

these monuments understood or appreciated, that he had but one hundred and seventy-two subscribers for his pamphlet of one hundred and sixteen pages; and it is doubtful whether he found sufficient encouragement to publish a second treatise upon the Calendar and other monuments subsequently found, as he hints his intention of doing, in case that the sale of his first adventure, covered the expense of the impression and the plates.

He gives (*page 110*) a description of a cluster of most curiously sculptured rocks, discovered in the Cerro of Chapultepec, in the year 1775, while labourers were carrying on certain excavations. After a most careful examination, he conceived them to form part of an astronomical contrivance, by which the ancient Mexicans were enabled to determine the meridian, the exact time of sun-rise and sun-set at the equinoxes, and thus the true time throughout the year. In recording on his next return to Chapultepec, the utter annihilation of these valuable relics of an extraordinary people, he feelingly exclaims 'how many precious monuments of antiquity have thus perished through ignorance!' ¹

¹ Quantos preciosos monumentos de la antigüedad per falta de inteligencia, habran parecido an esta manera!

LETTER VII.

OUR allotted period of sojourn in the country, which we now felt to be lamentably brief, passed swiftly away amidst the excitement of our position; and, urged by the feeling that necessity would compel us to leave Mexico at the commencement of May, we prepared, early in April, to make an excursion of a few days in the environs of the capital.

Accordingly, on the 8th of that month, for the especial solace and service of the invalid of the party, a huge unwieldy Mexican state-carriage, swinging to and fro upon its scaffolding, drove majestically up to the door of the Gran Sociedad, at the heels of ten mules, furnished with faded trappings and harness, and with tail-pieces of brass-studded leather, shaped exactly like a beaver's trowel. M^r Euen and myself on horse-back, backed by our two equerries Garcias and Mariano, the (latter a new acquisition) acted as escort. All were, of course, armed to the teeth, and felt very valiant. Two *mozos* presided over the mules.

The coach was, by the by, not so much amiss; for it was of a strength of construction, which might have made it available as a temporary citadel, on a pinch—and once put in motion, it went lumbering over the pavement, and out of the gate of San Lazaro, to the

new calzada, leading towards the mountains beyond the southern limits of the Lake Tezcucó.

The morning was splendidly bright, and the air of matchless purity.

The causeway runs straight towards the volcanic-mass, called the Peñon Viejo, situated on the ancient shore of the lake to the south, and which is to be distinguished from the other Peñon of similar origin, containing the hot baths, and lying between the city and the lake.

For many miles we continued by its aid to traverse a range of wide spread flats, from which the waters of the lake have long retired, leaving a surface but indifferently calculated for cultivation, from the spongy character of the soil, and the carbonate of soda forming upon its surface. The higher portions are subjected to a rude system of drainage and agriculture; and numerous herds of cattle were scattered over it.

We found Peñon Viejo to be a huge discoloured mass of fused matter, abounding in caverns; and displaying throughout, the play of the fierce element, to whose action it owes its elevation from the abyss.

As we proceeded, one pile of volcanic hills after the other started into isolated prominence on our left, disentangling themselves from their neighbours, and from the more distant ranges, with which they had hitherto appeared to be connected. Cones, which from the roofs of the city had appeared to rise from one common ridge, we now discovered to be separated by broad strips of level marsh. I believe I forgot to

mention among our excursions, one which we had made some time before, from the Hacienda San Antonio, to the great group of volcanic hills beyond Mejicalzingo, which consists, as far as I could determine, of three truncated cones, rising progressively in bulk and height, one over the other, from the surface of the plain. On this occasion we had contrived to scramble up the steep sides of the lowest, consisting of abrupt slopes covered with rotten scoria, and gained the brink of the crater, which in its present state, forms a smooth, grass-covered bowl, of about a mile in circumference.

After passing the Peñon Viejo, we approached the foot of the volcanic cone of the Ajotla; but then quitting the great calzada at Santa Marthe, followed a track over the half-dried marshes at the southernmost extremity of Lake Tezcucó to the village of Santa Madalena, on terra firma.

As we rode in front of the old church and dark group of Italian cypress of the village, and turning to the northward, advanced over a hilly tract of country, spotted by herds of cattle and haciendas, towards Chapingo,—the views increased in beauty and interest at every step. Popocatepetl, and its neighbour, now rose to the southward over the summits of the innumerable cones in the middle ground. Both were covered with snow to a far greater extent than on our arrival three weeks before; and even the Ajusco appeared sprinkled to a considerable extent. The whole breadth of the lake was now interposed between us and the city, and a most singular optical

illusion was displayed from the effect of the mirage : the white edifices and coloured domes of the capital appearing afloat, like a fleet of snowy sails, upon the blue surface of the water, which seemingly extended far on the other side, up to the very base of the rock of Chapultepec, and, of the mountains behind. The Peñon de los Baños appeared once more as an island ; and this, which was now a deceptive and unreal picture, was the fact three hundred years ago.

The phenomena exhibited by the lakes of Mexico are extremely interesting.

Though undisputably the hand of man has done much towards the altered state of things as far as regards the diminution of water in the lakes ; yet it is probable that natural causes, tending to the same results, have been in operation for ages ; perhaps, ever since the day, when the cessation of violent volcanic convulsions left the basin and table-land of Mexico, with all its chaotic parts, fluid or solid, to the sway of the ordinary and more gentle operations of nature.

It is improbable that there was ever a regular influx of water, from whatever source it may have proceeded, at all commensurate with the great evaporation, which, under the influence of the climate, and the physical construction of the country, must always have taken place.

Of the five lakes of Mexico : Tezcuco, Xochimilco, Chalco, Cristobal, and Zumpango—that of Tezcuco is the largest, the most central, the most impregnated with saline particles, and lies at the lowest

level.¹ Not one of them possesses a natural outlet from the valley of Mexico ; and in case of the overflow of any of the four lakes, Tezcuco is the only reservoir into which they can disembogue themselves. The streams falling into Tezcuco, Xochimilco, and Cristobal, are so inconsiderable as to be of little or no account ; but both Chalco at the southern, and Zumpango at the northern extremity of the chain, receive streams of a considerable volume, calculated, under a combination of causes, to throw so large a body of water into their respective reservoirs, as to produce a most extraordinary overflow, and a consequent rise of the waters in Lake Tezcuco. Such, tradition states to have been the case on various occasions prior to the Conquest ; and even since the seventeenth century, the waters of Tezcuco have risen to such a height, that the city has been greatly endangered by it, most of the streets on one occasion remaining many feet under water for between four and five years consecutively.² The pavement of the Plaza Major itself, the highest ground in the city of Mexico, is several feet lower than the surface of lake Chalco.

Nevertheless, such is the combined effect of the extraordinary evaporation from the dry and naked surface of the Table-land, raised above the clouds, and fully exposed to the sun's rays ; the diminished power of replenishment ; the decreasing infiltration, from the

¹ At the height of 7468 feet above the sea.

² AD. 1553. 1580. 1605—1607 were years of inundation ; and on June 20, 1627, the Capital was laid under water from such a combination of causes, and remained so till the year 1634.

destruction of woods and forests both on the plains and the surrounding mountains, laying the unprotected soil bare to the action of the ardent sun and rarified air; and lastly, the effect of the artificial means employed by the Spaniards two centuries ago, to carry off the superabundant waters of the lake to the northward, that all the lakes have retired on every side into narrower limits, and the surface of Tezcuco in particular, has become circumscribed far within its original bounds.

The present shore is already 14,763 feet from the centre of the city, which it once surrounded; and on every side, as I have described, wide flats and marshy meadows mark its ancient bed.

The great Hacienda of Chapingo, which we reached shortly after noon, lies some miles distant from the shore of the lake, directly opposite Mexico. By the circuitous route we had taken, that city lay about nine leagues distant, but as the bird flies, it could not have been more than eleven or twelve miles. The Intendant of the Hacienda, to whom we had brought a letter of introduction, was from home; but we were courteously received and entertained, by one of the upper domestics of this spacious establishment; breakfasting with uncommon zest after our preparatory ride of seven hours.

The estate attached to the Hacienda, is one of the most princely and productive in the Valley of Mexico. In old times it had belonged, with much valuable land on the same side of the lake, to the Jesuits.

Later it came into possession of the Marquis Vibanco, and now appertains to the exiled General Moran. The dwelling-house, though spacious, is hardly worthy of the size and construction of the adjoining offices; among which the two Troges, or Barns, are distinguished for their vast size and massive architecture. The largest, which we rudely measured, forms one immense apartment of seventy yards in length, by twenty-two in breadth. They are calculated to hold the whole of the ample produce of maize and wheat yielded by the estate. The land is rendered extremely productive, by the excellent system of irrigation to which it is subjected. The water is conveyed hither from the mountains to the east, by means of stone conduits. Wafd computes the annual income derived from this property at 60,000 dollars.

Leaving the carriage and the mules to find their way to the town of Tezcuco, at the distance of a short league; we got on horseback in the course of the afternoon, to visit some of the objects of interest in the neighbourhood. The frequent occurrences of deep fissures in the surface of the plain, compelled us to make a circuitous route, to gain the ancient but decayed town of Huejutla, now reduced to a mere Indian hamlet, while the large church erected by the Spaniards soon after the conquest, and its singular Aztec ruins, mark it to have been a place of considerable consequence both before and after that period.

The church stands upon a raised platform, from which you descend to a second walled enclosure by a

broad flight of steps. This enclosure is covered with sward, and overshadowed by seventeen noble olive trees, which tradition states to have been the first planted by the conquerors in New Spain. Their venerable appearance attests their great age.

The Indian remains are various in their character: but for the most part heaps of rubbish. The wall of the Palace is however one of the greatest curiosities in the country. It is still of considerable extent; and, where uninjured, seems to have been between twenty and thirty feet in height, and of six to eight feet in thickness. It is not built in a uniform manner, but varies in the form and distribution of the masonry at different points of elevation. About the mid height there is a layer of compact stone-work, composed of long cylindrical masses, disposed with the circular ends outwards. In following this wall for some distance to the eastward, it is found to abut suddenly upon a deep fissure or barranca, running east and west, and forming a natural defence on that side. The road crosses it by the celebrated arched bridge, concerning which antiquaries are divided in opinion; the sanguine and hot-headed insisting that, however improbable, it is of genuine Indian construction, and formed a part of the original erections in its vicinity; at the same time that the cool and plodding deny the probability, and even assert the impossibility. It certainly would be a singular anomaly, to find in this single instance, the principle of the arch so well developed, while in every part of the conti-

ment to the northward, and on the plateau of Mexico, you evidently see that the ancient architects were ignorant of the science and principle:—but for all that, my impression after I had studied it in every part was, that there was as much to be said on one side, as upon the other. It is of the rudest construction, far too much so to be Spanish in its origin; and precisely of that acute form, which, as it appears to me, would be the most natural for a timid architect, upon whose mind the truth of the principle had just dawned, to adopt in his first trials. The height above the bed of the barranca is about forty feet. A hunt after portable antiquities among the Indian huts, was rewarded by the acquisition of an ugly monster of an idol in a sitting posture, delftly carved in a hard volcanic substance. He was perfect, with the exception of a corner of his mouth, into which the Indian who unearthed him, had driven the nose of his ploughshare, demolishing a few of his teeth; and as he was pronounced worth carriage, he was henceforth, under the high sounding name of Huitzilipochtli, accommodated with a seat in the coach, by the side of his purchaser.

We now turned our attention towards the conical mountain of Tezcozingo, an inferior spur of the great chain to the east: and, skirting the town of Tezcuco, bore off in that direction. The country exhibited many plantations of maguey, and the villages were interspersed with hedges of tall organ-cactus. Long before

we got to the church of La Navidad, which at a distance, seemed close under the steep and pointed hill upon which the object of our search, the Baño de Montezuma was situated, it became apparent that night would overtake us in the midst of our excursion. But nothing daunted, we galloped forwards over the great plain; and under the direction of an Indian guide, whose assistance was secured at the last village, and crossing a deep barranca, we began to ascend the mountain through the scattered plantations of nopal and maguey. Fragments of pottery, and broken pieces of obsidian knives and arrows; pieces of stucco, shattered terraces, and old walls, were thickly dispersed over its whole surface. We soon found further advance on horseback impracticable; and attaching our patient steeds to the nopal bushes, we followed our Indian guide on foot; scrambling upwards, over rock and through tangled brush-wood. On gaining the narrow ridge which connects the conical hill with one at the rear, we found the remains of a wall and causeway; and, a little higher, reached a recess, where, at the foot of a small precipice, overhung with Indian fig and grass, the rock had been wrought by hand into a flat surface of large dimensions. In this perpendicular wall of rock, a carved Toltec Calendar existed formerly; but the Indians finding the place visited occasionally by foreigners from the capital, took it into their heads, that there must be a silver vein there; and straightway set to work to find it, obliterating the sculpture, and driving a level beyond it into the hard rock for several yards.

From this recess a few minutes' climb brought us to the summit of the hill. The sun was on the point of setting over the mountains on the other side of the Valley, and the view spread beneath our feet was most glorious. The whole of the lake of Tezcuco, with the country and mountains on both sides, lay stretched before us.

But however disposed, we dare not stop long to gaze and admire, but descending a little obliquely, soon came to the so-called bath, two singular basins, of perhaps two feet and a half diameter, cut into a bastion-like solid rock, projecting from the general outline of the hill, and surrounded by smooth carved seats and grooves, as we supposed,—for I own the whole appearance of the locality was perfectly inexplicable to me. I have a suspicion, that many of these horizontal plains and grooves, were contrivances to aid their astronomical observations, like that I have mentioned, having been discovered by de Gama at Chapultepec.

As to Montezuma's Bath,—it might be his foot-bath if you will,—but it would be a moral impossibility for any monarch of larger dimensions than Oberon, to take a duck in it.

This mountain bears the marks of human industry to its very apex, many of the blocks of porphyry of which it is composed, being quarried into smooth horizontal planes. It is impossible to say at present, what portion of the surface is artificial or not, such is the state of confusion observable in every part.

By what means nations unacquainted with the use