

I cannot ascertain with precision the quantity of mercury, lost in this operation, as the accounts of miners are so varied and incorrect on this head; the most probable conjecture, is, that they lose as many ounces of mercury, as they obtain ounces of silver, so that an ounce of mercury delivered at Mexico, becomes nearly of the same value as an ounce of silver (a).

(a) The 18000 quintals of mercury mentioned above, are disposed of in the following manner; 12000 sent to Mexico and New Spain, 2000 to Guatimala, and 4000 to Lima; Peru furnished the remainder from its own mine of Guancavelica. According to Barba, who was parish priest of Potosi, in 1637, mercury was first used in the mines in 1574, and down to his time, the royal office had received 204700 quintals of mercury, exclusive of the great clandestine import. Escalona in another work, declares that before 1638, it appeared by the public accounts, that the produce of the silver amounted to 395.609.000 pesos, which in 93 years, the time it had been discovered, amounts to 41.255.045 pesos per annum; from whence may be conceived the wealth of the mountain, and though it has not of late been so productive as formerly, yet it is still very considerable.---See "voyage to South America, undertaken by command of the king of Spain, by Don George Juan and Don Ant. de Ulloa, translated from the Spanish." London, 1758.

The following is an account of the Spanish mints in America, as they stood in 1777.

Mexico coins annually, about	- - - - -	18.000.000 pesos.
Lima	- - - - -	9.000.000
Santiago de Chili, chiefly gold	- - - - -	8.000.000
Popayan and Santa Fe together	- - - - -	12.000.000
Guatimala	- - - - -	2.000.000
Potosi	- - - - -	10.000.000
Sonora in California. New mint established in 1748,		
uncertain	- - - - -	-----
		<hr/>
		59.000.000 pesos.

Fifty-nine millions of pesos, at 4s. 6d. each, - - - £. 13.775.000 sterling per annum.

## LETTER II.

*Itinerary of Don Guillermo Bowles, continued, from Almaden to the city of Merida, in Estremadura.*

**I**NTENDING to make a tour into Estremadura, I set out from Almaden towards the north west, as far as Zarzuela, then, instead of continuing the road to Madrid, I went to the westward, crossing a chain of hills which divide La Mancha from Estremadura. These hills are covered with rosemary four or five feet high, privet, several sorts of the cistus with lavender leaves, elm leaves, rosemary leaves, and two other species: Also a great deal of lavender, thyme, and dwarf cistus, and though the cistus is of no use to the bees, they draw so rich a store from the other plants with which the country abounds, that hives are numerous every where in these parts. From these hills you descend to the village of Guabaguela, where the good pasture begins for the Merino sheep, the grass being plentiful and fine. The hills are chiefly covered with oaks, which become hollow by the imprudent manner in which the branches have been lopped; however they produce abundance of acorns for the swine, which are all black hereabouts. The principal revenue

of the country gentlemen, consists in pasture, honey and wax. They have studs of brood mares, and a breed of cows, which all over Estremadura are whitish or red. It is seven leagues from Guabagueta to Alcocer, over an uneven ground, watered by a great many springs. You next come to Tallarubia, whose district is level, and proper for pasture. The rocks of sand or quartz are seen no more, but many loose pieces of each lie scattered on the surface of the ground; the rocks have perpendicular laminated fissures, some thin, others thick, which seem to demonstrate their successive decomposition into arable land, and the same happens with the quartz rocks on the hills. The slaty rock is composed of argillaceous earth, and fine sand, and from them, when they decompose, comes that fine sand seen in the brooks, and on the sides of the road, the water carrying away all the argillaceous earth, which does not cling fast to the roots of shrubs, or trees. Some rocks hereabouts, are apparently as hard as the Egyptian Basaltes, and of the same colour, and nature; nevertheless they moulder away like the rest, and turn into earth. In the midst of this vitrifiable country, the calcareous stone begins to form itself, and is seen dispersed up and down, on the surface, like patches.

The pastures called *Dehesas de la Serena*, are contiguous, being a depopulated district of nine leagues extent,

tent, reaching to the village of Coronada, consisting of a plain without either trees or plants. At the end of this district, there are rocks of white quartz, veined with a pale red; also a great many oaks and wild olive trees, as well as that species of crowfoot, called *ranunculus ficaria* by Linnæus, whose roots are like barley corns, and from their resemblance to external hemorrhoides, fanciful people have imagined they had the virtue of curing them.

From Coronada, it is a journey of three hours to Villanueva de la Serena, from whence an extensive plain, entirely of sand, reaches to the village of Don Benito, nevertheless fertile in corn, vines, pears, figs, &c. owing to the proximity of the water, as appears from the quantities of rushes springing up every where; for, though the surface is covered with a loose sand, for two or three feet, there is a bed of a more firm and compact sort underneath, which supports the water, without the assistance of clay, hard earth, or rock, to impede its filtration; so that this soil will often produce thirty for one; it being enough to plant a branch of a fig-tree, or a flake of an olive, for it soon to take root, and give fruit; yet, notwithstanding all these advantages, great part of the country lies waste, as far as Medellin, on the banks of the Guadiana, whose houses are small, and only of one story. In the centre of Medellin, they shewed me an humble mansion, though

worthy of notice, as having been the native place of the illustrious Hernan Cortez, the great conqueror of the Mexican Empire. The lintel of the door, is of granite, similar to that of the Escorial, *a small cage indeed, for so considerable a bird!* said a bishop of Badajoz, on viewing this building.

From Villanueva I came, in four hours, to the village of San Pedro, crossing part of a sandy plain, but except what is cultivated, by the inhabitants of Don Benito, all the rest is neglected, and only serves for pasture, the water being at a greater distance. This district is called Torre Campos, and extends four square leagues, to the village of San Pedro, amidst hills, covered with oak, gum cistus, lavender, and white asparagus; from hence it is three hours journey to the city of Merida, descending, after the first league, into a well cultivated country, traversed by several brooks, that empty themselves into the Guadiana, whose beds are dry in the summer, as well as this great river itself, in many places; for, as it meanders so much in the plains, the sands soak up its water, which, by degrees, eats away the hills, converting the granite, sandstone, and rock, into sand; so that the coarse sand, the fine, and the pebble, are seen, decomposed, in the valley, in the same order they were ranged on the hills, from whence they have insensibly rolled down. Thus, for example, if, on the eminence,  
there

there was a quarter of a league of granite, the same proportion will be found in the valley, of pebble; if sandy rock, then coarse sand; and, if solid rock, then fine sand, and, at times, all blended together, from their having been so in their former position.

Merida, from its venerable remains, and antiquities, justly deserves the attention of the curious. What is now left of this antient city, is on a small hill, occupying about the circuit of a league, on the banks of the Guadiana, but its ruins extend much further, and shew it to have been the principal colony of the Romans, in Spain.

Examining the remnants of stone, scattered amongst the ruins, I found a great variety of colours, mixtures, hardness, and qualities. To be the better acquainted with their nature, I attentively observed the adjacent hills, and plains, from whence they were most probably dug out; from these researches, I deduced four primitive sorts, which, by various mixtures, constitute the great variety observed here. The first is of a deep red, like bulls blood, and sometimes as brown as chocolate, with a smooth grain; this is the mother of Porphyry; the second is white, and without any grain; the third is of a blueish cast, tending to black; and the fourth inclining to green; all these primitive kinds, when considered singly, are of very little value, from the  
dullness

dullness of their tints, the white excepted; but, when blended together, have a pleasing effect. The white united with the porphyry, constitutes an anomalous stone, which cannot be classed with any of those described, either by the antients or moderns. Pieces of it are found on the surface of the ground, of twenty pound weight, and it is probable there are considerable beds of it underneath; for, naturally, the antients dug out the best, and where it was easiest to be got. The mother of porphyry, appropriated to itself in its primitive state, divers fragments of white quartz, from the size of a hazle nut to that of a chesnut, which occasions those various specks and appearances: when a piece of red stone is seen, chequered in this manner, it is the true porphyry, so esteemed by the antients; in a word, this beautiful stone has no where its equal, and may justly be stiled the *Nonpareil of Merida*. Whenever the blue stone grows darkish, mixing with a little of the white, and some glimmer, it forms the grey porphyry; and when the green combines with fragments of white, it becomes the serpentine stone, and receives an admirable polish. These various combinations into one solid mass, evince, that at some remote period, they had a separate existence, in a state of solution, or soft paste; but if I am further asked, when this surprizing union happened? I shall be obliged to answer, that this is a circumstance I am entirely ignorant of.

There

There are still to be seen, in the city of Merida, the superb remains of two aqueducts, a theatre, a triumphal arch, a naumachia, a circus, two handsome bridges, one over the Guadiana, and the other over the Albarregas; all which announce its former magnificence, exclusive of the statues, inscriptions, medals, and other antiquities, so frequently dug out of its ruins (a). It was made a Roman colony by the Emperor Augustus, after the Cantabrian war, became the capital of Lusitania, and stiled *Augusta Emerita*. But at present agriculture and cultivation are at the lowest ebb; nor do the banks of the river, in its neighbourhood, afford that verdure and pleasing shade, so greatly praised, even in the days of Prudentius, who said of this place,

Nunc locus Emerita est tumuli  
 Clara colonia Vettoniæ  
 Quam memorabilis amnis Anas  
 Præterit, et viridante rapax  
 Gurgite mænia pulcra alluit.

(a) The great indolence and negligence of our countrymen, with respect to antiquities, says Don Antonio Ponz, generally engages such travellers as come to Merida, to speak slightly of our want of taste and little curiosity. In the year 1752, when Don Juan Williamfon visited that city, he made no difficulty to declare, that if the King had made excavations at Merida, as Don Carlos had done at Naples, he concluded it would turn out, in a manner, a second Herculaneum.--Viage de Espana. Tom. 8. Madrid, 1778.--This person here mentioned, was the Rev. Dr. Williamfon, chaplain of the British factory at Lisbon, whom Ponz, by mistake, calls the British ambassador, at that court. Our envoy, at that time, was Mr. Gasters, who died, in Lisbon, in 1756, where I happened to be, when that city still lay in ruins, in consequence of the fatal earthquake, of the first of November, 1755.



## L E T T E R III.

*Natural history of the locusts that ravaged the province of Estremadura, in the years 1754, 1755, 1756, and 1757, from the observations of Don Guillermo Bowles.*

**T**HE locusts, of which I am now going to speak, are continually seen in the southern parts of Spain, particularly in the pastures and remote uncultivated districts of Estremadura, but in general are not taken notice of, if not very numerous, as they commonly feed upon wild herbs, without preying upon gardens, and cultivated lands, or making their way into houses. The peasants look at them with indifference, while they are frisking about in the fields, neglecting any measures to destroy them, till the danger is imminent, and the favourable moment to remedy the evil is elapsed.

Their yearly number is not very considerable, as the males are far more numerous than the females. If an equal proportion was allowed, only for ten years, their numbers would be so great, as to destroy the whole vegetative system. Beasts and birds would starve for want of subsistence, and even mankind would become a prey to their ravenous appetites. In 1754, their increase was  
so

so great from the multitude of females, that all La Mancha and Portugal were covered with them, and totally ravaged. The horrors of famine were spread even further, and assailed the fruitful provinces of Andalusia, Murcia, and Valencia.

The amours of these creatures are objects of surprize and astonishment, and their union is such, that it is difficult to separate them. When this separation is voluntary, after having lasted some hours, they are so exhausted, that the male retires immediately to the water for refreshment, where, losing the use of his limbs, he soon perishes, and becomes an easy prey to the fish; having given life to his offspring, at the expence of his own. The female, disembarassed, though not without violent struggles, spends the remainder of her days in some solitary place, busy in forming a retreat underground, where she can secure her eggs, of which she generally lays about forty, screening them by her sagacity, from the intemperature of the air, as well as the more immediate danger of the plough, or the spade; one fatal blow of which, would destroy all the hopes of a rising generation.

The manner of her building this cell is equally surprizing. In the hinder part of her body, nature has provided her with a round, smooth instrument, eight lines

in length, which, at its head, is as big as a writing quill, diminishing to a hard sharp point, hollow within, like the tooth of a viper, but only to be seen with the lens. At the root of this vehicle, there is a cavity, with a kind of bladder, containing a glutinous matter, of the same colour, but without the consistency, or tenacity of that of the silk-worm, as I found by an experiment, made for the purpose, by an infusion in vinegar, for several days, without any effect.

The orifice of the bladder corresponds exactly with the instrument which serves to eject the glutinous matter, it is hid under the skin of the belly, and its interior surface is united to the moveable parts of the belly, and can partake of its motions, forming the most admirable contexture, for every part of its operations, as she can dispose of this ingredient at pleasure, and eject the fluid, which has three very essential properties: First, being indissoluble in water, it prevents its young from being drowned; next, it resists the heat of the sun, otherwise the structure would give way and destroy its inhabitants; lastly, it is proof against the frost of winter, so as to preserve a necessary warmth within.

For greater security, this retreat is always contrived in a solitary place; for, though a million of locusts were to light upon a cultivated field, not one would deposit her

her eggs there, but wherever they meet a barren and lonesome situation, there they are sure to repair, and lay their eggs: this difference in the earth they discover by the smell. Those who are of another opinion, surely have not observed the delicacy of those organs in every species of insects, birds, and animals, which govern all their pursuits. I have even seen numbers of wasps come to a piece of meat, placed in an open field, and covered over with a glass, so that their motions, which seem the result of reflection, arise from the emanations and effluviæ in the air, which strike their delicate organs. I have seen legions of insects fly to places where they were bleaching wax; the workmen observe, that the minute they touch it, they become faint, and if they do not, by a sudden exertion, free themselves from that vapour, which exhales about half an inch from the wax, they are suffocated, as we should be by the fumes of charcoal. Every one knows with what sagacity birds of prey fly to such distances, guided by the effluviæ of cadaverous bodies. Thus the locust of Estremadura, distinguishes the tilled land from the barren, and regulates its conduct in consequence, though ignorant of the motive of this preference, nor can it have any idea of the spade, or rejoice at the thoughts of saving its progeny; acting in consequence of that infinite perfection of its nature, given originally by the omnipotent creator. Like other insects, its motions are the consequences of primi-

tive laws, founded on infinite wisdom, and not proceeding from secondary reflection; therefore its behaviour preserves a constant sameness, and uniformity, originally perfect, and not standing in need of alteration, or improvement. The first locusts were as skilled as the present race, and their progeny will tread in their steps. Those who call it instinct, I suspect, do not understand what they mean, nor explain to us the true sense of that word.

Having spent many hours and days in observing the labours of the locust, I shall now proceed to describe them. The female begins, by stretching out her six legs, fixing her claws in the ground, and holding with her teeth to the grass; then expands her wings, to press her chest close to the ground; where, clinging firmly, and raising that part of the belly, where she has the instrument mentioned before, after forming a right angle with her body, she fixes it, with such strength, that it fastens to the hardest earth, and even in stone; she has all the necessary apparatus to make a perforation, but this alone would not answer the purpose, a place being still wanted wherein she may deposit her eggs.

This hollow cavity is made in about two hours; she then begins to shift the earth underneath, and emits the glutinous substance. Having thus kneaded the earth in-

to a substantial paste, and smoothed the floor with her trunk, she lays the first egg, then renews the operation and lays more, with admirable order, and after various repetitions, completes the whole in about four or five hours; next covering the superior aperture with a glutinous composition, the structure is perfect, with every advantage against the inclemency of the weather, or any hostile invasion.

The female is now overcome with fatigue, few having strength, like the male, to seek after refreshing waters; but, exhausted and spent, they expire close to their progeny, exhibiting a melancholy sight to the labourer; who, from their appearance, foretells the mischiefs to follow, without being able to prevent them; forming an idea of the hidden enemies, who are to devour his harvest, from the multitude of carcases he finds dispersed in the fields.

I cannot omit one circumstance, observed by many others, as well as myself; and that is, when the females are busy in laying their eggs, or in turning the earth, a male would immediately fix on her back, another male upon him, and another besides. Sometimes I have seen six males piled upon one another, over one female; the peasants pretended it was to give her more weight and strength to open the ground; but this could not be the reason, it seeming rather a moment of fury, as observed amongst

mongst animals; the more as I observed, that notwithstanding the great number of females in 1754, that of the males was still greater, even before they took wing, so as to be two or three hundred males to one female, and when they sallied out of Estremadura, to ravage La Mancha, I think I can take upon me to say, there were twenty males to a female; their sex is easily distinguished by their body and trunk, which induces me the more readily to give weight to my conjecture, from the great superiority of numbers in the males, who, luckily for mankind, are seemingly disappointed in their pursuits.

The egg which incloses the embryo, has the same cylindrical shape as the repository it is laid in, being a membranous cylinder, one line long, very white and smooth. They are placed aside each other, rather obliquely, the head, as in others being nearest the part where it is to come out. The time of hatching varies according to climate, those that are in high and mountainous places, being generally later than those on the plains. I saw legions of them skipping about at Almeria in February, because the climate is so mild there that most kind of greens are nearly over at that time. In Sierra Nevada they only begin to appear in April, and in La Mancha they were hardly animated in May, when there were no greens yet in the market of San Clemente. So that they form a certain thermometer to judge of the warmth of the air.

From

From these various situations proceed those immense swarms of locusts which appear successively in June, July, and August; but as they always lay their eggs in barren places which require a certain additional warmth, and temperature, to hatch them, it will account for their not appearing so frequently in cold climates, except such casual swarms of them as may have been wafted there by the winds.

When they first come out of the egg, they are black, of the size of a gnat, and gather in great heaps at the foot of shrubs, particularly the *spartum* or matweed, continually leaping upon each other, and occupying a space of three or four feet in circumference, two inches high. The first time I beheld this sight, it surprized me exceedingly, to observe this moving body, like a mourning scarf waving about, as at this period they only live upon dew, and are frisking about to catch it. For a few days they move at a very little distance, their limbs being weak, their wings very small, and their teeth not sufficiently strong to bite the grass. In about twenty days, they begin to feed on the youngest shoots of plants, and as they grow up, they leave the society of each other, and range further off, consuming day and night every thing they fix upon, till their wings have acquired a full degree of strength; in the mean time, they seem to devour, not so much from a ravenous appetite, as from a rage of destroying



ing every thing that comes in their way. It is not surprising, that they should be fond of the most juicy plants and fruits, such as melons, and all manner of garden fruits, and herbs, feeding also upon aromatic plants, such as lavender, thyme, rosemary, &c. which are so common in Spain, that they serve to heat ovens; but it is very singular, that they equally eat mustard seed, onions, and garlic; nay, even upon hemlock, and the most rank and poisonous plants, such as the thorn apple (*a*) and deadly night shade (*b*). They will even prey upon crowfoot, whose causticity burns the very hides of beasts; and such is their universal taste, that they do not prefer the innocent mallow to the bitter furze, or rue to wormwood, consuming all alike, without predilection or favour, with this remarkable circumstance, that during the four years they committed such havock in Estremadura, the love apple, or *lycopersicon solanum* of Linnæus, was the only plant that escaped their rapacious tooth, and claimed a respect to its root, leaves, flowers and fruit. Naturalists may search for their motives, which I am at a loss to discover, the more, as I saw millions of them light on a field near Almaden, and devour the wool-

(*a*) Thorn apple. *Datura ferox* of Linnæus.

(*b*) Deadly night-shade, or Dwale. *Atropa Belladonna*. Linn.—*Solanum Lethale*. *Park.* 346. *Gerard* 340. The whole plant is poisonous, and children allured by the beautiful appearance of the berries, have too often experienced their fatal effects.—See a curious account of this plant in Dr. Withering's Botanical Arrangement, &c. vol. 1. pag. 126.

len and linen garments of the peasants, which were lying to dry on the ground. The curate of the village, a man of veracity, at whose house I was, assured me, that a tremendous body of them entered the church, and devoured the silk garments that adorned the images of saints, not sparing even the varnish on the altars. The better to discover the nature of such a phenomenon, I examined the stomach of the locust (*a*), but only found one thin and soft membrane, with which and the liquor it contains, it destroys and dissolves all kinds of substances, equally with the most caustic and venomous plants, extracting from them, a sufficient and salutary nourishment.

Out of curiosity, to know the nature of so formidable a creature, I was urged to examine all its parts with the utmost exactness: Its head is of the size of a pea, though longer, its forehead pointing downwards, like a handsome Andalusian horse, its mouth large and open, its eyes black and rolling, added to a timid aspect not unlike a hare. With such a dastard countenance, who would imagine this creature to be the scourge of mankind! In its two jaws, it has four incisive teeth, whose sharp points traverse each other like scissars, their mechanism being such as to gripe or to cut. Thus armed, what can

(*a*) Swammerdam tells us, the locust is of the ruminant kind, thinking to have discovered in them a triplicate stomach, like those animals; but he may have been deceived, and seen one thing for another, or examined locusts different from these of Spain.

resist a legion of such enemies ; after devouring the vegetable kingdom, were they, in proportion to their strength and numbers, to become carnivorous like wasps, they would be able to destroy whole flocks of sheep, even the dogs, and shepherds ; just as we are told of ants in America, that will overcome the fiercest serpents.

The locust spends the months of April, May, and June, in the place of its birth ; at the end of June its wings have a fine rose colour, and its body is strong. Being then in their prime, they assemble for the last time, and burn with a desire to propagate their species ; this is observed by their motions, which are unequal in the two sexes. The male is restless and solicitous, the female is coy, and eager after food, flying the approaches of the male, so that the morning is spent in the courtship of the one, and the retreat of the other. About ten o'clock, when the warmth of the sun has cleared their wings from the dampness of the night, the females seem uneasy at the forwardness of the males, who continuing their pursuit, they rise together five hundred feet high, forming a black cloud that darkens the rays of the sun. The clear atmosphere of Spain becomes gloomy, and the finest summer day of Estremadura more dismal than the winter of Holland. The rustling of so many millions of wings, in the air, seems like the trees of a forest,

rest, agitated by the wind. The first direction of this formidable column is always against the wind, which if not too strong, it will extend about a couple of leagues; they then make a halt, when the most dreadful havock begins; their sense of smell being so delicate, they can find at that distance, a corn-field, or a garden, and after demolishing it, rise again, in pursuit of another: this may be said to be done in an instant. Each seems to have, as it were, four arms and two feet; the males climb up the plants, as sailors do the shrouds of a ship; they nip off the tenderest buds, which fall to the females below. At last, after repeated devastations, they light upon some barren ground, and the females prepare for laying their eggs.

What a dismal sight for a poor farmer, after having been visited by such cruel guests! A sensible man, amongst them, on viewing his corn-fields, where nothing was now left but chaff, thus expressed himself; “ If these creatures were not so coy, and would  
 “ suffer the embraces of their mates, in the country  
 “ where they were hatched, we should not be loaded with  
 “ such dreadful misfortunes; but, like us, they fear  
 “ death, and strive to prolong life; for which reason,  
 “ they shun the advances of the males, knowing, that  
 “ afterward nothing is left, but to deposit their eggs  
 “ and expire!”

We learn, by tradition, as well as from history, that these locusts have been a plague to the meridional provinces of Spain time immemorial. I remember to have read in an old Spanish novel, the following question, “ which was “ the animal that resembled most all other animals?” the answer was, “ the locust; because he has the horns “ of a stag, the eyes of a cow, the forehead of a horse, the “ legs of a crane, the neck of a snake, and the wings of “ a dove.”

However puerile this may appear, it proves the great length of time they have been known as well as dreaded. Many old people assured me, when so much mischief was done in 1754, it was the third time in their remembrance, and that they always are found in the pasture grounds of Estremadura, from whence they spread into the other provinces of Spain. They are certainly indigenious, being of a different shape from those of the north or the Levant, as is evident in comparing them with such, in the cabinets of natural history. The locust of Spain is the only one that has rose-coloured wings: besides, it is impossible they can come from any other part; from the north it is clear they do not, by the observation of so many ages; from the south they cannot, without crossing the sea, which is hardly possible, by the shortness of their flight, and, like birds of passage, they would be known. I once saw a cloud of them pass over Malaga, and

and move towards the sea, and go over it, for about a quarter of a league, to the great joy of the inhabitants, who concluded they soon would be drowned; but to their disappointment, they suddenly veered about towards the coast, and pitched upon an uncultivated space surrounded with vineyards, which they soon after quitted. When once they appear, let the number demolished be ever so great, the proportion remaining is still too considerable; therefore, the only way to put an end to such a calamity, is to attack them beforehand, and destroy their eggs, by which means they might be totally extirpated (*a*).

(*a*) In the life of Dr. Thomas Moffet, prefixed to a work of his, intitled, "Health's improvement, London, printed for T. Osborne, 1746;" mention is made of his Theatre of insects published abroad in 1598, where, speaking of locusts, he particularly relates, how much the Spaniards were then afflicted with swarms of them, that flew over from Africa, the news of which was received when he was writing that account. If to this occasional calamity, we add the frequent droughts to which their meridional provinces are so subject, and which cause such distrels amongst the poor, it will be a great drawback from their boasted fertility.

LETTER

## L E T T E R IV.

*Of the barren and wretched district of Batuecas, in Estremadura.*

THE territory of Batuecas, situated on the confines of Castile and Estremadura, near Portugal, has given ample scope to the fanciful conceits of different writers, relating to its imaginary discovery, and whether or not as supposed, it was an unknown land, inhabited by Pagans, blinded by ignorance, without the least knowledge of the Christian religion. This district we are now going to explore, is fourteen leagues to the south west of Salamanca, about eight leagues eastward of Ciudad Rodrigo, and twelve to the north west of Plasencia, forming a plain, or more properly, a most dismal and horrid gully at the foot of that famous mountain, where stands the noted convent called *La Pena de Francia*. The situation of this place inspires every idea of gloom and melancholy, closed in by jagged mountains, where hardly a tree is to be seen, or the least appearance of vegetation: on the contrary, numberless precipices, occasionally choaked up by broken masses of stone, detached insensibly from the rocks, form the most frightful scene the mind can conceive:

ceive. Such is the true state of Batuecas, horrid by nature ; rendered still more so, by ignorance and folly. The itinerary from Plasencia to the convent of Batuecas, is as follows : Plasencia to Aigal four leagues ; Mohedas one ; Casar de Palomero one ; Cambroncino two ; Vegas de Coria two ; Las Meftas one ; and to the convent of Batuecas half a league.

Between Plasencia and Aigal, the hamlets of Oliva and Gijo de Granadilla, appear on the right, and Santibanez el Baxo, on the left, with woods of oak and cork trees. You cross the river Ambroz, or de Caparra, and pass by the Puerto del Gamo, before you reach Casar de Palomero. Then enter the melancholy district of the Jurdes, being a division of what is generally called Batuecas ; but in any part of this wretched country, if you ask whereabout is the Jurdes, some will tell you, a little further on, and when you proceed, another informs you, it is at a small distance behind ; nobody being willing to acknowledge himself an inhabitant of the unhappy country of the Jurdes.

The valley of Batuecas, was idly considered as an unknown part of the world, by those who gave into the fabulous accounts invented in the reign of Philip the II. though an enlightened age in the annals of Spain. As a further proof of the ideas of the times, we have only to look



look back on the report made by Galarza, bishop of Co-  
 ria, to whose diocess this country belongs, when he gave  
 leave to the Carmelite friars to build a church there,  
 which document is to be found in the records of that  
 house. “ I give thanks to the Almighty (says this pre-  
 “ late) that in so desolated and wretched a country, where  
 “ it appears from certificates, which I have among the  
 “ records of my bishopric, that about forty years ago its  
 “ inhabitants were Gentiles, deceived by the devil with  
 “ visible apparitions, his majesty has now ordered a  
 “ sanctuary to be built, to which I give my concur-  
 “ rence with great satisfaction, and shall as far as lies  
 “ in my power, contribute towards so pious a founda-  
 “ tion.”

This record being positive, and the good bishop having  
 given ear to the many exaggerations and false reports,  
 obtruded on the public, might have confirmed these  
 fables in the minds of the people, which insensibly spread  
 themselves over Spain, and extended even amongst fo-  
 reign nations. They were the more easily propagated at  
 Batuecas, amongst ignorant people, in want of pastors  
 and Christian instruction; their neighbours then took  
 the alarm, and would not venture to move forward with  
 their flocks. In more remote villages these reports lost  
 nothing by the way, so that in many places, the poor  
 harmless inhabitants of Batuecas were looked upon as  
 savages,

savages, destitute of all information, beyond their bleak hills, where they lived in the grossest ignorance, and were supposed to worship the devil.

It was given out as an incontrovertible fact, that a certain lady, belonging to the illustrious house of Alba, seduced by her lover, had fled to these parts, and first made the discovery, meeting with a barbarous people, whose manners, and even language, were strange to them, except a few Gothic expressions. Such were the tales believed at Salamanca, the seat of a famous university; at Madrid, the residence of the court, and in many other places of note. It served as a foundation for novels, as well as dramatic performances, repeatedly exhibited on the stage, and propagated all over the kingdom.

Soon after the friars had settled themselves in this place, and spoken to the graver sort of people, concerning these matters, many of them laughed at their simplicity, while others expressed their indignation against the inhabitants of Alberca, whom they reproached with being the authors, through motives of jealousy, of such a ridiculous and invidious report.

The town of Alberca is the principal place in the territory of Batuecas, and not above a league distant from this valley: its inhabitants could not be supposed igno-

rant of the fallacy of the report, as their flocks were constantly grazing there; yet, so great was the prejudice and ignorance of the people, that Thomas Goncales Manuel, a clergyman of the town of Alberca, thought it necessary to justify his countrymen, and in 1693, published an essay in their defence, under the title of "A true narrative and apologetical declaration of the antiquity of Batuecas;" in which he seriously refutes the illusion by authentic documents and records, belonging to the town of Alberca, and its neighbourhood.

The late father Feijoo said every thing necessary on this subject, in his critical works (a), intended to explode the many vulgar errors that prevail amongst his countrymen, adding his astonishment that they should have been corroborated by national writers, such as Nieremberg (b) and Alonso Sanchez (c); by which means they even got credit abroad, and geographical writers of no small reputation ventured to copy them; particularly Thomas Corneille, and the author of the Great Atlas, as well as Moreri in his Dictionary.

The whole of this district may properly be reduced to an intersected valley of about a league in length, sometimes so confined as just to leave room for the passage of

(a) *Theatro critico*, tom. 4, Disc. x.

(b) *Nieremberg cuoriosa philosophia*, lib. 1. cap. 35.

(c) *De rebus Hispaniæ*, lib. 7. cap. 5.

the river that gives name to the valley: This then was that unknown country so surprizingly dreaded, where it is certain no others dwelled but a few wretched shepherds, and some miserable peasants, in forlorn huts, surrounded by precipices, divested of all intercourse with their neighbours, in a wild romantic situation, which the most fanciful pencil would find difficult to delineate, or the language of Shakespeare to describe.

The other valley called, "of the Jurdes," which may be about four leagues long, and three in breadth, yields not to the former in wretchedness and misery. During the whole journey from Alberca to Batuecas, nothing is to be seen but a repetition of jagged and illshapen rocks, with their rugged peaks, like so many turrets and battlements, towering one over the other, as far as the eye can extend, forming dreadful gullies where the river forces its way, whose waters are clear, abounding with trout, and having grains of gold in its sands, which the peasants know well how to look after, and sell at Plasencia, Ciudad Rodrigo, and Salamanca (a), which is a great resource to them in this sorrowful vale; where during winter, the sun's rays can hardly penetrate for above four hours in the day. To increase still further its horror, the hills are perforated with dismal caves, one above the o-

(a) The same happens in the river Sil, in Galicia, where the poor people are employed in this manner, after floods.

ther, and some so extensive, that three or four hundred sheep may easily take shelter there; to complete this picture of distress, let it suffice to add, that this country is the resort of numerous birds of prey, and affords shelter to bears, wolves, wild cats, and weazles, which destroy all the hares and rabbits, with the addition of snakes, serpents, and many obnoxious reptiles, particularly one sort of serpent, which darts at its prey with great violence, and perhaps may be of that species called *Facula*, or *Faculum serpens*, described in the acts of the Leopoldine academy, which mentions one of these to have darted from a ditch, to a considerable distance, and fixed itself upon the arm of a peasant. But why need I enlarge any further on so dreary a spot, or describe so barren a country, where even grass is not to be seen! here and there a solitary cistus, and nothing but furze, the only resource of goats and some bees, who are of service merely on account of their wax, as their honey is neither valuable for its colour nor flavour, having all the bitter taste of their food.

In this wretched country the Carmelite Friars pitched upon a little plain on the banks of the river, and built their convent in 1599, but their house has nothing worthy of description; and though the very sight of a distressed traveller at their gates, should be sufficient to engage the benevolent minds of these holy fathers, they are

are seldom in a hurry to open their doors, and none are admitted or intitled to hospitality, but such as are provided with letters of recommendation and positive orders from the provincial or general of their order.

The courtesy of hosts, in the Viceroy of Valencia, famous for the respect of the emperor Charles the Fifth.

W H E R E we to believe the exaggerated accounts which Spanish writers in general give of their country, we should be inclined to imagine the whole kingdom was a paradise flowing with milk and honey, where nature had lavished her most luxuriant productions; but whenever the traveller happens to pass through the interior parts of the kingdom, and to form his judgment from personal inspection, he will then be convinced that many of these allusions require a considerable lowering before they are reduced to the simplicity of fact and of truth, for though it will be allowed that the southern parts are fertile, that the plains of Valencia are delightful, and that the Bilsagans have been indelible in cultivating their rugged mountains, yet when we take a general survey of the kingdom in the review of a journey through Spain, it will be found that

LETTER

of the project, described only here and there with a few scattered spots of imperfect cultivation: Many

## L E T T E R V.

*The convent of Juste, in the Vera of Plasencia, famous for the retreat of the emperor Charles the Vth.*

WERE we to believe the exaggerated accounts which Spanish writers in general give of their country, we should be inclined to imagine the whole kingdom was a paradise flowing with milk and honey, where nature had lavished her most luxuriant productions; but whenever the traveller happens to pass through the interior parts of the kingdom, and to form his judgment from personal inspection, he will then be convinced that many of these assertions require a considerable lowering before they are reduced to the simplicity of fact and of truth, for though it must be allowed that the southern parts are fertile, that the plains of Valencia are delightful, and that the Biscayners have been indefatigable in cultivating their rugged mountains, yet when we take a general survey of the kingdom in the review of a journey through Spain, it will be found that barren hills and naked rocks and mountains, form a considerable part of the prospect, diversified only here and there with a few scattered spots of imperfect cultivation:

Many

Many districts still remaining uncultivated, and the rivers overflowing their banks without any impediment, in the same manner as they did in the earliest ages of the world; as if they were to receive every blessing from Providence without the least trouble or fatigue (*a*). Amongst innumerable instances which might be alleged in support of this assertion, I shall confine myself to one given by the Spaniards themselves, of the so much celebrated valley of Plasencia, in Estremadura, represented by many as the most delightful place in the world, selected by the great Emperor Charles to finish his days, and supposed to be seated in an enchanting vale, covered with all manner of fruit trees in the highest perfection, where the very air was embalmed with the most delicious odours; but alas! this is far from being the case, as the judicious Spanish writer (*b*), who lately visited that province, informs us, who complains loudly of its most miserable state, and from his authority, therefore, I shall venture to pronounce on its present most wretched and neglected condition.

(*a*) Don Antonio Ponz reproaches his countrymen very feelingly for their neglect on this subject in the following lines; "Los rios regularmente corren entre nosotros por donde Dios los encamino a principio del mundo, como si no hubiera dexado con grandissima providencia, nada que estudiar en el cultivo de las tierras, sino que todo hubiera de ser facil. No es assi, ni tal quiso, sobre cuyo punto dijo bien uno de los mejores poetas."

Pater ipse colendi

Haud facilem esse viam voluit primusque per artem

Movit agros, curis acuens mortalia corda. Virg. Georg. I.

Viage de Espana, tomo 3. Madrid 1777.

(*b*) Don Antonio Ponz.----See Viage de Espana, tom 7. Madrid, 1778.

After



After quitting the city of Plasencia, and crossing the river Xerte, you pass over the hill of Calcones, opposite the city, then descend into the territory of the Vega, leaving on your left the villages of Garguera, Barrado, and Arroyo Molinos; you next go through the village of Pasaron, five leagues from Plasencia, and come to a pleasant situation called La Magdalena, where there is a good farm house, which formerly belonged to the Jesuits: you are now at a league's distance from Juste, and to go there you traverse a woody country with a few chestnut trees, and pass several brooks, where they catch excellent trout. The convent of Juste is situated nearly in the centre of the Vera, on the brow of a steep hill, which protects it from the North wind, and with other mountains forms that chain which is called the Puerto de Tornavacas, joining with the hills of Arenas, Puerto del Pico, and others. Neither the convent nor church have any thing remarkable, and would have passed on to future ages in oblivion, had it not been for the distinction shewn them by the great Emperor who ended his life in this solitary place. Over the great altar in the church, they have a copy of that famous picture called the glory of Titian, which stood formerly here, and was removed to the Escorial by express command of the Emperor, who ordered that the original should be fixed in the same church with his remains. The following inscription is seen on the wall,

in

in a corner of the garden, underneath the arms of the Emperor.

“ EN ESTA SANTA CASA DE S. HIERONIMO DE JUSTE  
 “ SE RETIRO A ACABAR SU VIDA, EL QUE TODA LA  
 “ GASTO EN DEFENSA DE LA FE Y CONSERVACION DE  
 “ LA JUSTICIA, CARLOS V. EMPERADOR REY DE LAS  
 “ ESPANAS CHRISTIANISIMO, INVICTISIMO. MURIO A  
 “ 21 DE SETIEMBRE DE 1558.”

*In this holy house of St. Jerom of Juste, ended his days, he, who spent the whole of them in defence of the faith, and in support of justice, Charles V. Emperor, King of Spain. Most christian, invincible. He died on the 21st Sept. 1558.*

These are the only traces left here of that great Emperor, who once filled the world with the glory of his deeds. The ruined decorations of the garden and ponds seem to intimate their pristine state in happier days, and the several plantations in the Vera, watered by numberless brooks, might once have exhibited a more pleasing appearance.

A distinction must be made between the *Vera of Plasencia* and the *Valle de Plasencia*. The valley extends from the city to the Puerto de Tornavacas, upon a straight line from East to North, the length of nine leagues, and so level, that the whole extent lies open to your view, as far as the *Puerto*, closed by high mountains, dividing on the right hand the *Vera* from the *Valle*, and on the left

the hills between the valley and the road to Banos, and finally those of Tornavacas, whose high tops are always covered with snow.

The villages belonging to the valley are Asperilla, Casas del Castanar, El Torno, Valde Añilla, Cabrero el Rebollar, Navaconcejo, Cabezuela, Badillo, and Xerte, which gives name to the river, as Tornavacas does to the *Puerto*, but at present every branch of cultivation is at the lowest state, without even the appearance of an orange or a lemon tree, if we except two or three blighted ones at the convent of Santa Cruz de Tabilla, where the country is a desert: and what is still worse, the mountains and passes are filled with assassins and robbers, to the great terror of the inhabitants and travellers. The *Vera* is no better, and affords the most melancholy aspect imaginable; amongst the various experiments to destroy the worms that ruin the chestnut trees, fire was the last expedient, in so much, that the trees, scorched and half burned, now resemble the oaks struck by the thunder of Jove, instead of the golden age of the poets, and their whole agriculture is reduced to the sowing a few peas, with some miserable scraps of a vineyard. The villages of the *Vera* are Piornal, Barrado, Garguera, Arroyomolinos, Pafaron, Gargantalolla, Xarandilla, Gijo de Arandilla, Xarais, Robledillo, Aldeanueva de la Vera, Viandar, Villanueva, El Ofar, and Cuacos: This last being near to

Juste,

Juste, and distinguished by the savage disposition and ferocity of its inhabitants; to such a degree as to overcome the patience of that great personage who lived in their neighbourhood, by offering him every affront their low station would permit, taking his cows if they happened to stray into their district, and stealing the trout reserved for his use; and to crown all, flinging stones at Don John of Austria, the Emperor's son, whenever he ventured to taste of their cherries.

## L E T T E R VI.

*Further observations made in the course of another tour by Don Guillermo Bowles from Almaden to the silver mine of Guadalcanal.*

**I** SET out from Almaden for the village of Alcocer; in the plain there is a lead mine which has never been worked; after an hour's journey we came to the mountain of Lares, where there are ruins of a Moorish castle; here I saw for the first time the true Spanish emery, which before I only knew by specimens in the cabinets of Paris (*a*); the hill where it is found, is of sandstone, mixed

(*a*) Emery is a sort of metallic stone, found in most, or all mines of metals, but chiefly in those of iron, copper, or gold, of which three kinds are usually distinguished; the Spanish, red, and common emery. The first sort is found in the gold mines of Peru, and other provinces of Spanish America. It is judged a kind of *Marcasite* of that rich metal, being streaked with little veins and specks of gold, for which reason the king of Spain prohibits the exportation of it, whereby it is rendered exceedingly scarce, to the great regret of the searchers after the philosophers stone, who build great hopes in the transmutation of this precious metal. The red emery is found chiefly in the copper mines of Sweden and Denmark. The common emery is taken out of iron mines, and is almost the only sort used in England, the consumption of which is very considerable amongst the armourers, cutlers, locksmiths, glaziers, lapidaries, masons, and other mechanics, some of whom use it to polish and burnish iron and steel works; others to cut and scallop glass, marble, and precious stones.

The common emery is of a brownish colour, bordering a little on red, exceedingly hard, and of course difficult to pulverize. The English are the only people that have got the art of making it into powder, which is done by mills contrived for the purpose, and in that state they send it to their neighbours. Emery fused with lead and iron hardens them. It increases

with

with quartz: this mineral is blackish, resembles the polish given by the bloodstone, and is so hard that it emits fire when struck with steel. The Moors worked this mine, but more perhaps, for the sake of the gold which it probably contains, than for any other motive; and as their method is not to be found in any Arabic book that I know of, either printed or manuscript, I should think the following trial might be made. Let the ore be first softened by fire and water, then exposed to the air for four or five months or more, that the phlogiston might separate, leaving the matter in a proper state to extract the metal by fusion. I found two sorts of emery in Spain, one in a ferruginous stone, and the other in sand loaded with iron (*a*).

and heightens the weight and colour of gold. It is usual to mix a little of it with the gold from Madagascar, which is naturally pale and soft. It is brought in English ships from the Levant, particularly from the island of Naxia, where it costs but a crown the twenty-eight quintals; the quintal weighing 140 lb. which is therefore what they usually ballast their ships with.---Rolt's Dict. of Commerce.

(*a*) Notwithstanding what is said here relating to emery, Mr. Bowles, in page 364 of his work, further informs us, that he found five sorts of emery in Spain. First, That of Reinosa, composed of large grains. Secondly, Of very small fine grains, found at the foot of Guadarrama mountains, and used at St. Ildefonso, for polishing of crystals. Thirdly, The one of Alcocer, mentioned above, worked by the Moors, which has no grain, but on breaking the stone is smooth like an hæmatite, and contains a little gold. Fourthly, A species of emery, as it were, marbled in quartz, found about Molina de Aragon, and in Estremadura, in a district granted by the king, to Don Pedro Rodriguez Campomanez, containing a little gold, but not worth the expence of searching for. Fifthly, Another sort dispersed in many parts of Spain, particularly in the lordship of Molina, between Tortuera and Melmarcos, in loose, black, heavy stones, seeming to be the residue of some rock or mine, and having when pulverized, hard pungent and mordicant particles.

Between

Between Alcocer and Orellana, there is an iron mine in sandstone, with the finest red ocre in the world. A steep mountain must be crossed to arrive at Nabalvillar, where there are blood stones, and a species of black earth, which shines when rubbed in the hand, but is only a *blend* or dead mineral of no use. From hence you go to Logrofan, at the foot of a chain of hills which run from east to west, called *La Sierra de Guadalupe*. In coming out of the village, a vein of phosphoric stone crosses the road obliquely from north to south. It is a whitish stone without any flavour. When pounded and thrown on the fire, it burns, and emits a blue flame, without any smell (*a*). In the mountain to the north of this village, there is a silver mine in a whitish stone, with white *mica*, and in the mountain of *Guadalupe* to the south, there is a copper mine in a slaty stone, jaspered with blue and green. An extensive uncultivated plain lies half way between Nabalvillar and Logrofan, covered with the kermes oak; but before you reach Logrofan, the sandstone disappears, and the houses of that village are built with granite from the hills of *Guadalupe*.

After having gone out of our road to examine the phosphoric stone, we returned again to Orellana, at which

(*a*) Mr. Bowles says it is the phlogiston of the coal that causes this flame, but this explanation cannot be admitted; for it is well known that the phosphoric stones emit a blue light, when heated, without being exposed, to any substance, supposed to contain phlogiston.

place we crossed the Guadiana, where its bed is very shallow, in order to see a lead mine two leagues further to the southward, on the road to Zalamea (a). This mine is found on a small eminence called *Vadija*, or *Valle de las minas*; the vein runs from north to south, cuts the slaty stone, and is seen in a bed of quartz, which is discovered from a brook about two hundred paces from the first shaft, where the vein does not follow as I said above, but strikes off from east to west. The miners lost it by crossing the brook from north to south, when they should have followed it according to the direction of the soft slate as I did, and found it again.

Continuing two leagues further to the southward from this mine towards Zalamea, there is a silver mine without any lead in the spar; this vein is found in a rock of granite, cut contrary to its natural direction, and consists of spar, quartz, white and yellow pyrites, with a shining, black, small pyritous matter. The country, for many

(a) The town of Zalamea is six leagues from Aracena, in the very heart of the Sierra Morena. The country people have a tradition, that it was built by those persons sent there by Solomon in quest of the silver mines, who named the place after him, in proof of which they assert that a very antient castle just by, is still called Castle of Solomon. One of the villages in the jurisdiction of Zalamea is named *Obiud*, and the river near it *Odiel*, being Hebrew names, which I was informed of, says a celebrated Spanish writer, by a clergyman, as well as by antient people of the place; but this is not so easy to prove, or for me to give assent to, merely on their traditional relations. If it were true, that the *Tharfis* of scripture was *Tartessus*, then indeed it might be presumed that the treasures were got from hence; for which I refer them to Goropius Becanus Lib. 7. *Hispanicorum*. See *Antiguedades de Sevilla* por Rodrigo Caro. Sevilla 1634.



leagues round, is replete with immense pieces of granite, lying above ground, like the rocks of Fontainebleau; the land produces a great deal of corn, and is well furnished with oak.

These two mines being so near to each other, might be reciprocally advantageous, as the lead would be useful for refining the pyritous silver. In the one which is abandoned, the remains of a crucible and reverberatory furnace are still to be observed; they quitted it on being overwhelmed with water, but it might easily be cleared again, it being situated on an eminence, called *Chantra*, as the lead mine is on another, 300 feet higher than a brook, where, in summer, there is seldom any water.

From Zalamea we passed an extensive plain of eleven leagues, called *Vinolas de Zalamea*, and came to the village of Berlanga; where, entering upon the *Sierra Morena* we arrived, in four hours, at the famous town of Guadalcanal, observing great quantities of sumach in these parts, which is cut in the month of August; after which the leaves and flowers are pounded and sold to the carriers of Seville, who use it for dressing of leather. (a).

(a) The best Sumach is that which is greenish and new: Oporto in Portugal, being the place which furnishes the most, and generally speaking, the best. Rolt's Dict. of commerce.

## LETTER VII.

*Description of the famous silver mine at Guadalcanal in Estremadura.*

THE town of Guadalcanal is the last to the southward in the province of Estremadura, only separated from Andalusia by the small stream of Benalija. The famous and boasted silver mine of Guadalcanal (*a*), so celebrated by historians, and of which such various and uncertain accounts have been published, is situated about half a league distant from the town of that name, belonging to the knights of Santiago, and surrounded with high mountains. The first discovery of this mine, according to the

(*a*) This is not Mr. Bowles's account of the Guadalcanal mine, but I have reason to think it a more perfect one, giving the real state and present condition of the mine from whence a judgment may be formed of Mr. Bowles's conjectures. He says there are about 800 families at Guadalcanal; but they exceed a thousand, besides a convent of friars, three convents of nuns, and sixty ecclesiastics, who do not enter into the contribution roll, though they have houses and families. He mentions the mine being a league distant from the town, whereas it is only a mile and a half. He tells us, Guadalcanal is a very dry spot, though the inhabitants allege that there is not a more moist and damp town in all Estremadura. In the square there is one of the richest springs of excellent water that can be met with any where, and all the houses have wells at a small depth. There are four fountains in different parts of the town, which have no connection with the principal spring in the square, besides several small spouts of water continually running in the streets, that make the houses so damp, that the lower apartments cannot be inhabited without inconvenience before July. Though he says the galleries of the mine were in perfect good order, he could not have a just notion of them, proceeding no further than 50 feet, for the information of Don Joseph de Carvajal, minister of state at that time.

best information, was made by a farmer of the town of Guadalcanal, whose name was Delgado. This man accidentally met with the ore, as he was ploughing his fields : being struck with its brightness, he carried it home, after carefully covering the place, and then set out for Seville, where he was informed it was a valuable ore. This is said to have happened in the year 1509, soon after the discovery of America by Columbus, and is looked upon as the most ancient record of this mine. The surprising accounts which used daily to arrive from America, relating to those new discovered mines, added to the little information Delgado was able to procure at home, inspired him with the same ardour as many of his countrymen, and engaged him to repair thither for further instruction, where, after obtaining all the lights in his power from the American miners, he returned again to Spain, made a discovery to the court of the mine of Guadalcanal, soliciting a grant, and proposing to work it at his own expence. Though it might be supposed, this must have answered his purpose, nothing appears from history, either with respect to himself, or his heirs ; and what is still more singular, the mine seemed to be without any proprietor in the reign of Philip the second, which gave rise to the several laws promulgated in his reign, under the title of *Ordenanzas de Minas*, and are to be found in the *Recopilacion*, or code, published by that prince,

prince, which with respect to mines, are the only laws extant in the kingdom.

The Fuggers of Augsburg, obtained a grant of them from Philip the second, after they had been worked for some time on the king's account. Several Spanish writers assert, that immense riches were taken out of this mine, particularly Carranza, in his treatise on Spanish coins (*a*), affirms, that one week with another, they extracted the value of sixty thousand ducats. The history of the house of Herafti says, that this mine had produced eight millions of *pesetas* (*b*), which were employed in building the Escorial. Be this as it may, the chief shaft in the mine acquired the name of *Pozo Rico*, "The rich shaft", and continued in the hands of the Fuggers and their heirs, until 1635, when they totally abandoned it, after having gone a great depth, and formed ten galleries, though it is surmised they continued it for political reasons, to cover other projects, as they solicited considerable loans to pursue their works, and when they relinquished it, reports were spread, that it contained several rich veins of silver ore, which none could contradict, for in less than a month the mine filled with water within thirty feet of the surface. This opinion however has

(*a*) Licenciado Alonfo Carranza Ajustamiento de Monedas y reduccion de metales. Madrid, 1629.

(*b*) Valuing the peseta at 10*d.* sterling, the eight millions above-mentioned will amount to £. 333,333, 6*s.* 8*d.* sterling.

been handed down from one to another to the present time.

In 1690, Raphael Gomez, a Jew, obtained a grant of this mine from Charles the second, and formed a company with some Portugueze merchants of his tribe. They attempted to drain Pozo Rico, but for want of a sufficient capital, engines, and intelligent workmen, they could not drain further than the third gallery, and failing in their future attempts, were charged with duplicity and fraud; Gomez was arrested and carried prisoner to Seville, where he underwent a long and severe confinement, though he printed his case and defence, but died before the business came to an issue.

The distracted state of king Charles's finances, suggested to his ministers the idea of continuing the works of these mines; on this account, and to give this operation a more plausible appearance, the guilt of Gomez was to be made more conspicuous; Don Alonso Carrillo Rueda, of the council of finances, was named superintendent of the mines, and ordered to repair thither directly, and carry on the works on his majesty's account; following the directions of a wandering friar lately returned from America, appointed chief engineer, on a supposition of his knowledge in mines. Carrillo arrived at Guadalcanal in 1695, and Gomez was arrested as mentioned

tioned before; he then proceeded in his commission with all the deliberation and formality of the law, issuing out orders, and multiplying writings at every step; they began to drain Pozo Rico, but never went further than the third gallery; sickness, want of money, and other impediments, baffled all their attempts; this famous mine was once more abandoned, and Carillo and his retinue returned to Madrid.

The death of Charles the second, the last Austrian monarch of Spain, and the succession war which followed, prevented all further pursuits of this kind, till 1725, when a new company was formed at Madrid, with fresh expectations of success. The draining of Pozo Rico was once more undertaken, but all their labours were fruitless. In this embarrassed situation a new ray of light seemed to pierce the recesses of these hidden mines, and revive the drooping spirits of the present adventurers, raising them from a desponding anxiety, to the most sanguine expectation. The personage who was to work this surprising alteration, was no less a character than an English lady of quality, of very high rank. In 1728, lady Mary Herbert, daughter of the marquis of Powis, arrived at Madrid from Paris, where she had been concerned in the Mississippi schemes, and by her acquaintance with the famous Mr. Law, had improved her talents and natural genius for enterprize, which engaged her