

sea. In the Cordilleras of New Spain, under the torrid zone, the Mexican pines extend to the height of two thousand toises. Notwithstanding the similarity of structure existing between the different species of the same genus of plants, each of them requires a certain degree of temperature and rarity in the ambient air to attain its due growth. If in temperate climates, and wherever snow falls, the uniform heat of the soil be somewhat above the mean heat of the atmosphere, it is probable that at the height of Portillo the roots of the pines draw their nourishment from a soil, in which, at a certain depth, the thermometer rises at most to nine or ten degrees.

The fourth and fifth zones, the regions of the retama and the gramina, occupy heights equal to the most inaccessible summits of the Pyrenees. It is the sterile part of the island where heaps of pumice-stone, obsidian, and broken lava, form impediments to vegetation. We have already spoken of those flowery tufts of alpine broom (*Spartium nubigenum*), which form oases amidst a vast desert of ashes. Two herbaceous plants, the *Scrophularia glabrata* and the *Viola cheiranthifolia*, advance even to the Malpays. Above a turf scorched by the heat of an African sun, an arid soil is over-spread by the *Cladonia paschalis*. Towards the summit of the Peak the *Urceolarea* and other plants of the family of the lichens, help to work the decomposition of the scorified matter. By this unceasing action of organic force the empire of Flora is extended over islands ravaged by volcanoes.

On surveying the different zones of the vegetation of Teneriffe, we perceive that the whole island may be considered as a forest of laurels, arbutus, and pines, containing in its centre a naked and rocky soil, unfit either for pasturage or cultivation. M. Broussonnet observes, that the archipelago of the Canaries may be divided into two groups of islands; the first comprising Lancerota and Forteventura, the second Teneriffe, Canary, Gomera, Ferro, and Palma. The appearance of the vegetation essentially differs in these two groups. The eastern islands, Lancerota and Forteventura, consist of extensive plains and mountains of little elevation; they have very few springs, and bear the appearance, still more than the other islands, of having been separated from the continent. The winds blow in the same direction, and at the same periods: the *Euphorbia mauri-*