

posed upon their surfaces, they are covered with *striæ*, usually parallel to one another, and indicating the exact course of the drift agency. They are rarely met with on pure limestone, unless the rock has been protected by soil; on account of its great liability to disintegration. Most of the coarse granites and conglomerates, as well as gneiss, are so much decomposed at the surface as to have lost all traces of these markings. Greenstone, syenite, and porphyry are frequently rounded and smoothed; but the markings are usually faint on account of the great hardness of the rocks. Ledges of talcose, micaceous, and argillaceous rocks retain the *striæ* most distinctly. Were the rocks of the Northern States to be laid bare, nearly half of the surface would show marks of this scarification. In New England the proportion would be much greater.

If we find embossed rocks, with no *striæ* upon them, we can determine the direction of the force by which they have been rounded, by ascertaining which is the *stoss*, and which the *lee* side. The bosses can hardly lose their form by the ordinary natural agents, because they act upon the whole surface equally. Drift action is chiefly distinguished from aqueous action upon rocks by the great evenness and uniformity of its erosion. Water will smooth rocks, but not uniformly over so great surfaces.

Care must be taken by the observer not to confound drift furrows and *striæ* with those grooves on the surface of rocks produced in the direction of the cleavage planes, or the planes of stratification, by the unequal disintegration of the harder and softer parts; nor with the furrows between the veins of segregation, produced in the same manner.

The drift *striæ* vary in direction from northeast to southwest and northwest to southeast. Multitudes of examples may be found all over the country directed to every conceivable point between these two courses. Of these the first are probably the oldest, and the second the most recent. In New England the first set are found principally upon elevated peaks. Those from north to south are found at all altitudes.

In general, these *striæ* do not alter their course for any topographical feature of the country. They cross valleys at every conceivable angle, and even if the *striæ* run in a valley for some distance, when the valley curves the *striæ* will leave it, and ascend hills and mountains, even thousands of feet high. But these *striæ* are never found upon the south sides of mountains, unless for a part of the way where the slope is small. Mt. Monadnoc, of New Hampshire, is an illustration of these statements. It is a naked mass of mica schist, 3,250 feet high, rising like a cone out of an undulating country. And from top to bottom it has been scarified on its northern and western sides, indicated by *striæ* running up the mountain, at first southeasterly, and at the top at S. 10° E. There are deep furrows and other phen-