

boulders of various kinds, at points far removed from their native place, and such boulders often furnish conclusive proof of the direction in which the glacier moved. Thus if the glacier or boulders from a certain range of hills are found to the north of that range, the inference is that the ice moved northward. Such evidence is not always, however, strictly conclusive as to the agency of a glacier, for though ice in some form must have been largely instrumental in the moving of boulders, in very many cases the active agent has been in the form of floe or floating ice, either in bergs or huge pans, such as now float up and down the St. Lawrence, and which have carried huge masses of Laurentian rock from their original place on the north shore of the river to the south side, where they can now be seen for hundreds of miles along the beaches of the Gaspè coast.

Subsequent to the ice age we find a period of depression and submergence, during which the present surface was hundreds of feet under water, and the arctic currents from the north carried huge trains of bergs, with their loads of dirt, stone and gravel, just as at the present day are seen off the coast of Newfoundland, which by their stranding and subsequent melting deposited their debris at points now many hundreds of feet above present sea level. The proofs of submergence are well seen in the presence of beds of clay, containing often great quantities of marine shells of forms similar to those now found in northern waters. These can be picked up at many points about Ottawa and Montreal as well as elsewhere, while bones of seals have been found in the brickyards in this vicinity. With the nodules of Green's Creek you are also, most of you at least, familiar.

The amount of submergence has also been a fruitful source of controversy, some holding to the view that this must be determined by the present elevation of known shell beds above the sea level, ignoring the evidence of drift boulders, and thus limiting it to some 500 feet. Others, again, maintain that as much of the glacial phenomena is due to the action of ice bergs and floating ice, the submergence should be measured by thousands instead of hundreds of feet, and in certain places there is unmistakable evidence of the presence of old sea beaches several thousands of feet above the present level. The various claims of the rival schools can be found in most text books on geology, but it