

the middle latitudes, the resultant of which movements was the establishment of a vast area of dry land extending over all that portion of North America covered by the temperate zone. The northern regions were still the bed of a vast circumpolar ocean. Now, in turn, the high northern latitudes experience an unwonted uplift. Arctic lands raise high their dripping heads above the temperate waters of the polar zone. The climate of the whole northern hemisphere feels the change. No moving currents can now bear torrid warmth to the frozen sea, and return the colder waters to the equatorial zone. The stable land bears sternly the vicissitudes of the clime, smiling coldly in the slanting rays of a summer's sun, and gloaming darkly beneath the auroral shimmering of arctic midnight. The accumulated cold of years binds all the northern latitudes in indissoluble bonds of ice. The northern blast bears frost along the vales which had never felt its power. The limpid streams grow torpid, and then rest in a long hibernal sleep. The verdure of forest and plain, touched by the first breath of winter, shrinks away, and the sere and blackened leaf hangs where there had been perennial green. The ponderous tread of the mastodon turns from the withered meadow to the frozen jungle, and the shivering tapir yields himself a victim to the strange rigors of the climate. The snows of many winters are gathered on the slopes of northern America, and the summer's sun suffices but to change them to a bed of porous ice. Glaciers brood over all the land, and Alpine desolation reigns without a rival over half the continent. Such was the fate of the fair vales which we thought just ready for the occupancy of the human race.

The marks of this stupendous glacier are still visible. As in the glaciers of the Alps, the expansion produced by a summer's warmth would tend to create a motion in the