

Magellan to the parallel of the port of Arica ( $18^{\circ} 28' 35''$ ), runs from south to north, in the direction of a meridian at most  $5^{\circ}$  N. E.; but from the parallel of Arica, the coast and the two Cordilleras east and west of the Alpine lake of Titicaca, abruptly change their direction and incline to north-west. The Cordilleras of Ancuma and Moquehua, and the longitudinal valley, or rather the basin of Titicaca, which they inclose, take a direction N.  $42^{\circ}$  W. Further on, the two branches again unite in the group of the mountains of Cuzco, and thence their direction is N.  $80^{\circ}$  W. This group of which the table-land inclines to the north-east, forms a curve, nearly from east to west, so that the part of the Andes north of Castrovireyna is thrown back more than 242,000 toises westward. This singular geological phenomenon resembles the variation of dip of the veins, and especially of the two parts of the chain of the Pyrenees, parallel to each other, and linked by an almost rectangular elbow, 16,000 toises long, near the source of the Garonne;\* but in the Andes, the axes of the chain, south and north of the curve, do not preserve parallelism. On the north of Castrovireyna and Andahuaylas (lat.  $14^{\circ}$ ), the direction is N.  $22^{\circ}$  W., while south of  $15^{\circ}$ , it is N.  $42^{\circ}$  W. The inflexions of the coast follow these changes. The shore separated from the Cordillera by a plain 15 leagues in breadth, stretches from Camapo to Arica, between  $27\frac{1}{2}^{\circ}$  and  $18\frac{1}{2}^{\circ}$  lat. N.  $5^{\circ}$  E.; from Arica to Pisco, between  $18\frac{1}{2}^{\circ}$  and  $14^{\circ}$  lat. at first N.  $42^{\circ}$  W., afterwards N.  $65^{\circ}$  W.; and from Pisco to Truxillo, between  $14^{\circ}$  and  $8^{\circ}$  of lat. N.  $27^{\circ}$  W. The parallelism between the coast and the Cordillera of the Andes is a phenomenon the more worthy of attention, as it occurs in several parts of the globe where the mountains do not in the same manner form the shore.

After the great knot of mountains of Cuzco and Parinacochas, in  $14^{\circ}$  south latitude, the Andes present a second bifurcation, on the east and west of the Rio Jauja, which throws itself into the Mantaro, a tributary stream of the Apurimac. The eastern chain stretches on the east of Huanta, the convent of Ocopa and Tarma; the western chain, on the west of Castrovireyna, Huancavelica, Huarocheri, and Yauli. The basin, or rather the lofty table-land which is

\* Between the mountain of Tentenade and the Port d'Espot.