

and 4 of the compass of Freiberg (direction from south-west to north-east). This research, which I thought might lead to important discoveries relating to the structure of the globe, had then such attractions for me that it was one of the most powerful incentives of my voyage to the equator. My own observations, together with those of many able geologists, convince me that there exists in no hemisphere a general and absolute uniformity of direction; but that in regions of very considerable extent, sometimes over several thousand square leagues, we observe that the direction and (though more rarely) the inclination have been determined by a system of particular forces. We discover at great distances, a parallelism (loxodromism) of the strata, a direction, of which the type is manifest amidst partial perturbations, and which often remains the same in primitive and transition strata. A fact which must have struck Palasson and Saussure is, that in general the direction of the strata, even in those which are far distant from the principal ridges, is identical with the direction of mountain chains; that is to say, with their longitudinal axis.

Venezuela is one of the countries in which the parallelism of the strata of gneiss-granite, mica-slate, and clay-slate, is most strongly marked. The general direction of these strata is N. 50° E., and the general inclination from 60° to 70° north-west. Thus I observed them on a length of more than a hundred leagues, in the littoral chain of Venezuela; in the stratified granite of Las Trincheras at Porto Cabello; in the gneiss of the islands of the lake of Valencia, and in the vicinity of the Villa de Cura; in the transition-slate and greenstone on the north of Parapara; in the road from La Guayra to the town of Caracas, and through all the Sierra de Avila in Cape Codera; and in the mica-slate and clay-slate of the peninsula of Araya. The same direction from N. E. to S. W., and this inclination to N. W., are also manifest, although less decidedly, in the limestones of Cumanacoa at Cuchivano, and between Guanaguana and Caripe. The exceptions to this general law are extremely rare in the gneiss-granite of the littoral Cordillera; it may even be affirmed, that the inverse direction (from S. E. to N. W.) often bears with it the inclination towards S. W.

As that part of the group of the Sierra Parime over which