

Jauja, and the Upper Marañon;* but I was fortunate enough to be able to determine the six other basins, or longitudinal valleys, which succeed each other, as if by steps, towards the north. The bottom of the valley of Cuenca, between the knots of Loxa and Assuay, is 1350 toises; the valley of Allansi and of Hambato, between the knot of the Assuay and the ridge of Chisinche, 1320 toises; the valley of Quito in the eastern part, 1340 toises, and in the western part, 1490 toises; the basin of Almaguer, 1160 toises; the basin of the Rio Cauca, between the lofty plains of Cali, Buga, and Cartago, 500 toises; the valley of Magdalena, first between Neiva and Honda, 200 toises; and further on, between Honda and Mompox, 100 toises of average height above the level of the sea.† In this region, which has been carefully measured, the different basins lower very sensibly from the equator northward. The elevation of the bottom of enclosed basins merits great attention in connection with the causes of the formation of the valleys. I do not deny that the depressions in the plains may be sometimes the effect of ancient pelagic currents, or slow erosions. I am inclined to believe that the transversal valleys, re-

* I am inclined to believe that the southern part of the basin of the Upper Marañon, between Huary and Huacarachuco, exceeds 350 toises.

† In the region of the Andes comprehended between 4° of south latitude and 2° of north, the longitudinal vallies or basins inclosed by parallel chains, are regularly between 1200 and 1500 toises high; while the transversal vallies are remarkable for their depression, or rather the rapid lowering of their bottom. The valley of Patias, for instance, running from N.E. to S.W. is only 350 toises of absolute height, even above the junction of the Rio Guachion with the Quilquasi, according to the barometric measures of M. Caldas; and yet it is surrounded by the highest summits, the Paramos de Puntaurcu and Mamacondy. Going from the plains of Lombardy, and penetrating into the Alps of the Tyrol, by a line perpendicular to the axis of the chain, we advance more than 20 marine leagues towards the north, yet we find the bottom of the valley of the Adige and of Eysack near Botzen, to be only 182 toises of absolute height, an elevation which exceeds but 117 toises that of Milan. From Botzen however, to the ridge of Brenner (culminant point, 746 toises), is only 11 leagues. The Valais is a longitudinal valley; and in a barometric measurement which I made very recently from Paris to Naples and Berlin, I was surprised to find that from Sion to Brigg, the bottom of the valley rises only to from 225 to 350 toises of absolute height; nearly the level of the plains of Switzerland, which, between the Alps and the Jura, are only from 274 to 300 toises.