

found it, in the summer at central points and near the front, even as high as 65 feet per day. I have stated that the vertical ice wall where the glacier discharges into the sea, is 200 feet above the water, but this is by no means the total thickness of the glacier there. Soundings in the immediate front of the glacier have shown a depth of over seven hundred feet, and, as this is not enough to float a mass of ice rising as high above the water as the Muir glacier, we are forced to conclude that the ice front has a thickness of over nine hundred feet.

A wall of ice nine hundred feet high and nearly two miles long, breasting the element from which it sprang! We are struck with awe. But stop! Let us read more of history—written in characters more indelible than those of man. About fifteen miles south of the present front of the glacier, is Willoughby Island of pure rock, and over a thousand feet high, without the slightest vegetation, and showing a strongly striated surface due to glacial action. That this island was covered by this glacier within recent times is obvious to anyone who has visited the bay and noted the surrounding circumstances.

We have the record of Vancouver too, who, a century ago, passed the mouth of the bay, and reported it one mass of ice.

Hence, had we measured the thickness of the ice only a century ago, where the present ice front is, we should have found it at least 4,000 feet thick instead of 900 as at present. What stupendous change! and all almost within the space of a life. This evidence goes to show that the Muir glacier was at one time, and not long ago, much larger than it now is; but there is evidence too, that it has been much smaller, for on the west side we find a buried forest. Standing trees in situ are found there, which undoubtedly are incontrovertible evidence of a former and greater diminution of the glacier than the present shows.

To give another illustration of the rapid recession of the glaciers at present and during the past, I will quote Sir George Simpson, Governor of the Hudson's Bay Company, who, in 1841, paid a visit to Alaska. When going up Frederick Sound and Stephen's Passage he says:—
 "The valleys were lined with glaciers down to the water's edge, and the pieces that had broken off during the season filled the canals and straits with fields and masses of ice, through which the vessel could scarcely force her way.