

Similar evidence is offered by the St. Lawrence. This majestic river leaves Lake Ontario as pure as the waters of the lake itself. The ice-worn hummocks of gneiss at the Thousand Islands still retain their characteristic smoothed and polished surface down to and beneath the surface of the current. In descending the river, I was astonished to observe that the famous rapids of the St. Lawrence are actually hemmed in by islets and steep banks of boulder-clay, and not of solid rock. So little obvious erosion does the current perform, even in its tumultuous billowy descent, that a raw scar of clay betokening a recent slip is hardly to be seen. The banks are so grassed over, or even covered with trees, as to prove how long they have remained undisturbed in their present condition. That very considerable local destruction of these clay-islands, however, has been caused by floating ice will be alluded to further on.

Mere volume and rapidity of current, therefore, will not cause much erosion of the channel of a stream unless sediment be present in the water. A succession of lakes, by detaining the sediment, must necessarily enfeeble the direct excavating power of a river. On the other hand, by the disintegrating action of the atmosphere, and by the operations of springs and frosts, loose detritus as well as portions of the river-banks are continually being launched into the currents, which, as they roll along are thus supplied with fresh materials for erosion.

(b) Besides the obvious relation between the angle of slope of a river-bed and the scouring force of the river, a dominant influence, in the gradual excavation of a river-channel, is exercised by the lithological nature and geological structure of the rocks through which the stream flows. This influence is manifested in the form of the channel,