily at work in producing growth, disintegration and decay were then in operation, and have been continuously since. Forests covered the land, and vegetation in its decay everywhere yearly contributed to the soil; torrents found their way to the rivers, and the rivers to the lakes and to the ocean, creating on their way boulders and gravel, and depositing clays and