

and small ones of limestone and serpentine, which have been brought down from Monte Rosa, through the gorge of Ivrea, after having travelled for a distance of fifty miles. Confining my attention to a part of the moraine, where pieces of limestone and serpentine were very numerous, I found that no less than one-third of the whole number bore unequivocal signs of glacial action; a state of things which seems to bear some relation to the vast volume and pressure of the ice which once constituted the extinct glacier, and to the distance which the stones had travelled. When I separated the pebbles of quartz, which were never striated, and those of granite, mica schist, and diorite, which do not often exhibit glacial markings, and confined my attention to the serpentine alone, I found no less than nineteen in twenty of the whole number polished and scratched; whereas in the terminal moraines of some modern glaciers, where the materials have travelled not more than ten or fifteen, instead of a hundred miles, scarce one in twenty even of the serpentine pebbles exhibit glacial polish and striation.

*Theory of the Origin of Lake-basins by the erosive Action of
Glaciers, considered.*

Geologists are all agreed, that the last series of movements to which the Alps owe their present form and internal structure, occurred after the deposition of the miocene strata; and it has been usual to refer the origin of the numerous lake-basins of Alpine and sub-Alpine regions, both in Switzerland and Northern Italy, to the same movements; for it seemed not unnatural to suppose, that forces capable of modifying the configuration of the greatest European chain, by uplifting some of its component tertiary strata (those of marine origin of the miocene period) several thousand feet above their former level, after throwing them into vertical and