

originally more intense, or has undergone less loss in its passage. This consideration explains to a certain point, why, under a perfectly serene sky, the state of the thermometer and the hygrometer being precisely the same in the air nearest the earth, the peak is sometimes visible, and at other times invisible, to navigators at equal distances. It is even probable, that the chance of perceiving this volcano would not be greater, if the ashy cone, at the summit of which is the mouth of the crater, were equal, as in Vesuvius, to a quarter of the total height. These ashes, being pumice-stone crumbled into dust, do not reflect as much light as the snow of the Andes; and they cause the mountain, seen from afar, to detach itself not in a bright, but in a dark hue. The ashes also contribute, if we may use the expression, to equalize the portions of aerial light, the variable difference of which renders the object more or less distinctly visible. Calcareous mountains, devoid of vegetable earth, summits covered with granitic sand, the high savannahs of the Cordilleras,\* which are of a golden yellow, are undoubtedly distinguished at small distances better than objects which are seen in a negative manner; but the theory indicates a certain limit, beyond which these last detach themselves more distinctly from the azure vault of the sky.

The colossal summits of Quito and Peru, towering above the limit of the perpetual snows, centre all the peculiarities which must render them visible at very small angles. The circular summit of the peak of Teneriffe is only a hundred toises in diameter. According to the measures I made at Riobamba, in 1803, the dome of the Chimborazo, 153 toises below its summit, consequently in a point which is 1300 toises higher than the peak, is still 673 toises (1312 metres) in breadth. The zone of perpetual snows also forms a fourth of the height of the mountain; and the base of this zone, seen on the coast of the Pacific, fills an extent of 3437 toises (6700 metres). But though Chimborazo is two-thirds higher than the peak, we do not see it, on account of the curve of the globe, at more than 38 miles and a third farther distant. The radiant brilliancy of its snows, when, at the port of Guayaquil, at the close of the rainy season, Chimbo-

\* *Los Pajonales*, from *paja*, straw. This is the name given to the region of the gramina, which encircles the zone of the perpetual snows.