

a candle, which was lit as the procession entered the church. Ladies did not attend funerals; the evening after the funeral they would meet in some convenient house, light candles, and talk about the dead and his virtues until the candles burned away.

Customs connected with courtship and marriage are changing, as in other countries, but even now the relations between the sexes are under strict surveillance among the Mexicans, and young men and young women have not the same opportunities for becoming acquainted as in many other countries. A j6ven who feels the first impulses of the tender passion has few opportunities for meeting the object of his affections alone, or for conversing with her save in the presence of parent or grim dueña. He may dance with her at parties, speak to her at christenings, or kneel near her at mass or vespers; but his chief pleasure is to be found in *jugando el oso*, or *oseando*, as the term goes. He takes his station close to the lattice of the young señorita, and there remains until she approaches and looks down and (of course) by accident drops a flower or a handkerchief; then, animated by hope, he may venture to send some female relative to sound the girl's parents and find out what are his prospects. Among the rural Mexicans, who adhere most strictly to old usages, a betrothal is still an affair of considerable formality. The aspirant accompanies his declaration by the tender of the dones, generally jewelry, the acceptance of which gives him the right to walk with the young lady and her family to church and places of entertainment. As the wedding-day approaches, he buys the trousseau for the bride. This custom is now dying out in all but the remote Mexican districts.



CHAPTER XLV

NATURAL ADVANTAGES

NOWHERE in the world do we see a country which has come forward more rapidly than has Mexico in the last half-century. Few Americans realize that Mexico was "discovered" and settled by Cortez a hundred years before any settlement was made in the United States. And in natural advantages no other portion of this marvellous western hemisphere can claim a place above her.

Mexico is the geographical centre of the earth, an imperial place in the great highways of the world. The country extends between 14° 30' and 32° 42' north latitude, and between 88° 54' and 119° 25' of longitude west of Greenwich.

It is bounded on the north by the United States, on the east by the Gulf of Mexico, on the southeast by Guatemala, and on the south and west by the Pacific Ocean.

The frontier line which separates Mexico from the United States starts near the mouth of the Rio Grande from a point in the sea three leagues from the coast, follows the line of the river to its intersection with the parallel of latitude 31° 37' 47" N. (at Ciudad Juarez), runs in a straight line westward one hundred miles, then bends to the south to 31° 20', then follows the parallel westward to 111° of longitude west from Greenwich, and continues in a straight line to a point on the Rio Colorado twenty miles from its confluence with the river Gila, then it turns toward the north of this confluence and bends toward the west, following the line between Lower and Upper California. From Ciudad Juarez westward the boundary lines are marked with two hundred and fifty-eight massive iron and stone monuments. It has a northern frontier of fourteen hundred and a southern of three hundred and forty-five miles. It has a seaboard of sixteen hundred and seventy-seven miles on the Gulf of Mexico and the Caribbean Sea, two thousand and forty on the Gulf of California, and four thousand four hundred and eight on the Pacific Ocean, making six thousand and eighty-six in all.

The area of this immense republic is nearly two million square kilometres, say seven hundred and fifty-two thousand square miles, that of the United States being about three million six hundred thousand square miles, so that Mexico has an area of about one-fifth that of our great territory, a fact which few realize. The greatest length of the country is two thousand eight hundred kilometres (seventeen hundred and fifty miles), and the greatest width twelve hundred kilometres (seven hundred and fifty miles), while the least is two hundred and eighty-five metres (one hundred and seventy-five miles) at the Isthmus of Tehuantepec.

So few outsiders have anything more than a general idea of Mexico that I may be pardoned for going into still further details.

Mexico comprises an elevated table-land one thousand kilometres (six hundred and twenty-five miles) in width in the north, and from one hundred and eighty to two hundred kilometres (one hundred and twelve to one hundred and twenty-five miles) at the south, in the

Isthmus of Tehuantepec. The central table-land, a continuation of the Rocky Mountains of North America and of the Andes of South America, is formed by the chain of mountains called the Sierra Madre, which divides in the state of Oaxaca into three branches, the southern, the eastern, and the western. The face of the country is extremely diversified. The littoral regions are in general low and sandy, especially on the Atlantic side, where they were probably submerged at no remote period as far as the foot of the mountains. In no part of the republic within thirty miles of the sea does the land rise higher than one thousand feet, except, perhaps, in Chiapas, where the chain of the Mexican Andes presents a mural barrier facing the ocean, toward which the descent is exceedingly rapid. But the traveller journeying inland from either side, north of the Tehuantepec isthmus, climbs by a succession of gigantic terraced mountains to a table-land with a mean elevation of eight thousand feet, extending far beyond the northern limits of the republic. On the railway from Vera Cruz to the capital every variety of climate is experienced within the space of a few hours, and the natural productions peculiar to each are successively passed in review, from the sugar-cane, indigo plant, and plantain of the tropics, to the pines, firs, and lichens of the north.

The valley of Mexico is an elliptical plain with an area of about nine hundred and forty square miles, fringed on the east, south, and west by lofty peaks, some of which are active volcanoes; indeed, the plain may be regarded as one vast volcanic hearth, roughened at intervals by isolated hills rising abruptly from the surrounding level. The most elevated summits are at the southeast, where Popocatepetl and Ixtaccihuatl tower majestically over all the rest. So regular is the great plateau (formed exclusively by the broad, undulating, flattened crest of the Mexican Andes, and not the swelling of a valley between two mountain-ridges, such as the alpine valley of Bolivia or that of Thibet), and so gentle are the slopes where depressions occur, that the journey from Mexico to Santa Fé, New Mexico (about twelve hundred miles), might be performed in a four-wheeled vehicle. From Mexico south to Oaxaca, in the centre of the plain of that name, with an elevation varying from three thousand to six thousand feet, the route is almost as level as from the capital northward.

There are seventeen mountains—ten of which are volcanoes—which are over ten thousand feet in height. Popocatepetl ranks first, at seventeen thousand five hundred and forty feet, and Orizaba next, at seventeen thousand one hundred and seventy-six feet.

The central table-land has toward the north a height of from twelve hundred to eighteen hundred metres (say from three thousand nine hundred and fifty to five thousand eight hundred feet) between 32° and 22° north latitude, where it is called the table-land of Chihuahua, and from eighteen hundred to two thousand seven hundred metres (say from five thousand eight hundred to twelve thousand two hundred feet) in the table-land of Mexico, which extends from 22° to 17° north latitude. The table-land of Chihuahua is level, arid, and covered with a nitrous soil.

Near the nineteenth parallel the table-land of Mexico is broken by a line of volcanoes.

The volcanic zone is about nine hundred kilometres (five hundred and sixty miles) long from east to west, and ninety kilometres (fifty-six miles) wide. Its central line starts at the volcano of Colima, near the Pacific, and ends in the volcano of San Andres Tuxtla, near the north of Mexico.

As has already been said, from the coast toward the interior of the country the land rises by gradations, forming grand plateaus and picturesque and deeply bordered valleys, with sudden changes of level. The waterfalls precipitate themselves in imposing cascades, adding greatly to the beauty of the country.

The crest of these vast cordilleras, seen from the savannas of the coast, is defined from afar sometimes against a blue and transparent sky, sometimes against a misty background. Granitic rocks or snowy peaks accentuate a country which is more broken up, and which rises in vast echelons to the central plateau. Bounded on the east and on the west by a succession of heights, which merge into the axis of the two grand mountain-chains into which the cordillera divides, it is different in many points from those which traverse South America, and of which they are the continuation.

In going inland from the state of Vera Cruz one encounters savannas, or grand prairies, broken by woods and forests, then numberless spurs, which jut out from the foot of the cordillera. On the flanks of these are echeloned valleys, and at the summit the plain of Puebla, to which one rises by the gorges of the sierra, that of Boca del Monte being two thousand three hundred metres above the sea-level.

The mountains in the extreme southeast are mainly composed of porphyry, with some limestone and clay slate, in which lie embedded unnumbered veins of silver, copper, and lead, awaiting the enterprising hand which shall seize them and turn them into wealth untold.

The Oaxaca system is chiefly of granite, especially the loftiest peaks. Granite also forms the foundation to the central table-lands, where there are richly in evidence also the porphyries and precious metals. The Cerro del Mercado, in the state of Durango, is said to be almost a solid mass of iron.

The rocks of Mexico throughout belong to the granitic, porphyritic, basaltic, and limestone formations. The porphyries form the summits of colossal masses of bizarre and capricious form. Sometimes they are found in thick strata, when they are traversed by metal-bearing veins, and form, in the Sierra de Hidalgo (Pachuca), large deposits of great richness.

The limestone cavern of Cacahuamilpa, described in the chapter on Morelos, affords, with its vast and enormous galleries, its infinitely diversified and beautiful concretions, and its fantastic aspect under the electric light, one of the wonders of the world.

The mineral deposits of Mexico, so far as hitherto known, are richer than those of any other country, not excepting Peru; and it is supposed that still richer mines of silver and gold are likely to be discovered. The quantity of silver annually extracted is estimated at five hundred tons, and that of gold at a ton and a half.

The mines during the colonial period were crown property, and those who worked them paid one-fifth of the product to the king. When Mexico became independent they were declared public property, and miners were required to pay into the national treasury only a small percentage of the yield. Even this tax was afterwards abolished, and any one can, by right of discovery, denounce or record a mine and obtain authority to work a certain number of varas free of tribute. A slight tax is, however, imposed on melting and coining the metal.

No country in the world is more favored than Mexico. Situated below the tropics, the climate of Mexico is not less uniform than diversified. The temperature of each locality is almost always the same, yet the different localities present a thousand distinct temperatures.

There is comparatively little difference between summer and winter, except that one is the wet season and the other the dry. The climate can, as a whole, be classified as temperate, yet the country may be considered as divided into three zones,—the hot, the temperate, and the cold. The first is comprised between the sea-level and one thousand metres of height, the second between one thousand and two thousand metres, and the third extends from two thousand metres up. Longitude and latitude do not influence the climate so much as does

height, and one often finds these three distinct climates within a few miles of one another, according to the height above the sea.

A marked instance of sudden changes in climate may be instanced in the trip from Esperanza, where the descent from the temperate to the torrid zone is made in about two hours, the drop in altitude being over four thousand feet.

Within the torrid zone the only distinction in the seasons is the wet and the dry,—the first between June and October, the second from November until May.

The torrid region of this country comprises the peninsula of Yucatán, the state of Tabasco, and the greater part of the states of Vera Cruz and Tamaulipas near the coast. The torrid district on the Pacific Ocean extends to the territory of Lower California.

The lands in the torrid district near the coast are of wonderful fertility, thanks to the abundant moisture of the soil kept up by a permanent dew and by the copious rains, and are generally healthful.

Perpetual spring reigns on the slopes of the cordillera between one thousand and sixteen hundred metres above the sea-level; the thermometric variations do not exceed four or five

degrees C. (eight or nine degrees F.), and the main temperature varies between twenty-three and twenty-five degrees C. (seventy-three to seventy-seven degrees F.), cold and excessive heat being unknown.

Europeans and North Americans may settle here without danger; they soon get acclimated. This district offers the agricultural laborer and the intelligent artisan many opportunities for fortune.

The cold district and the central plateau occupy the plains on the north of the states of Michoacán and Mexico, the federal district, the northern and eastern parts of the state of Puebla, the



LA SEDEÑA BRIDGE, INTEROCEANIC RAILROAD.

states of Tlaxcala, Hidalgo, Querétaro, and Guanajuato, part of Jalisco, the state of San Luis Potosí, except its western part, the states of Aguas Calientes and Zacatecas, and the plains of Durango.

The healthiest climates are, of course, the driest ones, whether hot or cold. Mineral springs abound on the table-lands and on the slopes of the cordilleras.

The mean temperature of the city of Mexico is about fifty-eight degrees of Fahrenheit the year through. In no other country does the temperature become so much cooler after sunset, and one may walk a mile even at noon under the tropical sun without fatigue.

The rainy season begins at the end of May and lasts into October. During this time the sun comes out brightly in the morning, about noon pleasant showers without wind or violence come up, and by sunset all is bright again. The same is the case in the table-lands; but on the

Pacific coast between the twenty-fifth and thirty-fifth parallels the case is reversed, and the rainy season falls in the winter months. The difference between winter and summer, therefore, is hardly felt; indeed, in the rainy season the climate during the daytime is slightly cooler, but altogether delicious. There is probably no other country on which God has bestowed so delightful a climate.

The nature of the surface and the character of the seasons prevent there being many large bodies of water and the formation of navigable watercourses; but what is lost in this direction is gained by the numberless water-powers which abound on every hand.

There are, however, five groups of lakes: those which are without outlet and which have no streams as feeders, being fed directly by the rains; those formed by the enlargement of water-courses, as of rivers which flow through them; those which receive no watercourse, but which give rise to one or more rivers as outlets; those which receive watercourses which are lost therein; and lagoons which communicate with the sea, some of which might be considered as estuaries.

The soil throughout Mexico is, for the most part, extremely fertile. Artificial irrigation is in many places resorted to, and is effected by dams or aguages and canals. The landed property is estimated at over one billion, and the vegetation everywhere is magnificent.

Every variety of edible fruit known in Europe or America is found there, usually growing spontaneously. Owing to the peculiar structure of the country, too, all fruits, with every kind of garden vegetable, may be obtained in the Mexican markets the year round.

The flowers of Mexico are among the richest, most beautiful, and most varied in the world. On Sunday mornings the streets of the capital are literally enamelled with blossoms of the most fragrant odors and most brilliant colors.

The fields in the hot district are adorned with the beautiful green of the tobacco, the sugar-cane, and the pampas grass of the coast region; and the plantations of mangrove-trees and the bamboo, with its branching foliage, give shade to the river banks. In the virgin forests gigantic fig-trees are found, with immense cedars, mahogany-trees, and many others, beautiful in foliage as well as useful for their fruits and woods. The most luxuriant vines trail from the highest branches of the trees, with choicest flowers hanging in festoons, making the forest almost impenetrable. In Mexico, where the language of flowers is understood by all, the orchidaceæ seem to compose nearly the whole alphabet. Not an infant is baptized, not a marriage is celebrated, no obsequies are performed, at which the aid of these flowers is not called in by the sentimental natives.

In the temperate regions the character of the vegetation changes, but its beauty does not lessen. Magnificent forests of liquidambar, various kinds of oak, laurel, magnolia, and myrtle, cover the base of the mountains; mosses, ferns, and lichens carpet the smooth surface of the rocks, as also the rough bark of the trees. Every dale or glen is an orchard where one can gather the most palatable of fruits while enjoying the most delightful breezes, and where the sighing of the winds, the singing of the birds, and the murmur of the waterfalls make sweetest music.

In the colder regions one finds a rich variety of the coniferous plants and trees crowning the heights and waving in the extensive fields of golden grain and among the green corn, whose cultivation is so general in the central table-land, while adorning the valleys and meadows are the leafy ash, the immense ahuehuete, and the beautiful willow with its hanging branches.

In travelling through Mexico one sees all varieties of vegetation; therefore, on the bleak and hilly parts are to be found scanty growths, although invariably, even here, there are surprises wherever there is a little rivulet bathing trees and flowers in dew; or the loveliest