

Lake Tezeuco, and thence to the new Vera Cruz road; that to Chapultepec, south west: and lastly, one in the direction of the north west, towards Guautitlan. Several of these causeways are planted with avenues of poplars and other trees, and along two of them, that of Chapultepec and Tacuba, the supply of fresh water is brought from the mountains to the capital by the aqueducts of Chapultepec and Santa Fe.<sup>1</sup>

Let us turn together for our first excursion, to the southward, upon the great *calzada*, leading to Chalco and San Augustin, by a continuation of which, the traveller attains the eastern declivity of the Sierra Madre, and the Pacific at Acapulco. It was in this direction that two of our number made our first sortie, a few days after our arrival, early on a glorious morning, in whose brilliant sunshine the façades of the palaces shone like silver and enamel.

A light caleche with a couple of well-bitted horses, soon bore us over the pavement of the long street; and passing the Garita, we entered upon the raised causeway, with the sterile tracts of the marshy flat surrounding the city on either hand—a vast track of country with groups of volcanic hills in the middle ground,—and in the distance a splendid semicircular range of mountains, comprising the highest summits of the great porphyritic chain. The Monte Ajusco, towards whose base we were bending our course, was comparatively at no great distance, while the two

<sup>1</sup> The Aqueduct of Chapultepec counts 904 arches, and is 10,826 feet in length; that of Santa Fe, 33,464 feet.

great volcanoes of Puebla, towered, with their snowy caps, from a distance of sixty miles to the south. Beyond the flats in your immediate vicinity, over which the various causeways with their avenues of elm and poplar, and the aqueducts are seen stretching for miles, towards the base of the hills,—the eye catches a glimpse of a lovely region of verdure and cultivation, studded by innumerable orchards, villas, and tasteful country-houses; and many a village, indicated by the dome and tower of its church. In that direction the country appears like one vast garden, and the contrast between its verdure and gray tints, and varied hue of both the intermediate plains and the slopes of the mountains beyond, is extremely beautiful.

A few miles from the mud barrier of the city, you leave the ancient road to the lake of Chalco, stretching towards the village of Mejicalzingo, and the foot of the Cerro di P'Estrella, to the left. The latter strangely-moulded ridge, heaving up from the surrounding plain, is noted as the spot from which Cortez enjoyed his first near view of Tenochtitlan. Such is the extreme dryness and transparency of the atmosphere on the table-land of Mexico, that the traveller soon discovers, that he is quite unable to form a just idea of the relative position and distance of the objects scattered over this great plateau. Indeed this deception surpasses any thing which I have witnessed in any other country, and is heightened by the brilliancy of the colouring observable in the general tints



of the landscape. Thus, in looking towards the hill I have just named, it appears to be but little in advance of a huge mass more to the eastward, whose steep purple sides, truncated summit, and yawning crater bespeaks its volcanic origin. Yet as you proceed on your road, you see them remove from each other, leagues apart. A further advance you see first one distinct cone disentangle itself from the bulk of the more remote, then another, and in the end discover a range of distinct cones increasing in height, and admit the complete fallacy of your first impressions.

For many miles after he has gained what might be called *terra firma*, the traveller is appalled with the sterility of the surrounding plain; at the same time that the signs of a past system of careful drainage, and the ruins of huts and haciendas, show you that this curse of barrenness has not been always the dowry of the soil. In truth, owing to causes which it is difficult to explain, some of the finest estates in the immediate vicinity of the capital have become absolutely desert, from the rapid spread of saline efflorescence formed upon the surface, and which is more or less a main feature of all these great elevated plains.

About six miles from the city, we traversed the dry bed of the Chórubusco, passing along a ridge raised several feet above the general surface of the country, and formed by the *debris* brought down by the river from the mountains in the rainy season.

We now approached the noble estate and Hacienda of San Antonio, covering a large tract of fertile country in advance, and admirably cultivated and governed by its noble proprietor, to whose family we had the advantage of being known; and I shall take occasion at once to make use of the knowledge gained by subsequent visits here, to allude to a few points of interest connected with agriculture in this part of Mexico.

The Hacienda San Antonio is situated at the distance of eight miles from the city, in the centre of a body of land of great fertility, extending from the line of the road far into the plain to the east and south, while exactly opposite a small picturesque church surrounded by trees, marks the limit of a vast field of hard black lava of revolting sterility, deforming the country in the vicinity of San Augustin, and along the base of the neighbouring mountain of the Ajusco. It is known by the name of the Pedrigal.

The road and a rivulet in front of the Hacienda, are shaded by fine silver poplars, and other well known trees; in addition to the *schinus* or Peruvian-peppertree, of which the bright green foliage, and pendant clusters of red berries, form such a graceful ornament of the upper regions of the country.

A deep arch-way on the left hand side of the road, introduces you to the court-yard. In common with all the Haciendas we had seen on the table-land, the mass of buildings here are imposing from their great size and solidity of structure. Besides the dwelling-house of the proprietors, built like the town houses



in a quadrangle round an interior open court; they comprise a church, dwellings for the dependants, stables, and other offices on a large scale, and a granary, which, for massive architecture and dimensions, might serve for a state prison. This granary is calculated to hold twelve thousand cargass of maize, each carga weighing one hundred and eighty English pounds.

The principal products of the estate are maize and pulque. Of the former the annual produce alone is estimated at eight thousand cargass. The whole domain is under excellent cultivation and management, and both from the excellent system of irrigation and drainage pursued, and its vicinity to the capital, is accounted one of the most lucrative in the whole valley.

The mode of culture of the Maguey,<sup>1</sup> from which, as I have before mentioned that the pulque is derived, may demand a little further elucidation.

In appearance the great Agave is a stately aloe of a dark green hue and leaves of great size and thickness. I have not unfrequently seen it rise higher than my head when seated on horse-back.

Its culture is a very productive one. The prime cost and the whole expense of labour demanded by the plant from first to last, may be estimated at three dollars and a half, and the ultimate produce at ten. In the sale of land, the well-grown maguey plants are computed at the average value of five dollars. They are

<sup>1</sup> Agave Americana.

set in regular rows, about three yards apart, and come to perfection in from eight to ten years; when, if left to themselves, they would flower.

This is the interesting moment for the cultivator. He watches the plant, till by well-known signs he sees that nature has completed her time, and that the maguey is upon the point of throwing up the high flowering stem. He then cuts deeply and systematically into the very heart of the plant, depriving it of the tight scroll of leaves which envelopes the embryo flower-stalk, and scoops out a regular hollow of nearly a foot in diameter in the centre.

The sap vessels of the mutilated plant, still perform their allotted duty, and pour into this artificial bowl, such an abundant supply of juice, that it requires emptying two or three times a day for eight or ten successive weeks. It is computed that a single maguey will yield six hundred pounds of sap in the course of the season. This is the pulque. It is commodiously drawn from the reservoir by means of suction into a long gourd, and thence transferred to goat-skin sacks, where it ferments slightly, and is then drinkable and pleasant enough, if not too old. When long bottled in these primeval receptacles, it takes a very peculiar *schmaack*, as a Dutchman would say, disagreeable to many foreigners, but I cannot say we found it sufficiently so to prevent our partaking of it with great satisfaction as long as we were in the country.

A brandy is distilled from the maguey, which is



perniciously intoxicating when taken in too freely. The ordinary pulque is slightly so, and the Indians frequently render it highly deleterious, by steeping the berries of the *schinus* in it.

It is hardly necessary to say that no maguey plant which has been mutilated, lives; its uses are however still various and important. The dried fibres are of universal substitution instead of hemp, in the manufacture of cordage and packing cloths.

There are estates in the valley of Mexico which return as much as thirty-six thousand dollars annually from the culture of the Maguey alone.

This most useful plant comes to perfection on the various *plateaux* of the table land, from the height of five thousand feet to that of nearly nine thousand feet, but beyond a certain elevation, it ceases to be so productive.

Besides the two principal products, the estates about Mexico furnish a large quantity of European grain, Mexican and European wheat, and abundance of beans, peas, chile pepper, and vegetables, in addition to most of our European fruits.

Surely there is not on the face of the earth a country more highly favoured by nature than New Spain. You can hardly name a mineral product which it does not hide within its bosom, or a vegetable one, of whatever zone, which it might not under proper management be made to bring to perfection in one part or another of its varied surface. Yet how little has man hitherto done to improve these advantages!

But to return for an instant to the Hacienda. It may be remarked, that in common with all its neighbours of the same class, there are signs of interior decay observable, consequent upon the altered circumstances of the country: and the general magnificence of the plan and the dimensions of the apartments, contrast disagreeably with the scanty character of the furniture. These country-seats were once palaces, but they are no longer so; still there was a feudal air about the great hall of San Antonio, which for size and noble proportions might almost rival the Ritter-saal of a German castle. The church had been completely despoiled of its ornaments, and now seemed to be utterly deserted.

From the Hacienda of San Antonio, the route continues to run, in nearly a straight line, to Tlalpam or San Augustin de las Cuevas, a town with a large church and Plaza, most delightfully situated among gardens and groves, at the very foot of the hills in advance of the Ajusco. It is a favourite resort of the citizens of all classes from the capital, many of the wealthier of whom have country-seats here, to which they repair to enjoy fine air and verdure, in exchange for the heat and glare of the city.

Among these, the country-seat and gardens of the exiled General Moran are particularly beautiful. The whole country in the neighbourhood is under high cultivation. At Whitsuntide a great fair is held at the town, when thousands assemble hither from Mexico and the



adjoining district. The lengths to which gambling is carried on at the Monte-tables of St. Augustin, at that season of festivity, is almost incredible. Many of the once wealthy families of this country, have been beggared by giving themselves up to a taste for this witless game of headlong chance.

No language of mine can give you a just idea of the scene from the neighbouring heights. They command a view of vast extent over the southern portion of the valley, with the broad plain, the distant lakes Xochimilco and Chalco, various groups of volcanic hills in the middle ground, and the wall of mountains surmounted by the snowy summits of Iztaccihuatl and Popocatepetl on the horizon.

The Ajusco, a compact mass of porphyritic rock, soaring to the height of thirteen thousand feet above the Pacific, rises directly in the rear. It is the highest point of the eastern wall of the Cordillera which girdles the valley.

In the view from this point, which I had more than once the opportunity of examining in detail, nothing struck me more than the great number of truncated cones and volcanic summits within sight.

Though there exists throughout this portion of the continent, positive proofs of the agency of internal fire, in upheaving the whole of the table-land of the Mexican Cordillera to its present extraordinary level, an examination of the continent would seem to indicate that the forces set in action by igneous agency, have

been more active in one particular direction than another; that is, along a nearly right line of no great breadth, inclosed between  $18^{\circ}$  and  $20^{\circ}$  of north latitude. Commencing with the volcano of San Martin de Tuxtla, on the shore of the Gulf, thirty-six leagues south of Vera Cruz, and moving across the surface of the country, a little to the north-west, you find in succession—the gigantic cone of Orizava, and its neighbour the Coffre de Perote—the volcano of Tlascalala,—the great volcano of Puebla or Popocatepetl,—the valley of Mexico with its innumerable cones,—the Ajusco,—the Nevada of Toluca,—and the active volcanoes of Jorullo and Colima; while report would incline you to pursue the same general direction over the Pacific ocean, for upwards of three hundred miles, to the islands of Revillagigedo, which are said to be attributable to the same cause. Of the central group,—Popocatepetl, the Ajusco, and the volcano of Toluca, are exactly upon the same line. I do not name Iztaccihuatl, '*the Indian with snowy breasts*;' because, though supposed to be, and generally called a volcano, I have heard the fact of its possessing a crater repeatedly denied on such respectable authority, that I almost doubt whether it has been justly named such.

Of these volcanoes, that of Tuxtla was in eruption about the commencement of the century. Orizaba, or Citlat-tepetl—'*the star-mountain*,' was in violent eruption, according to Humboldt, between 1545—1566. Of the eruptions of the Coffre de Perote, and of the vol-



cano of Tlascalala, no tradition exists to my knowledge. Popocatepetl,—‘*the mountain casting out smoke*,’ has shown signs of slight combustion at times during the present century, and was in active eruption at the time of the Spanish invasion, when Diego Ordaz, a Spanish officer, attempted to ascend it. The Nevada of Toluca, has been long extinct. The crater, if report says true, contains a lake abounding in fish.

The eruptions of the Ajusco, and the long chain of volcanic heights to the southward are without record: though tradition says, that the Chicli,—signifying in the Indian language,—‘*the hill that casts up sparks*’—an inferior cone at its base, from which the huge stream of the Pedrigal probably proceeded, was in partial eruption at the immigration of the Aztecs into Anahuac, in the beginning of the fourteenth century.

The two last upon my list, those of Colima and Jorullo, are still active, and were in fact, the only active volcanoes in Mexico at the time of our visit.

Though, therefore, there exists but little outward sign of the present activity of the internal fires which are still surely smouldering beneath the surface of the earth in this part of the world, and occasionally shake the mountain-piled continent from its foundation;—the signs of their past power are such as to shake the observer with great wonder and awe.

To me the whole of the hollow valley of Mexico, with its ramparts of porphyric rocks, gave the idea of a vast crater, which had been, in ages of which no

human tradition remains, the grand and principal vent through which the pent-up element, after by repeated efforts, heaving up the continent step by step from its primeval level, finally escaped through the crust of the earth.

Would you accuse me of yielding too freely to the play of imagination, when I thought that I could read in the sublime features of the vast scene before me, the unrecorded history of past centuries; and faintly picture to myself the convulsions of which the valley around me must assuredly have been the theatre? At the time when the earthquake was bursting those innumerable fissures and barrancas which are observable in the surface of the lower districts; raising one sheet of level country after another to its ordained elevation; and sending up one long, towering range of porphyritic mountains after another from the abyss to the sky:—how little can the fancy paint the scenes of awful desolation which must have existed here,—the great combustion which may have given birth to the valley, with its basins of saline waters,—and the successive formation and appearance of the numberless cones before me. The world has grown old, but the records of that age are fresh around us. What must have been the signs in the earth and sky, as the ungovernable and subtile element destroyed the unseen obstacles to its escape into the upper air, and the surface began to yield to the tremendous force exerted by the internal fires underneath. Here rose the huge pyramid, based upon the wall of the surrounding moun-