

should like to have spent a day with this living chronicle of olden times, but our plans did not admit of it.

Our next day's journey lay through a very romantic ravine in the mountains, along the banks of the river Sonora, which winds in a very crooked manner between two ridges. We crossed the bed no less than two hundred times in the course of the day; it is from this stream that so much gold has been extracted, the rains washing it from the mountains, which rise on each side almost perpendicularly, and depositing the small flakes of gold in the sands. No doubt great quantities might be taken out by intelligent people, as it is natural that the larger grains should bury themselves at some depth, and the natives never think of looking below a foot deep in the sand. The ridge on the left of this ravine is full of mineral veins, all of which contain more or less gold; and as gold in grains is generally discovered on or near the surface, it is very probable that in the shelves and interstices of these mountains, a large quantity of this precious metal is deposited by those tremendous periodical rains, which continue from June to September.

About two o'clock in the day we quitted this *canāda*, and entered upon the estate of Concepcion, the property of a Bustamante, and well watered by the river Sonora. At four o'clock we arrived at Babiadora, and went to the house of an old friend, Don Santiago Dominguez Escolasa, curate of Babiadora and Conche, and member of the State Congress. In this day's journey we passed several farms in openings in the glen, with some good mills for grinding wheat, and a few small arastres, or mills, in which the Indians separate the metal which they pick up. I observed, that what they had been working last were gold minerals.

Babiadora is a town of three thousand inhabitants, more than three-fourths of whom are Indians of the Opata tribe. There is nothing particular in the place itself, for, like all the towns in this country, it has a very large square in the centre, and a neat little church. The Opatas are the most civilized of all the Indian nations; they live in thirteen towns,* and are

* The population of each of these towns includes those Indians who live in huts, or small ranchos, in the vicinity, and who regularly attend on Sundays in the Plaza.

very industrious people, of a darkish brown colour. Their dress is similar to that of the Indians of Mexico, which is a white cotton jacket, loose, but closed up all round: short pantaloons of the same, with shoes open on one side and projecting round the ankle. They seldom go barefooted; every man has a blanket, and every woman a long scarf: they are good carpenters, masons, shoemakers, and house-painters; and manufacture blankets, shawls, coarse cotton, saddles, pack-saddles, bridles, &c. with considerable quantities of soap. The Opatas are most useful citizens, and have, on many occasions, proved their loyalty to the Mexican Government, by assisting the Whites in repelling the attacks of the Apaches, and other nations. This tribe alone has the privilege of bearing fire-arms; and at this day they are formed into militia companies in several towns, particularly in Oposura, where some of them are incorporated with the Whites, and form companies of two hundred men, well armed and trained. They are very brave, good warriors, and a terror to the others; their chief is a fine stout man, named Salvador: he holds the rank of general, and receives from the Supreme Government in Mexico fifty dollars per month. He is generally respected by the inhabitants, and implicitly obeyed by the tribe.

Babiadora is situated on a Table-land, about one mile from the river Sonora, elevated one hundred and fifty feet above the valley, over which it commands an extensive and pleasing view. The vale of Sonora extends from this town about twelve leagues north, and is considered one of the most fertile and productive districts in the State. It contains the towns of Conche and Sonora, besides a number of Haciendas and farms, and a considerable population.

In the neighbourhood of Babiadora there are many silver mines, most of which contain a greater or less proportion of gold. The principal are Dolores and San Antonio, to the south-west of the town, Cerro Gordo to the south-east, and Cobriza on the Cerro de San Felipe, in the valley above.

The mine named Cerro Gordo, is situated about four leagues south-east of Babiadora, on a very high hill, and appears to have been one of considerable interest, from the great quantity of refuse minerals thrown out on its sides. The quantity of

water contained in it cannot be ascertained, as there is not any perpendicular shaft. There are ruins of fortifications about the mines, to defend the workmen from the Apaches. From the steepness of this hill, a *socabon* might be driven far below the bottom of the works from a fine plain. According to the accounts I received from two old men, called Padilla and Arbayo, the mine must have produced very rich ores. The vein is half a yard in breadth; but this must be understood (and the observation applies generally to all the mines in Sonora Alta), to mean that part of the vein which produces metals that can be reduced by smelting; for the natives, neither understanding the process of amalgamation, nor being able to procure quicksilver, have left untouched fine broad veins of azogues, or ordinary ores, in most of the mines, as may be proved by making experiments on the rejected ores, thrown out on the surface, some of which produce from twelve to thirty marcs per monton.

The mine of Cobriza de San Felipe, eight leagues north of Babiacora, and three leagues from the town of Ituapaca, with the Haciendas and farms of San Felipe, Agua Caliente, and Los Chinos, in its neighbourhood, is said to have been abandoned when producing pure silver, which the miners cut out in small pieces, by means of large scissors, or shears. It was the property of two women, named Loretas, but known in Sonora by the name of Guadalaxareñas. The Apache Indians made such repeated and desperate attacks on this district, that they were obliged to abandon the mine, during which time some water got in, and a considerable fall from the hill above choked up the mouth. However, a man, by the name of Vicente Estrada, succeeded, a few years since, in clearing away this rubbish, and gained the galleries; but before he could procure means of draining off the water, another huge rock fell in, and again choked up the mouth of the shaft. In 1826, another man was making a similar attempt, but in consequence of a formal denunciation of the mine being made by Padre Escobosa, he was obliged to suspend his operations.

The mine of San Antonio, on the hill of Tacapuchi, is three leagues from Babiacora, to the south-west. It is a new mine.

The metals produce at the rate of fourteen marcs per monton, of ten cargas, of three hundred pounds each.

Dolores, one league from Babiacora, produces silver in the same proportion, with a mixture of gold. With respect to population, provisions, wood, water, horses, mules, &c., these mines are very advantageously situated; the distance to Guaymas, by the nearest route, being only seventy leagues, and the road very good.

Eighteen leagues to the west of Babiacora is the town of Oposura, the capital of the Opata nation, and the residence of many of the principal inhabitants of this part of the State. It is a large town, containing upwards of four thousand inhabitants, and situated upon the southern extremity of a fine plain, on the banks of a river of the same name, which falls into the river Yaqui, above Onabas.

Oposura, though little known in Mexico, is one of the oldest establishments in the province, and the residence of many of the most respectable families, descendants of those who first settled in this State; amongst which, are the names of Morenos, Peralta, Mazo, Bustamante, Vasquez, Mallen, and Teran. As early as the beginning of the last century, the Jesuits had erected a famous convent and church there: the former is now in a ruinous state, but the church is entirely built of red brick and stone, decorated with many pictures of an image of the Virgin, which possesses diamonds, pearls, gold, silver, and precious stones, to a very considerable value. The square is very spacious, and surrounded by the houses of the principal families; besides which, there are several very good and regular streets, which render Oposura by far the prettiest and gayest town in the State.

The Whites are in greater proportion to the Indians than in any other place, and the Indians themselves seem in a more thriving condition, having better land, and more live stock. Below the town, for a considerable distance, the lands are divided amongst the inhabitants, and water from the river is carried through each lot by canals, so that here they can produce vegetables all the year round. Each family grows corn, wheat, frijoles, sugar, &c. for the annual provision: most of them

have horses, mules, and horned cattle, which breed and feed in the adjacent plains and mountains.

At certain seasons they collect the cattle, when each proprietor affixes his mark. It is by the number of cattle which a man possesses, that you estimate his wealth: very few have money, except the merchants. When they kill a bull, eight or ten families divide it, and so each kills in turn. When a merchant arrives with goods to offer, the people select what they want, and pay in mules, bullocks, horses, &c. In this way they manage almost all their affairs, without the necessity of money. I resided in Oposura nearly three months in the house of the Cura, it being a central point, from which I made various excursions, so that I had a good opportunity of gaining a thorough knowledge of the manners and customs of the natives. To enter into minutiae, would require much time; I shall therefore confine myself to an outline. The men are a fine race, much superior to any in the Southern provinces of New Spain; they are very lively and industrious, and strangers to care. The women are generally well-grown, handsome, with good shapes and complexion: a great many have blue eyes and light hair, which is a proof that they are not of Moorish extraction. They pride themselves on not mixing their blood with the aborigines. The women are continually employed in domestic affairs, and are excellent wives and mothers. They make all the men's clothing, as well as their own shoes, which are of silk and stuff, and they are very celebrated for needlework of every description, ornamental as well as plain. Their embroidery is not excelled by any thing in Europe, if it is surpassed in China. Both sexes are passionately fond of dancing and cards, and the intercourse of society is constantly carried on in order to gratify these tastes.

About eight leagues to the north-west of Oposura, are the old and celebrated mines of San Juan Bautista, of Sonora, which was the seat of Government for this province long before Arispe was built. In fact, it was the main object of my journey from England in 1825, to visit this mineral. Ten days after our arrival in Oposura, the priest, Dr. Julian Moreno, informed us that he had ordered every thing to be prepared for

our journey to these long-forsaken mountains; that on the following day his servants, whom he had dispatched to the Hacienda for the purpose, would bring horses and mules for the whole party, and that he himself, with a number of the principal inhabitants, and the Alcalde at their head, would accompany us. Two of the Cura's sisters, and four other ladies, announced their determination to be of the party, and prepared provisions of every description for a week, besides plenty of wine and brandy.

On the 8th of March we set out, our party consisting of forty-five persons, including servants, cooks, &c. and we arrived at San Juan, preceded by a musician mounted on a mule, playing a guitar; for nothing can be done in Sonora without music. On the present occasion the ladies were interested in the question, as they wished to dance in the evenings. On our arrival, we found nothing remaining of a place once so famous, but the outer walls of the Church, one room of which was entire, while we soon made another tenable with bulls' hides and blankets, which we appropriated to the ladies. The greater part of the men slept in the open air. Here we remained four days, and completely investigated the whole of the surrounding mountains, returning every evening to the camp, where the women prepared every thing for our comfort.

The "mineral" of San Juan is a mountain of itself, encircled by others to the North, West, and South, of considerably greater elevation. It is three thousand yards in length, from East to West, and fifteen hundred yards in breadth, where the broadest; terminating at both ends in a point, and is entirely surrounded by a ravine, which discharges itself at the east end into a large open plain. This mountain, or hill, has an elevation of six or seven hundred feet where highest, at which part the principal vein, called Santa Ana, crosses from North to South. This is crossed by another vein, on the Northern slope of the mountain, which is called El Rosario. These two mines have been worked to a considerable extent, and have produced, according to existing documents and tradition, in which no one varies, immense wealth. They now contain a great deal of water, (at least fifty or sixty varas,) which would require new shafts and

whims to take it out. In this same hill there are twelve other distinct veins, some of which have been worked for the sake of those small threads of very rich silver which appear to have formed the centre of the vein; but the azogues, which are very abundant, and yield from twenty-four to ninety-six ounces of silver, for three hundred pounds of ore, (according to experiments made on the spot by an azoguero, whom we brought with us from Real del Monte,) are untouched. The ores, by smelting, have yielded one-half pure silver; and tradition says, when they were obliged to abandon Santa Ana from water coming in, they left off in a vein of pure silver, one-third of a yard in breadth. The above twelve veins vary from one yard to six in breadth, at the surface; the depths to which they have been worked, are as follow:—Santa Ana, one hundred and forty varas; Rosario, sixty; Cata de la Agua, five; Guadalupe, four; Gazapa, twenty; Texedora, twenty; Santa Catarina, twenty; Arpa, twelve; Prieta, twelve; Bellotita, twelve; Coronilla, twelve; Fontana, ten.

Half a league to the north of Santa Ana is the mine of Descubridora, with a vein of azogues, fifteen varas in breadth. This mine is thirty varas deep, and the metals contain ninety-six ounces to three hundred pounds.

One league to the westward, is the mine called Bronzosa, with an immense vein, which may be traced at least one mile upon the surface. It has been considerably worked, but has water in it.

Two leagues farther west, is the mine called Cobriza, a new mine, twenty varas deep. These two last mines bear a high character.

On the fifth day we returned to Oposura, after a very fatiguing but interesting excursion.

The valley of Oposura, through which the river of the same name winds, is about twenty-six leagues in length, commencing at the foot of the mountains of Nacosari to the north, and terminating at the town of Tepache to the south. In some places

* Not one of them has a shaft, except Santa Ana, which is eighty-four yards deep to the water; below the water there is no shaft.

it is from three to four leagues in breadth, and in others not more than half a league. In this small space there are, besides Oposura, the towns of Tepache (population 1,000); Icori, 2,500; Cumpas, 1,000. The villages, or ranchos, of Moreno, 200; Barispe, 4,000; Jamaica, 200; Ojo de la Agua, 400; La Noria, 50; Tembabi, 300; and other settlements, 100. The population, including the town of Oposura, is not less than 10,600 souls, and the valley produces annually 20,600 fanegas of grain; 180,000lbs. of brown sugar in cakes; 105,000lbs. of soap; 2,000 horses; 350 mules; 150 asses, and 3,500 cows and bulls, besides sheep, &c.; 4,000 blankets; 900 dressed bulls' hides, with a good deal of cotton and tobacco.

To the north, is the mining district of Nacosari, sixteen leagues from Oposura, and fourteen eastward from Arispe, which is a town of 3,000 inhabitants, now the residence of the Commandant-General of the Estate, Colonel José Joaquin Calvo, and his staff. The entrance from the plain of Nacosari is up a very narrow glen, two leagues in length, down which there flows a tolerable stream of water, which is lost in the sand, about one mile from the entrance; but I was informed that, in the rainy season, it is a stream as far as Ojo de la Agua, the source of the river Oposura. Just before you arrive at Nacosari, the glen expands into a beautiful vale, planted over with fig-trees, pomegranates, peaches, and other fruits, with a variety of ornamental shrubs and plants, which were once arranged with order and taste, but now form a confused thicket. The remains of numerous canals are visible, through which water has been conveyed over every part of this vale; and the old men say their fathers used to speak of this spot (once the residence of a community of Jesuits), as being the most delightful place in all Mexico: it is certainly the most singular situation that I ever saw. At the upper end are the remains of a church, with mud walls, and several dwellings without roofs. There are the ruins, likewise, of some reduction works, but so dilapidated that it is impossible to judge of their former nature or extent, as they have been abandoned upwards of sixty years, and entirely destroyed by the Apaches. The mountains, which rise almost perpendicularly from this spot, are full of strata, of

a great variety of colours; some of them present a mixture of bright red, yellow, green, and other varied tints. In traversing these mountains you meet with many excavations; but the principal mine, called San Pedro de Nacosari, is a phenomenon. The vein runs east and west, and is laid open from the surface more than one thousand varas, to the depth of seventy varas; the breadth of the aperture is about two yards, but on each side are immense quantities of rubbish thrown out. Much dirt and sand have washed in and covered the vein; but general report says, that the mine has no water in the interior, and that the ores were so rich that the best yielded from twenty-five to thirty marcs of silver for twenty-five pounds of ore.

The mines of Churunibabi, Pinal, Huacal, Aguage, and many others, are situated to the north and north-east of Nacosari, at no great distance from San Juan del Rio, built upon a stream which falls into the Yaqui. These minerals are equally rich with those already described. Pinal contains a greater proportion of gold than silver. It is recorded in the archives of Arispe, that the former owner, a lady, by name Maria Quijada, lent, at one time, 700 marcs of gold for the use of the Government.

Churunibabi is a very old mine, worked in the same way as San Pedro; as, indeed, are all the mines in this part of the country. The direction of the vein is east and west, the breadth two varas. The last persons who undertook to work this mine, were three men by the names of Escalante, Vasquez, and Coulla. They cleared away the rubbish at one end until they found a pillar, left to support some of the old workings, from which they took ores that produced 70,000 dollars, and yielded seventy marcs of silver per carga, of 300lbs. Not immediately finding the principal vein, they divided the money, and discontinued their works. The mine is laid open from the surface 400 yards in height. Tradition says that the first discoverers found the vein of virgin silver half a vara in breadth, that it was abandoned in the Apache war, with the vein as described above two varas, and ores of seventy marcs per carga. The richness of these ores appears almost incredible, but when we consider the great quantities of bars of silver that Sonora has produced,

without the aid of quicksilver, the metals must have been very rich and abundant.

Ten leagues to the west and south-west of Nacosari, and six to the north of San Juan, are the mines of Tobarachi and San Pedro Vigilia, with ores of from six to eight marcs per carga.

To the west of Arispe are the mines of Santa Teresa, of gold and silver, completely virgin, and the Cerro, or mountain of San Pedro, which contains innumerable mines and veins untouched.

In all the districts above described, the roads are only passable for horses and mules, the country being very mountainous, but not of very great elevation. None of these mines are more than six or seven leagues from rapid streams of water, sufficiently considerable to work almost any machinery.

The mines of La Agame, near Horcasitas, are famous for the abundance and richness of their gold ores. Those of Lampazos and Palos Blancos, five leagues to the south-west of Tepache, are likewise excellent veins and rich ores.

I have here mentioned the most considerable mining districts, but in Sonora almost every mountain and hill contains silver and gold. Even in the plains, beds of native gold have been found in grains, varying in size from one to sixty ounces, as in Cienguilla, San Francisco, San Antonio de la Huerta, Mulatos, Baucachi, and various others. Silver has been found in immense balls in Arizona.

Besides the towns already named, those of most note in the northern part of the State are Dolores, Cucurpe, Tuape, and Opodepe on the river Dolores; Banamita, Cinaguessci, and Sonora, on the river Sonora; Bacuachi and Barispe, to the north of Arispe; there are likewise some good settlements on the Ascension river, and in the Pimeria Alta.

The valleys through which the rivers Sonora and Dolores flow, are much more fertile and abundant than the valley of Opesura, particularly in grain; they are also considerably larger.

Of the Indian tribes to the North of Arispe and Fronteras, little is known, except by the natives of the country. No dependence can be placed on the accounts given by the Spaniards, who were cruel colonizers, and have always provoked that barbarity of which they so much complain. I have seen much of

Indians, and am acquainted with most of the tribes that inhabit the west country that stretches from Florida, by Texas and Cohahuila, to the Pacific. I have invariably found them kind and harmless, when well treated. The Apaches of the North are an extremely independent and high-minded people. They have very light complexions, and will not live in towns, or in a domesticated state, but subsist entirely by hunting. They are very brave, good horsemen, handle the lance remarkably well, and are good marksmen with the bow and arrow. The Governor of the State, Don Simon Elias, told me, that if an Apache leaves his hut for one minute, on his return he examines his bow, turns over every arrow, and looks at the point and feather, so that he is always prepared for enemies, or game. The continued wars carried on against them by the Spaniards for many years, and conducted by cruel and rapacious officers, gave them the greatest abhorrence of their conquerors, but they entertain no antipathy towards the Creoles born in the State; and frequently when the Spaniards were obliged to sue for a suspension of hostilities, they sent two brothers, called Geronimo and Leonardo Escalante, to treat. These men exercised so great an influence over the Indians by their mode of treating them, that they always succeeded.

In the part of Sonora last described, the climate is charming, the thermometer ranges betwixt 50 and 84; the atmosphere is always dry and clear. The inhabitants require no fires in the houses in winter, nor are they oppressed with the summer heat. In the mountains, the evenings and mornings are sometimes chilly. The natives live generally to a good old age: the women are prolific, and bear from eight to twenty children, and in some instances have exceeded that number. In Oposura many of the women have what are termed "buches" (wens), in their necks, like the Savoyards. Some few are very much disfigured with them; they attributed it to some peculiarity in the water, the effects of which are confined to this particular spot, for the inhabitants three leagues above and below it are free from any thing of the kind.

In this northern part of the State the curacies are of immense extent, many of them from thirty to forty leagues in length.

The Curas have to do the whole duty without any assistance, to attend three or four chapels, to perform mass, and baptise, to confess the sick and bury the dead. The severity of this duty is the more felt, because they know how many are living in large cities rolling in wealth, without occupation. The Curas of Sonora are in general plain, well educated, sensible men, very lively and sociable, and except when in the performance of their duty, dressed like rancheros, or other citizens. They join in all the little diversions of society, and from what I could observe, and hear, they take the greatest care of their flocks, and are much looked up to by every class of people.

I left the North of Sonora on the 8th of May, 1826, with sincere regret, after having spent three months there, which I shall ever consider as the most agreeable part of my life. The route to the capital, El Fuerte, is nearly due south from Oposura; it lies through a country of little interest, the road winding continually through deep glens between ridges of mountains of a secondary class. On the way there are many towns and villages, besides numerous estates and farms. The principal towns are Tepache, Batuca, Onabas, Mobas, and Los Alamos. The rivers which cross this road are the Oposura, Yaqui, Chioe, and Mayo. The inhabitants are courteous, and hospitable to strangers. The distance is one hundred and twenty leagues. Alamos is a very fine town, between the rivers Mayo and El Fuerte, about sixteen leagues from the mouth of the latter, and thirty leagues from the former, the whole of which is a plain. It contains some celebrated mines, worked to a considerable extent, and with great skill and regularity. They belong to many different proprietors, being mostly divided into small shares; but the principal miners are the family of Almadós, four brothers, who have amassed great wealth, and are said to possess at least half a million each. The eldest, José Maria, has in his house upwards of five hundred bars of silver. The mines of Alamos are much of the same description as those of Catorce, with veins of from six to eight varas in breadth, and ores of from fourteen to thirty marcs of silver per monton, which are generally reduced by amalgamation. The mines and reduction-works lie nearly five leagues to the north of the town.