

than is supposed by the inhabitants of Cumana, on account of their exaggerated ideas of the cold of Cumanacoa. But the difference of climate observable between places so near each other is perhaps less owing to comparative height than to local circumstances. Among these causes we may cite the proximity of the forests; the frequency of descending currents, so common in these valleys, closed on every side; the abundance of rain; and those thick fogs which diminish during a great part of the year the direct action of the solar rays. The decrement of the heat being nearly the same within the tropics, and during the summer under the temperate zone, the small difference of level of one hundred toises should produce only a change in the mean temperature of 1° or 1.5° . But we shall soon find that at Cumanacoa the difference rises to more than four degrees. This coolness of the climate is sometimes the more surprising, as very great heat is felt at Carthago (in the province of Popayan); at Tomependa, on the bank of the river Amazon, and in the valleys of Aragua, to the west of Caracas; though the absolute height of these different places is between 200 and 480 toises. In plains as well as on mountains the isothermal lines (lines of similar heat) are not constantly parallel to the equator, or the surface of the globe. It is the grand problem of meteorology to determine the inflections of these lines, and to discover, amid modifications produced by local causes, the constant laws of the distribution of heat.

The port of Cumana is only seven nautical leagues from Cumanacoa. It scarcely ever rains in the first-mentioned place, while in the latter there are seven months of wintry weather. At Cumanacoa, the dry season begins at the winter solstice, and lasts till the vernal equinox. Light showers are frequent in the months of April, May, and June. The dry weather then returns again, and lasts from the summer solstice to the end of August. Then come the real winter rains, which cease only in the month of November, and during which torrents of water pour down from the skies.

It was during the winter season that we took up our first abode in the Missions. Every night a thick fog covered the sky, and it was only at intervals that I succeeded in taking some observations of the stars. The thermometer kept from