tain side; but onward it moves with irresistible force grinding over everything in its course—one gigantic body of ice, sometimes miles wide and 600 to 700 feet thick. Such a glacier can be seen at the present time in Greenland. If the snow line is only one or two thousand feet above the sea level, the glacier from it reaches the sea before the temperature of the lower region is sufficient to melt it. This immense body of ice will continue pushing out into the water grounding upon the sea bottom until the depth of the water is sufficient to float it. As soon as this occurs portions of the glacier will break away and float off, forming what are known as icebergs; hence, the origin of icebergs is, to a great extent, the terminus of a glacial stream whose mouth enters the sea. This phenomenon is now seen in countries far north, where the line of perpetual snow is near the sea. In such places glaciers appear issuing from the mountain tops, passing onward through valleys until they reach the sea, where the ends break off and float away as icebergs into warmer regions. But in countries where the snow line is much higher we notice different phenomena. The glacial stream never reaches the sea in the form of ice, for long ere it gets the temperature of the atmosphere has melted it, and a river of cold water flows into the country below, and becomes in many cases the source of a river. Such is the origin of the Ganges, which rises at the base of the Himalaya Mountains from the end of a glacial stream.

Could we examine the rocks upon which this immense body of ice has been grinding in its course, we would find it very much scratched and abraded. As the glacier moves on through the valley, portions of rock are continually dropping upon it from the heights above; consequently, where the the glacial stream is long, it is loaded with fragments of rock, which, in transportation, by continual grinding, become more or less rounded. If the glacier terminates before reaching the sea, these rounded pieces of rock will be deposited near its mouth and where it has contained for many years an immense heap of stones will be formed, which in years after when the aspect of affairs has changed, may have much the appearance of a gravel pit or line of boulders seen in some parts of the country.

GLACIAL DRIFT.

The question which presents itself now is, has this part of the Dominion experienced these phenomena, and if so, to what extent? If we were to remark on seeing a man's footsteps upon the sand that a human being had been there, no one would doubt it though years had elapsed since the person who made them passed that way. Just so with regard to glaciers being in the North-West. Their traces are here and though absent themselves have left silent monuments, which indicate their course from northern regions to those farther south of us. North and west of us near Nelson River, Knee Lake and places in that vicinity glacial striæ, in other words, markings upon the rocks in the form of grooves, scratches and polished surfaces, such as are found upon rocks where glacial action is now going on, have been observed in over seventy-four places widely separated from each other. They all indicate a course from north to south, in a more or less south-westerly direction. Of all observed only three show a course south-east. North-west of us, in the vicinity of Lake Athabasca, especially at the western end the rocks present all the characteristics of having undergone glacial action. If the surface of the rock, which crops out at Stony Mountain, be closely examined we think that in some places glacial striæ will be observed. In many parts of Ontario rocks with abraded surface are very common. So uniform and over such broad areas do these glacial markings occur that there can be no doubt as to their origin, especially when we remember that similar markings are being made on the surface of rocks in other countries which we know are now undergoing glacial action. See Greenland, Alps, Norway and Himalaya Mountains. Although our soil here is comparatively free from stones, still a little west of us many stones are seen which are not of the same composition as the rock below, but precisely the same as those lying north and east of us. By some agency or other they have been transported here, and as no view has yet been given to account for their presence so far south of