

The first is so encompassed that no drop of water can escape except by evaporation; it is like the enclosed valley of Mexico,* and of those numerous circular basins which have been discerned in the moon, and which are surrounded by lofty mountains. An immense alpine lake characterizes the basin of Tiahuanaco or Titicaca; this phenomenon is the more worthy of attention, as in South America there are scarcely any of those reservoirs of fresh water which are found at the foot of the European Alps, on the northern and southern slopes, and which are permanent during the season of drought. The other basins of the Andes, for instance, those of Jauja, the Upper Marañon, and Cauca, pour their waters into natural canals, which may be considered as so many crevices situated either at one of the extremities of the basin, or on its banks, nearly in the middle of the lateral chain. I dwell on this articulated form of the Andes, on those knots or transverse ridges, because, in the continuation of the Andes called the Cordilleras of the shore of Venezuela, we shall find the same transverse dykes, and the same phenomena.

The ramification of the Andes and of all the great masses of mountains into several chains, merits particular consideration in reference to the height more or less considerable of the bottom of the enclosed basins, or longitudinal valleys. Geologists have hitherto directed more attention to the successive narrowing of these basins, their depth compared with the walls of rock that surround them, and the correspondence between the re-entering and the salient angles, than to the level of the bottom of the valleys. No precise measure has yet fixed the absolute height of the three basins of Titicaca,

occupy 23,300 square leagues of this surface, and the three basins contained between lat. 6° and 20° south measure 7200 square leagues. Subtracting 33,200 square leagues for the whole of the enclosed basins and spurs, we find, in latitude 65° , the area of the Cordilleras elevated in the form of walls, to be 25,700 square leagues, whence results (comprehending the knots, and allowing for the inflexion of the chains) an average breadth of the Andes of 18 to 20 leagues. The valleys of Huallaga and the Rio Magdalena are not comprehended in these 58,900 square leagues, on account of the diverging direction of the chain, east of Cipoplaya and Santa Fe de Bogota.

* We consider it in its primitive state, without respect to the gap or cleft of the mountains, known by the name of Desaghué de Huehuetoca.