

and earthy masses. Some of its most obviously powerful effects are seen in the regions of glaciers and drift ice. In warm latitudes glaciers are found only at those great elevations on mountain ranges that rise above the limits of perpetual snow. On the Himalaya, the loftiest peaks of which are about 31,000 feet high, the greater glaciers descend to the level of about 14,000 feet; in the Alps, in the lower glacier of Grindelwald, to about 3,300; and in the Glacier du Bois to 3,350 feet above the sea. In the north of Norway, Greenland, and the southern part of South America, and in the Antarctic continent of Victoria Land, the large glaciers descend to the sea-level. In the two last-named regions, towards the poles, surfaces of vast extent are covered by ice in the form of universally diffused glaciers.

A glacier in temperate regions is chiefly supplied by the *drainage* of the snow that falls on those parts of the mountains which rise above the limits of perpetual snow; and its size is commensurate to the height of the mountains and the extent of area drained. Pressure of the yearly accumulating snow, and in less degree the summer's heat and the winter's cold, or, indeed, the summer day's thaw and the nightly frost, gradually change snow into ice, which experience proves, acts as a whole, like a plastic body, and glaciers progress down valleys at slow rates, proportionate to the steepness of their inclination, the volume of ice, and the season of the year—moving faster in summer and autumn, and slower in winter. The effect of this motion in these icy masses is to grind, polish, scratch, and groove the rocky valleys over which the glaciers pass, removing asperities, and giving portions of the rocky floor rounded and mammillated forms, termed *roches moutonnées*. A necessary result of this action is the