

seasons are regular; the spring, for example, commences in September; the summer, in December; the autumn, in March, and the winter in June. At the commencement of the spring there are abundant falls of rain, but seldom or ever in the other seasons. The summer is serene, and passes without storms or tempests. The want of rain does no injury to the country: for the moisture that is absorbed from the heavy falls in spring, and the abundance of dew which descends every night in summer, are sufficient for fructification. The summer season in these parts would be insupportably hot, if the air were not cooled by the wind which blows from the sea, as well as by that which comes from the Andes, the summits of which are always covered with snow. The cold of winter is very moderate, in-somuch that snow is scarcely ever known to fall in the maritime provinces; and it is not seen once in five years in those which are contiguous to the Andes.

METALS. There are in Chili mines of every metal, semi-metal, and mineral, which has hitherto been discovered; and gold in particular abounds there; but it is only dug for in the provinces belonging to the Spaniards. There are two ways of obtaining the gold from the mine, which are either by breaking the rocks that contain it, with iron crows, or washing the sand which is conveyed by the currents of the rivers. The first method is preferable, because it is most advantageous, but it is very expensive; for, besides the fatigue experienced by the workmen, it requires several machines, and a particular kind of mill, to reduce to powder the metallic fragments.

The other manner of obtaining gold is generally adopted by those who have not sufficient property to establish the apparatus already mentioned; they therefore put the sand in a kind of horn bowl, which they call *porunna*, in which they wash it well, and collect the particles of

gold that have subsided by their weight. But as they do not use mercury, they lose more than half of the valuable metal. The profit is, nevertheless, very considerable.

Some silver mines have also been discovered in this country ; but as they require much greater fatigue and expense than the gold mines, they are little attended to. The following is the gross method which the inhabitants employ for separating this metal from its heterogenous parts. They first reduce the ore to powder by means of a mill, then sift it through a very fine wire-sieve, mix it with mercury, salt, and mud, and inclose it in an ox-hide, when they pour water on it for some time ; it then forms a mass, which during eight or ten days is malleated, and trodden under feet twice a day. After these operations the mass is put in a stone trough, where water is poured upon it, which carries off the ore into pits that are formed under the trough ; and here the amalgama of silver and mercury is precipitated in

whitish globules. These globes are then taken out, and put in a linen bag, which is squeezed hard, in order to express the mercury, after which the workmen give to the mass, which is as soft as dough, such forms as their caprice may dictate. But, as mercury, notwithstanding the pressure, has not entirely been forced from the silver, they throw the mass into a well-heated furnace, where the mercury is volatilized, and the silver remains pure, white, and solid.

The copper mines in this country are as abundant as those of gold, with which, indeed, they are often mixed; but the people only work those that are very rich in ore. They adopt the following methods to obtain the copper. At first they dig a deep ditch, which they pave with a mixture of plaister and calcined bones, which resists heat to such a degree, that there are no cracks in it through which the metal can escape. On each side of the ditch, which is square, are built four walls,

which, at the surface of the ground, close in the form of an arch, and make a kind of an oven. A hole or door is left at the top by which to put in the metal, and observe the state of its fusion; some small apertures are also left to give vent to the smoke. The fire is then blown to a great heat by bellows, worked by water. The furnace is heated for several days before the metal is put in, and even then large logs of wood are added to it. At length, when the copper is in a complete state of fusion, a door is opened at the bottom of the furnace from which it issues, like a torrent of fire, and fills the trenches that have been made for its reception.

Iron, though abundant in this country, is not explored.

QUADRUPEDS. The *guanaco*, *chilibuèque*, *guémul*, and the *Peruvian sheep*, are species of animals which very much resemble each other, and may be considered as belonging to the genus of the camel, from which they differ by not having the hump.

The chilibuéque is an animal between the guanaco and the European sheep. Its head, neck, and tail, are like those of the guanaco, and the rest like the sheep, except that the animal is altogether about twice as big: hence the Indians call it chilibuéque, which means Chili sheep, in order to distinguish it from the lama, or sheep of Peru. The chilibuéque is a domestic animal, which is held in much esteem by the Indians; and in their religious ceremonies and treaties of peace, they sacrifice it as a token of friendship. Its flesh is as good as that of that common sheep, and its wool is excellent. This animal is of four colours, viz. white, grey, black, and ash colour; but it does not increase much, on account of the difficulty of conception on the part of the female, which is obliged to be kept up before she will receive the male.

The guémul is, in form and shape, like a chilibuéque, with the exception of its tail, which resembles that of a stag: it is

wilder than the guanaco, and almost always herds on the steepest parts of the Andes.

The Peruvian sheep lives in the most temperate parts of the country, but particularly in the provinces of Copiapo and Coquimbo. It must necessarily be very prolific, for notwithstanding the continual massacre to which it is subjected, it is always to be found in great numbers.

The *viscaque* is of the size and almost the same figure as a large rabbit, except that its legs are shorter: its hair is soft, and of a grey and black colour, while its tail, which resembles that of a fox, is furnished with hair so hard and sharp that they seem like bristles.

There is another animal called *chimna*, which is also about the size of a rabbit, but in figure it resembles a little dog. This animal enters the houses in the country, eats whatever it finds, and roves about amongst the dogs, which do not disturb it any more than their masters; in fact, the

people respect and fear it, though it does no harm, either with its teeth or its claws. The circumstance which places it in security is, that it has a little bladder at the root of the tail near the anus, which contains an excessively foetid liquor, that it darts towards those who attack it; and the smell of it is so contagious that it renders a chamber uninhabitable for ever, if a drop happens to fall in it.

The *arda* is a species of field mouse, though of the size of a cat, and is only found in the province of Copiapo. This animal is tolerably docile, and is covered with a thick ash-coloured wool, as delicate as the finest cotton.

Topography of the Provinces and Towns.

COPIAPO. This corregidory, the principal town of which is *Saint Francois de la Selva*, borders on that of Atacama, in Peru, and to the north and west it is li-

imited by the Pacific Ocean. Its length is 180 miles from north to south; and its breadth between 60 and 90 miles from east to west. There is but little rain in this district, nevertheless it produces all sorts of corn and fruits of the finest quality. Its climate is always mild, and it contains many mines of copper, sulphur, loadstone, gold, silver, and lapis lazuli. There is a shrub which grows on the banks of the rivers in this country called *pararabolo*, and which, when reduced by heat, answers the purpose of wax for sealing bottles. A quantity of large eels is caught on the coast, and the chief articles of exportation are nitre and sulphur, the latter of which is so good, that it requires no purification.

COQUIMBO. This corregidory borders to the east on that of Tucuman; to the south on that of Quillota; and to the west on the Pacific Ocean. It is 240 miles long, by 120 broad, from east to west. There are bred in it numbers of guanacos and Peruvian sheep; and its vegetable pro-

ductions are wine, corn, and excellent oil. It contains many mines of gold, silver, copper, lead, mercury, lime, and salt; and those of copper supply Spain with the metal from which its artillery is cast. The country also affords excellent horses, and ox-hides, with which a considerable commerce is carried on at Lima.

The capital of Coquimbo, which is also called *Serana*, is three quarters of a mile from the sea, and its climate is that of a continual spring. All its streets are even, and its houses are ornamented with beautiful gardens and walks of myrtle trees. Its port is commodious and much frequented: it is 45 miles from the city of Concepcion, and 174 from Saint Jago, in 24. deg. 54. min. S. lat.

Cuyo. This is a great corregidory, the capital of which is Mendoza. In the eastern part of Chili, it is called *Trasmontano*: it is bounded to the east by *Pampas*; to the north by *Bioxa* in *Tucuman*; on the south by the territories of the *Puelch*

Indians and other savages ; and on the west by the Andes. This province is extremely fertile, and besides abundance of fruits, it also affords much corn, wine, and brandy. The wine is sent to Buenos Ayres and Monte-Video ; its colour is like that of a mixture of rhubarb and senna, and its taste is similar to that composition ; but it probably acquires both these qualities from the goat's skins, in which it is conveyed ; and scarcely any other kind is drunk in all Paraguay. It is a good stomachic. This country abounds in all sorts of cattle, besides Peruvian sheep, and the *Ithea Americana*, or Magellanic ostriches. The flesh of the wild boar and the he-mule of these parts is excellent, and all other kinds of provisions are uncommonly cheap. There are also silver, copper, and gold mines. The inhabitants are very adroit at hunting, and particularly in chasing ostriches, the exercise of which renders them so agile,

that they can keep up with a horse at a gallop.

QUILLOTA. The capital from which this corregidory takes its name, is called *St. Martin de la Coucha*. It is situated about 27 miles from Valparayso, and is bounded to the north by Coquimbo. It is 75 miles from north to south, and 63 from east to west. It produces wine, corn, cattle, and abundant mines of gold and copper. The inhabitants are employed in making ropes for ships, as well as soda and soap, which are articles of commerce.

VALPARAYSO. The soil of this town is but ordinary in point of fertility, as it consists mostly of calcareous hillocks, which rise one above the other like the steps of a terrace. The vallies and plains between these rows of steep hills produce excellent fruits, particularly the Quillota apples.

Valparayso, which is a port, and a good

town for trade, is 90 miles from Saint Jago, the capital of Chili. This central position renders it the principal medium of commerce for the whole vice-royalty. There are exported annually for Lima nearly 15,000 tons of wheat, either in grain or flour; and a considerable quantity of ropes, salt-fish, and fruits. The merchants of Valparayso receive in exchange sugar, tobacco, indigo, and spirituous liquors.

The houses of Valparayso only consist of ground floors, on account of the frequent earthquakes. Their walls are constructed of mud plastered with mortar, but they are convenient, appropriate to the climate, and in general well furnished. The batteries at the port are mounted with seventy pieces of cannon; but Captain Vancouver asserts, that three frigates would beat them to atoms.

ACONCAGUA. This corregidory, the capital of which is *San Felipe el Real*, borders to the north, on a part of that of

Quillota ; and to the south on the jurisdiction of Saint Jago. It produces a quantity of corn. Some barracks have been built on the mountains, through which a road leads to Mendoza, and these edifices serve as a shelter to travellers, who are supplied at them with biscuits and salt beef. In consequence of this regulation couriers pass to and from Saint Jago at all seasons of the year.

MELIPILLA. This jurisdiction, the chief place of which is *Logrono*, borders to the east on that of Saint Jago, and is limited to the west by the sea. It is not very extensive. Its productions are corn, wine, and cattle ; and an abundance of fish is caught on the coast.

BACANGUA. This is a corregidory, the chief place of which is *Santa-Cruz de Triana* ; but it is sometimes called *Bacangua*. It borders on that of St. Jago, and reaches as far as the sea. It is 120 miles from east to west ; and 39 from north to south. It is well watered, abounds

in fruit and fish, and contains some mines of gold and rock salt, as well as some medicinal baths, which are beneficial for various diseases.

SAINT JAGO, or more properly *San Yago*. This is a corregidory, which is 78 miles long from east to west; and 63 broad from north to south. It has many gold mines, but they are only worked in summer, which is in December, January, February, and March. About 60 miles from the capital is the great mine of *Kempu*; and in the valley called *Blanche*, they breed silk-worms. At the mountain of *Delcurato de Colina* there are thirty-four gold mines, at which people work every day; and the province also contains some mines of copper and tin; three of silver, and one of lead. At *Monte-Negro* there has lately been discovered a quarry of jasper. Vancouver asserts, that the soil, from *Valparayso* to *Saint Jago*, is a continual ascent, and that the cold from the mountains is sensibly felt. The climate

of Saint Jago is temperate and salubrious; the environs of the town are covered with gardens and vineyards, while the eye extends farther over vast grazing plains, and the interesting perspective is terminated by the summits of the Andes, which are covered with snow.

SAINTE JAGO. the capital of the whole kingdom of Chili, is situated in 33 deg. 40 min. 11 sec. S. lat. and is 90 miles from the port of Valparayso. The town is said to be more than three miles in circumference. The streets intersect each other at right angles, and some of them are tolerably wide, and three quarters of a mile long. Its population is estimated at 30,500 souls. Some of the edifices in Saint Jago are worthy of mention, on account of their magnificence, though the rules of architecture have not been exactly observed in their construction; the principal are, the mint, the new cathedral, and some churches, though there are several splendid houses belonging to indi-

viduals. These all consist only of a ground floor, though the apartments are capacious and lofty. This manner of building, which is, as has been observed, adopted from the fear of earthquakes, is probably in the end more convenient, salubrious, and even more magnificent than the European method of building several floors above each other.

Saint Jago is the residence of a captain-general, who is likewise the civil magistrate of the kingdom of Chili; of a bishop who enjoys a large revenue, and a still greater degree of respect; of a supreme tribunal, an university, and a college of nobles. There are twelve monasteries, and seven nunneries in this capital.

The manner of living at Saint Jago exhibits all the characteristics of gaiety, hospitality, and good nature, which so advantageously distinguish the Spaniards in the New World as well as in Europe.

The women there are handsome brunettes, but a gothic dress rather disfigures them. The conversation in the first circles of the town seems to partake of the simplicity and freedom which prevail in the country parts of Europe. Dancing and music are here, as well as throughout America, the favourite amusements of both sexes. The luxury of dress and equipages is carried to a great height ; but in the furnishing and fitting up the houses, more regard is had to pomp than to neatness and elegance.

COLCAGUA. This corregidory, the capital of which is *Fernando*, is bounded to the east by the Cordeliers or Andes ; to the west by the South Sea ; and to the south by the province of Maule. It is 120 miles from east to west ; and 90 from north to south. It contains mines of gold and copper ; and abounds in cattle, horses, and mules. Hot springs are frequently met with in this country, which are ex-

cellent for curing leprosy, wounds, and siphylitic diseases.

CHILLAN. This place, though a capital, is a very small and mean looking town: it lies in 36 deg. 6 min. S. lat. At a short distance from it there is a volcano, which bears the same name.

MAULE. This province, the capital of which is Talca, is bounded on the east by the Cordeliers, by the district of Concepcion, from which it is separated by the river Maule; and on the west by the South sea. It is 138 miles from north to south; and 90 from east to west. It contains many gold mines, but particularly that of Mount Chivato, which is very famous for the quantity of pure metal that it affords. The country furnishes all sorts of corn and cattle in abundance, but particularly goats, the skin of which is made into Morocco leather, and gives rise to a considerable commerce. A kind of wine, which is much valued, is also produced in

this country, as is likewise tobacco. There is also a pitch mine, and a quantity of very white salt is manufactured in these parts.

CONCEPTION. This corregidory extends from the river Maule to that of Bio-bio, which is its limit, at the inhabited parts of Chili. Its climate is temperate, and the four seasons of the year are distinguished as in Europe, though at inverse periods. The soil is very fertile; the wheat yields in the proportion of sixty grains to one; the vines are equally abundant, and the fields are covered with cattle. In 1787, the price of a large ox was eight piastres; and that of a sheep three quarters of a piastre. The men are very robust, courageous, and adroit at riding, as are the women; but they are particularly clever at throwing a running-noose over the different animals which they hunt, without ever missing their mark.

The town of La Conception having been

overwhelmed by the sea, in consequence of an earthquake, a new one has been built at some distance from the shore, which is indiscriminately called La Mocha; or New Conception. The inhabitants are about 10,000 in number. It is the residence of an intendant and a military commander, and the authority of these two officers extends over the province of La Concepcion, which comprises the south of Chili; but its limits are not precisely known.

Talcaguana is a little town, situated at the shore of the Bay of La Concepcion, which is one of the most convenient harbours on the coast of Chili. The fortresses of Araucos, Tucapel, and others, were intended as a check to the incursions of the Indians, who are now submissive and peaceable. Our account of this vast and interesting country will terminate with

VALDIVIA. This is a corregidory, the capital of which bears the same name. It is situated on the bank of a river, and

of a fortified eminence. This is considered one of the best places in all America. It has a good and well-defended port; its fields are very fertile; it furnishes excellent timber for building, and contains a great number of gold mines.

ACCOUNT

OF THE

VICEROYALTY OF PERU.

THE vicerealty of Peru comprehends the audiency of Lima, the province of La Paz, and the presidency of San-Yago. This presidency is, however, separated from the other parts of the vicerealty, as has already been shewn, by the audiency of Charcas, which belongs to the vicerealty of Buenos Ayres.—The two former occupy the principal part of the ancient Peru.

This great empire, the foundation of which by the Incas remains enveloped in the obscurity of a series of fables, and of an uncertain tradition, has lost much of its local grandeur since the time when it was stripped, on the north side, of the

provinces which form the kingdom of Quito, and afterwards of those which, towards the east, constitute the viceroyalty of Buenos Ayres. Its present extent in length runs, north and south, over a space of from 1260 to 1350 miles, from two degrees to nearly twenty-three degrees of south latitude; and its greatest breadth is from 300 to 360 miles, east and west, i. e. about 13 degrees of W. lon. The river of Guayaquil divides it from the new kingdom of Granada on the north side. The depopulated territory of Atacama separates it from the kingdom of Chili towards the south. Another horrible desert, of more than fifteen hundred miles extent, separates it towards the east from the provinces of Paraguay and Buenos Ayres; and lastly, the Pacific Ocean washes its western shores.

A chain of barren and rugged mountains; several sandy plains, which in a manner reach from one extremity of the coast to the other; and several lakes of

many leagues in extent, some of which are situated on the summits of the above chain of mountains, occupy a great part of the Peruvian territory. Throughout the breaks and the vallies, which enjoy the benefit of irrigation, present to the view an extensive range of delightful plains, replete with villages and towns, and the climate of which is highly salubrious. That of the elevated spots of La Sierra is extremely cold. In the pampas, or plains, of Bombou, Fahrenheit's thermometer is constantly at from thirty-four to forty degrees above zero.

The population of Peru does not much exceed a million of souls, and so far as relates to the original casts, is composed of Spaniards, Indians, and Negroes. The secondary species best known, and proceeding from a mixture of these three, are the mulatto, the offspring of the Spaniard and negro woman; the quarteron, of the mulatto woman and Spaniard; and the mestizo, of the Spaniard and Indian

woman. The final subdivisions which are formed by the successive mixtures, are as many as the different possible combinations of these primitive races.

The commerce of Peru has been considerably augmented, since it has, by the arrival of the merchant vessels of Spain by Cape Horn, and by the grant of an unrestrained commerce, freed itself from the oppression under which it groaned in the time of the Galeons, and of the fairs of Porto-Bello and Panama. Prior to that epoch, the bulky and overgrown capitals circulated through, and were in a manner lost in, a few hands; and while the little trader tyrannized over the people, by regulating, at his own will, the prices of the various productions and commodities, he himself received the law from the monopolizing wholesale dealer. The negotiations of the capital with the interior were then, in a great measure, dependent on the intelligence and the decisions of the magistrates; and the commerce with

Spain owed its best security to the circulation of the silver entered in the bills of landing. Commerce, on the other hand, being at this time subdivided into so many smaller branches, maintains a greater number of merchants; at the same time that the fortunes which accrue from it are not so numerous. It is necessary that a commercial man should combine his plans skilfully, and extend his speculations, to be enabled to acquire a handsome property.

The manufactures of this country consist almost entirely of a few friezes, the use of which is in a manner confined to the Indians and negroes. There are besides an inconsiderable number of manufactures of hats, cotton cloths, drinking glasses, &c. which do not, however, occupy much space in the scale of the riches of Peru. Sugar, Vicuna wool, cotton, Peruvian bark, copper, and cocoa (it is to be observed, however, that the two latter articles, as well as a considerable part of the Peruvian bark, are sent

hither from Guayaquil, &c.), are the only commodities, the produce of our mines excepted, which we export.

The mines are the principal, it may indeed be said, the only source of the riches of Peru. Notwithstanding the little industry which is employed in working them, and the small help which commerce affords to the miners, 534,000 marks of silver, and 6,380 of gold, were smelted and refined last year (1790) in the royal mint of Lima; and 5,206,906 piastres, in both materials, were coined there.

From the mines of Gualgayoc, and from that of Pasco, about the one half of the silver which is annually smelted, coined, and wrought, is extracted. The mine of Guantajaya is abundant in ores and rich metallic veins, but does not yield in proportion, in consequence of the dearness of every necessary, as well for working as for convenience and subsistence. On account also of its distance from the capital, the benefits which would otherwise

arise from it are lost: the ores of thirty marks the caxon*, do not pay themselves; and the same may be said of the products of the smaller and more superficial veins, which occasionally present themselves, and in which the silver is chiselled out.

LIMA. The audience of Lima is divided into five provinces or districts; viz. Truxillo, Guananga, Lima, Cusco, Arequipa, and we may add the province of La Paz.

The province of Lima extends along the coast of the Pacific Ocean, and is subject to the jurisdiction of the viceroy, and archbishop of Lima. It is subdivided into several subordinate districts, among which the principal is *Conchucos*. This district is 156 miles in length, by 60 in breadth. It abounds in fruits of various kinds, and also produces luxuriant crops of wheat, maize, and barley, but the chief wealth of the inhabitants consist in the possession of numerous flocks, of which

* The caxon contains 6,250 pounds.

the wool constitutes the chief article of their commerce. There are also some mines of very pure gold and silver, as well as of sulphur, in different parts of Conchucos.

Santa, another of these subordinate divisions, is bounded on the north by Truxillo, and on the west by the south sea. It is 120 miles in length, and 36 in breadth. Along this part of the coast there are different safe, and commodious harbours; the chief commerce of *Santa* consists of wool-bearing animals, cotton, and hogs-lard, for which the merchants find a ready market at Lima; there are some sugar-houses, and distilleries established in the capital. The climate in this district is rather warm; it abounds with mines containing loadstones.

Caxatamba, the third subdivision, is 102 miles long, and 96 broad; like *Santa*, it abounds in fruit of every kind; but the chief dependence of the inhabitants is upon their flocks and herds. Their

trade is mostly confined to woollen stuffs, some of which are dyed with the cochineal found in the neighbourhood. In this district, there are several mines of alum, copperas, and silver.

Guanuco, the fourth of these subdivisions, is blessed with a mild and salubrious climate, and a fertile soil. Here cotton is raised in great abundance, and at the foot of the mountains vast quantities of Cocoa, which is sold at Tarma. This district is intersected by two large rivers, which form a junction near the capital, bearing the same name as the district; the preserves made here are much esteemed at Lima.

The district of Tarma is bounded on the north by Guanuco. Here the climate is colder than in any other part of the province of Lima; of the wool procured from their numerous flocks, the inhabitants manufacture stuffs of different qualities, which constitute the principal staple of their commerce. There are also

some productive silver mines in this district. Government has found it necessary to construct forts at different points, in order to prevent the incursions of the Indians from the mountains. Chancay, or Annedo, which is the last of these subdivisions, enjoys a considerable diversity of climate, being warm towards the sea, and colder on the side adjoining the mountain. The inhabitants of this district cultivate maize in great abundance, with which they fatten hogs and pigeons in vast numbers for the market of Lima, and which produces to them more than 300,000 piastres (53,750 pounds sterling). In this district the land is manured with the dung of a bird, termed huanaco, which inhabits the small islands near the coast, and such is the fertility it gives to the soil, that if a handful of maize be scattered at random it will produce a two hundred fold. The country likewise abounds with salt-pits, from which the adjoining provinces are furnished with

this necessary article; it is given to their animals as an antidote against an insect which attacks their livers, so as most frequently to occasion their death.

In a greater or less degree, the arid mountains of Peru may be considered as an inexhaustible elaboratory of gold and silver. With the exception of the mine of Guantajaya, situated near the port of Iquique, at a distance of two leagues from the sea, the richest mines are comprehended in the most rigid and insalubrious parts of *La Sierra*, where the absence of plants and shrubs, or, in other words, the infertility itself of the cold soil they occupy, is in general a sure indication which leads to their discovery.

As the Indians were ignorant, not only of the invention of money, but likewise of the astonishing powers of hydraulics applied to machinery, and of the secrets of mineralogy, more especially as they refer to chemistry and subterraneous geometry, the metals they extracted were not

of a very considerable amount. The last emperor of Peru could not muster for his ransom, the value of a million and a half of piastres in gold and silver; and the plunder of Cusco was not estimated at a greater sum than ten millions. This was a small quantity for so many years of research and accumulation, but immense for the simple and unique process of collecting, among the sands of the rivers, the minute particles of gold that had been swept along by the waters, and the little pure silver that could be dug out of a pit, which, in many instances, did not exceed a fathom in depth.

The most moderate computations of the Spanish writers, among whom may be particularly cited Moncada, Navarrete, and Ustariz, fix at nine thousand millions of piastres the sums which Spain received from America during the two hundred and forty-eight years that followed its conquest, up to that of 1740. The mine of Potosi alone, during the first ninety years of its

being worked, produced 395,619,000 piastres ;—a prodigious extraction, which appears more surprizing, when it is considered that metallurgy had hitherto been treated, not according to the principles and rules of art, but according to the adoption and practice of an ancient and blind usage.

As the provinces of La Sierra annexed to Buenos Ayres, are the most abundant in mines, and on that account the most populous and sterile, it is necessary that the consumers, whose numbers are very considerable, should be supplied with the natural productions of the coast, the only part of the territory of Peru where the lands can be profitably cultivated. Arequipa is, by its proximity, the source of these supplies ; and Cuzco administers, by its manufactories, the baizes, and other articles of clothing which the population demands. It ought, however, to be observed, that the augmented introduction of the manufactures of Europe, by the

river of La Plata, has latterly occasioned this branch of commerce to decline in a sensible manner, the jcamlets, fustians, second cloths, &c. imported by this channel, having been sold at little more than their prime cost, so as to have ruined, by their competition, the baizes and stuffs of the manufacture of the country.

Lima, which is the capital of the kingdom of Peru, is justly regarded as one of the handsomest, largest, most populous, and richest cities in the world. It is termed by the Spaniards the *Queen of Cities*, though a commercial spirit does not prevail in it to the same extent as in Mexico and Buenos Ayres; nor are the inhabitants equally industrious as those of Puebla, of Los Angeles, or Quito. M. Humboldt highly extols the genius, the liberal sentiments, and natural gaiety of the inhabitants.

This city is situated nearly six miles from the Pacific Ocean, between the 78th and 79th deg. of W. lon. and 12 deg. 2 min.

31 sec. S. lat. The port called *Callao*, is six miles distant from the city, in a plain termed the valley of Rima, or sometimes the valley of Lima. This valley is intersected by a river of the same name, over which is thrown a beautiful stone bridge consisting of five arches. The city is of a triangular figure, surrounded with brick walls, having 34 bastions; it is more than two miles in length on the side next the river. The streets are wide, and most of them run in a straight direction. The houses are low, on account of the frequency of earthquakes, but are highly ornamented, and of an elegant appearance; they have generally gardens adjoining to them. The royal square is extremely handsome, and in the middle is placed a beautiful fountain of bronze, surmounted by an image of fame, executed in a very good style. This square is from 500 to 600 feet in length, and is surrounded by superb edifices.

There is one university in Lima, dedicated to St. Mark; this city is the residence of a viceroy, who is president of the royal audience; besides an ecclesiastical tribunal, there is also a supreme tribunal of audience, composed of a president, a fiscal, and two examiners. The climate is here healthy, and extremely agreeable, and though no rain falls, the ground is watered by a gentle dew termed *garra*; a variety of the most delicious fruits abound in the vicinity of Lima; and, in short, nothing is here wanting which can contribute to the comfort or the luxury of the inhabitants.

A treasury is established here for receiving the duty on the produce of the mines, as well as all the taxes paid by the Indians to the King of Spain.

The trade carried on by the merchants of Lima, is represented by Alcedo to be very extensive; but this author appears to have overlooked the great decay of this trade, occasioned by the growing prospe-

rity of Buenos Ayres, which is much more conveniently situated for the European commerce. Besides, the government has established at this last place, a magazine for the produce of the mines of Potosi and La Plata; these are now conveyed thither by the Piicomayo, and the river La Plata, which is a much shorter, and more secure route than that of Lima.

The beauty of the situation, the fertility of the soil, the mildness of the climate, and the riches of the inhabitants of Lima, are not, however, sufficient to compensate for the continual dangers with which they are menaced. In 1747, a dreadful earthquake destroyed three fourths of the city, and entirely demolished the port of Callao. Never was destruction more complete, since of 30,000 inhabitants, only one escaped to relate the disastrous event. This man happened at the time to be in a fort which overlooked the harbour, when he perceived all the inhabitants, at the same moment, rush out of their houses,

in the greatest terror and consternation. The sea, as is common on similar occasions, receded to a great distance from the shore, but almost immediately returned like foaming mountains, and engulfed these unfortunate people. The next moment all became calm and tranquil, but the waves which had destroyed the city, drove a small boat into the place where this man had remained, into which he threw himself, and by this means attained a place of safety.

QUITO.

The province of Quito is perhaps one of the most singular and interesting countries in the universe. The valley of Quito is situated 1460 toises above the level of the sea, which is higher than the tops of the most elevated mountains of the Pyrenees. A double range of mountains surround this delightful valley; though under the equator, an eternal spring reigns in this favoured spot; the trees are per-

perpetually clothed with luxuriant foliage, and loaded with fruits of every species; it abounds with animals, the wool of which is employed in the manufacture of stuffs, which form its principal article of commerce with Peru. They likewise manufacture in this city cotton cloth equal in fineness to that which they receive from England. The province every where abounds with mines of gold, silver, copper, and other metals; there are also several mines of quick-silver, rubies, amethysts, emeralds, rock crystal, and of beautiful marble of different qualities.

This kingdom is intersected in all directions by innumerable rivers, of which the principal flow into that of the Amazons, while others pour their waters into the Pacific Ocean; amongst these we remark the river of *Emeraldas*, the banks of which formerly abounded with emeralds, the precious stone from which its name is derived.

But this fertile and smiling country is not the abode of safety and tranquillity. “Unfortunate people,” says the eloquent Marmontel, when speaking of the inhabitants of Quito, “Unfortunate people! whom the fertility of this deceitful land has drawn together; its flowers, its fruits, and its luxuriant harvests, cover an abyss underneath their feet. The fecundity of the soil is produced by the exhalations of a devouring fire; its increasing fertility forebodes its ruin, and it is in the very bosom of abundance that we behold engulfed its thoughtless and happy possessors.”

The earthquake of the 7th February 1797, has been justly reckoned one of the most destructive that ever occurred on our globe. A particular description of this event, as well as of the volcanos of Pichincha, and Cotopax, will be found at page 276 of the Appendix.

The labouring classes of the inhabitants of the city of Quito are industrious.

and have attained to considerable perfection in many arts and manufactures, particularly in those of woollen and cotton cloths, which they dye blue and dispose of in the different villages and cities of Peru. The number of the inhabitants of this city is estimated at 50,000, of which the majority are Mestizes, the offspring of native Indians and Spaniards. It is governed by a president, and in it is held the supreme court of justice: it is likewise a bishop's see. The inequalities of the ground on which it stands are so great, as to render the use of carriages inadmissible. The houses are constructed of brick, and seldom exceed two stories in height.

MISCELLANEOUS FACTS.

Natural Curiosities of South America.

AMONG the natural curiosities in South America may be mentioned those immense quantities of fossile bones, found in the vicinity of Santa-Fé, at 2,370 toises above the level of the sea; some of which evidently belong to the species of elephant known in Africa, while others appear similar to those discovered near the banks of the Ohio. M. Humboldt speaks of having seen similar bones, which were discovered in the Andes and in Chili; from which fact it may be fairly inferred, that those gigantic animals must have formerly existed from the shores of the Ohio to Patagonia.

From the researches of M. Humboldt it appears, that petrifications are extremely rare in the Andes; even belemnites and ammonites, so common in Europe, are there wholly unknown. Along the shores of Carraccas, this indefatigable naturalist found many shells recently petrified, and resembling those in the

neighbouring sea. In the plains of the Orconoko some trees have also been found petrified, and converted into a hard stony substance.

Father Feuillée, describing in his journal the warm springs of Guancavelica observes, that the inhabitants of this canton set apart those waters which are strongly impregnated with calcareous particles, to cool, when they deposit a sediment which, being received into vessels prepared for the purpose, soon acquire the hardness of stone; and that it is with this stone their houses are constructed.

But the greatest natural curiosity perhaps in South America is the skeleton of a quadruped discovered under ground in Paraguay. The form of the head, and the proportions of the body, bear some affinity to those of the sloth, but its length is twelve feet, from which, and other circumstances, it should seem to belong to a gigantic species which is probably now extinct. An accurate description of the *Megatherium* is given by M. Cuvier in the Annals of the Museum of Natural History, from which it appears, that it is only furnished with molares, but is destitute of incisive or canine teeth.

On the Mountains.

NEXT to the extent of the New World, (observes Dr. Robertson) the grandeur of the objects which it presents to view, is most apt to strike the eye of an observer. Nature seems to have carried on her operations upon a larger scale, and with a bolder hand, and to have distinguished the features of this country with a peculiar magnificence.

The mountains of South America, which may be divided into three kinds, are much superior in height to those of the other divisions of the globe.

The great chain of the Andes runs through the whole Continent, from north to south; it arises near the Straits of Magellan, and, following the direction of the Pacific Ocean, crosses the Kingdoms of Chili and Peru, seldom receding more than 36 miles from the coast. The broadest part of this chain is in the vicinity of Potosi and lake Titicaca; near Quito, under the equator, the continuation of this range rises to a prodigious altitude, forming the highest mountains on the surface of the

globe. At Popayan, it terminates and divides into several branches, two of which, in particular, are very remarkable; the one runs to the Isthmus of Darien, the other passes between the Oroonoko and the river Madeleine and approaching the Caribbean sea, to the east of the lake Maracaybo, it pursues the direction of the coast, and appears to stretch, under the sea, as far as the island of Trinidad.

Under the second division of mountains in South America, are comprehended those of Brazil, which form rather a cluster than one continued chain. The centre of this cluster appears near Minas-Geracs; from this point there proceeds one chain towards the north, which terminates at Cape Royme; another pursues a southern direction along the coast from Rio Janeiro to Rio St. Pedro; lastly, a third chain, that of Matogropo, extends towards the Campos-Parefis, a large reservoir of water, which, during the rainy season, empties itself into the Amazons and La Plata.

The third division of mountains is composed of those which arise near lake Parima, and form the centre of Guiana. This central point has not hitherto been sufficiently explored; very

little also is known of the chain which appears to stretch eastward towards Cape North; but some important information has been furnished us by Don Santos, Don Solano, and M. de Humboldt, respecting the chain which extends toward the Oroonoko. This series, according to them, is extensive, but not very elevated. To the south-west it is lost in an extensive plain, where the waters of the Oroonoko and those of the Amazons form communications, particularly with a branch of the river Casiquiari. This circumstance alone may serve to show, that there does not exist one uninterrupted chain to the Andes, as some might be led to infer, from one of the letters of Humboldt, on this subject. There can, in fact, only be an abrupt descent from one plain to another; in which way are formed, it should seem, the cataracts of the Oroonoko.

Thus, it is evident, that the three extensive plains, viz. that through which the Oroonoko flows, that which the Amazon crosses, and that which is watered by La Plata, are in contact with each other. Hence it would not be a difficult undertaking to establish a communication, by means of navigable canals, from

the mouth of the Oroonoko to Buenos Ayres.

To the general view of the configuration of the American mountains, may be added some details, which we owe to the indefatigable labours of several distinguished travellers, particularly Condamine, Bouguer, and Humboldt.

In the mountainous chain which borders the northern coast of Terra Firma, is situated the lake of Valencia, which particularly attracted the attention of M. Humboldt, by whom we are informed that it exhibits a similar appearance to the celebrated lake of Geneva, with this difference, that it is embellished with all the luxuriance of vegetation peculiar to the torrid zone. The height of this range is estimated at from six hundred to eight hundred toises above the level of the sea. The plains, which extend to its base, are from 100 to 260 toises. But there are detached mountains, which rise to a prodigious height; for example, the altitude of *Sierra Nevada* of Merida is 2,350, and that of the *Silla* of Carraccas 2,316 toises. Their summits are covered with perpetual snows, and from them pro-

ceed torrents of hot liquefied substances, sometimes attended with earthquakes. This chain is more precipitous towards the north than to the south; in the *Silla* there is a dreadful precipice, upwards of 1,300 toises in height.

The rocks of this chain are composed of *gneiss* and *micaceous schistus*, as in the inferior division of the Andes; these substances are frequently disposed in strata from two to three feet in thickness, and contain large crystals of feldspath; in the micaceous schistus are often contained red garnets, as well as other matters; and in the gneiss of the mountain D'Avila, green garnets are not unfrequently found, and sometimes also nodules of granite. Towards the south the chain is partly composed of calcareous mountains, which sometimes rise to a greater height than the primitive mountains. In this range we also meet with rocks of veined serpentine bluish steatites, &c.

The chain of Guiana, or the mountains towards Lake Parima, do not rise to the same elevation as the former. According to the estimate of M. Humboldt, the mountain of Duida, near the Emeralds, is 1323 toises in