

snow, formed the actual summit of Chimborazo. The ridges leading to its crest are the flying buttresses visible from the plain, which seem to support on different sides, as if to steady it, this mighty mass of rock. The ridge at whose extremity stood the three adventurers was scarcely a yard in width. On every side it was surrounded by precipices and rocks contrasting strangely with the dazzling whiteness of the snow. Long stalactites of gleaming ice, suspended over their heads, might be compared to a cascade suddenly frozen in its descent. The weather was magnificent; the air calm and pure; the eye embraced a boundless horizon; in a word, the entire situation was one of surpassing sublimity.

The barometer remained firm at 14'606 inches, corresponding to an absolute elevation of 19,600 feet. Boussingault and his companions had, therefore, overpassed the greatest height attained by Humboldt. None of their predecessors had carried the barometer to an altitude of 19,000 feet. And we shall see that this latter limit has been only exceeded by the brothers Schlagintweit in their passage across the snowy summit of the Himalaya.

Colonel Hall was overwhelmed with joy, and never ceased to joke and jest while sketching the "hell of ice" (*l'enfer de glace*). The voice seemed completely changed; and sound had so little intensity that the clash of a hammer on the rock would scarcely have been audible.

It is a noteworthy circumstance that the effects of the *mal des montagnes* which our adventurers had so painfully experienced at the bottom of the ridge disappeared on the summit of Chimborazo. Boussingault's pulse beat, it is true, one hundred and six times in a minute; he was thirsty, too, and felt, like Colonel Hall, a feverish excitement, in which, however, there was nothing painful.

The slight effect produced on our travellers by the atmospheric rarefaction may be explained by the degree of acclimatization they had undergone during a prolonged sojourn on the table-lands of the Andes. We are apt to believe that man may accustom himself to the rarefied mountain air when we reflect that the people of Quito live at an elevation of 9543 feet above the sea; that man dwells, without inconvenience, in South America, at altitudes as great as those of Mont Blanc and its sister-peaks; and especially when we remember the battle of Pichincha, which was fought at a level not inferior to that of the giant of the Alps.

It has been observed, and Boussingault insists upon the truth of the statement, that the conditions of elevation being equal, men experience greater inconvenience on a surface of snow than on the naked rock. The Indians, when marching on the snow, are seized with a choking attack (*akogo*), a difficulty of respiration not solely dependent on the rarefaction of the air. Boussingault, therefore, was led to conclude that the snow vitiates chemically the respirable air. Saussure had ascertained that the air extracted from snow contains less oxygen than the ordinary atmosphere. Boussingault experimented eudiometrically on the gases contained in a bottle filled with snow from the crest of Chimborazo, and arrived at the same result. This fact is indicative of a certain alteration of the atmosphere effected by the snow at great elevations.

Boussingault did not detect in the sky of Chimborazo the intense colour which