

from a similar scrutiny of the boulders and pebbles of the terminal moraine of one of the old extinct glaciers, namely, that of the Rhone in the suburbs of Soleure. Thus at the point κ , in the map, fig. 42, p. 299, I observed a mass of unstratified clay or mud, through which a variety of angular and rubbed stones were scattered, and a marked proportion of the whole were polished and scratched, and the clay rendered so compact, as if by the incumbent pressure of a great mass of ice, that it has been found necessary to blow it up with gunpowder in making railway cuttings through part of it. A marble rock of the age of our Portland stone, on which this old moraine rests, has its surface polished like a looking-glass, displaying beautiful sections of fossil shells of the genera *Nerinaea* and *Pteroceras*, while occasionally, besides finer striæ, there are deep rectilinear grooves, agreeing in direction with the course in which the extinct glacier would have moved according to the theory of M. Guyot, before explained.

Extinct Glaciers of the Italian Side of the Alps.

To select another example from the opposite or southern side of the Alps. It will be seen in the elaborate map, recently executed by Signor Gabriel de Mortillet, of the ancient glaciers of the Italian flank of the Alps, that the old moraines descend in narrow strips from the snow-covered ridges, through the principal valleys, to the great basin of the Po, on reaching which they expand and cover large circular or oval areas. Each of these groups of detritus is observed (see map, p. 306) to contain exclusively the wreck of such rocks as occur in situ on the Alpine heights of the hydrographical basins to which the moraines respectively belong.

I had an opportunity of verifying this fact, in company with Signor Gastaldi as my guide, by examining the erratics and boulder formation between Susa and Turin, on the banks of