

MEXICO;

AZTEC, SPANISH AND REPUBLICAN:

A HISTORICAL, GEOGRAPHICAL, POLITICAL, STATISTICAL AND SOCIAL
ACCOUNT OF THAT COUNTRY FROM THE PERIOD OF THE INVASION
BY THE SPANIARDS TO THE PRESENT TIME.



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A HISTORICAL, GEOGRAPHICAL, POLITICAL, STATISTICAL AND
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ACCOUNT OF THAT COUNTRY FROM THE PERIOD OF THE INVASION
BY THE SPANIARDS TO THE PRESENT TIME;

WITH A VIEW OF THE

ANCIENT AZTEC EMPIRE AND CIVILIZATION;

A HISTORICAL SKETCH OF THE LATE WAR;

AND NOTICES OF

NEW MEXICO AND CALIFORNIA.

BY
BRANTZ MAYER,
FORMERLY SECRETARY OF LEGATION TO MEXICO.

IN TWO VOLUMES

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BOOK IV.

GEOLOGICAL AND GEOGRAPHICAL STRUCTURE OF MEXICO—POLITICAL DIVISIONS—POPULATION; PRODUCTIONS—MINES—AGRICULTURE; MANUFACTURES—COMMERCE—FINANCES—ARMY; NAVY—CHURCH—CONSTITUTION AND LAWS; NATIONAL CONDITION.

CHAPTER I.

GEOLOGICAL AND GEOGRAPHICAL STRUCTURE OF MEXICO—EXTENT.

ABSENCE OF ACCURACY—HUMBOLDT.—SUPERFICIAL EXTENT OF MEXICAN TERRITORY.—PHYSICAL STRUCTURE OF MEXICO—VOLCANIC MOUNTAINS—CLIMATES—TIERRAS TEMPLADAS, CALIENTES, FRIAS.—POLITICAL DIVISIONS AND BOUNDARIES OF MEXICO.—OLD SPANISH DIVISIONS—PROVINCES—INTENDENCIES—STATES—DEPARTMENTS.—NORTH BOUNDARY—PRESENT STATES AND TERRITORIES.—RIVERS OF MEXICO.—RIVERS AND LAKES OF MEXICO.

IT is unfortunate that, notwithstanding the rich mineralogical and agricultural character of Mexico, no thoroughly accurate survey or geological examination has ever been made of the whole country. There is no complete map of the territory which may be confidently relied on. The enterprise of developing Mexico, since the foundation of the colonial government by Spain has been almost entirely abandoned to private enterprise, and, consequently the valuable information, collected by individuals, either perished in their hands after it had been used for their own benefit, or, if imparted to the government, has never been united and collated with other accounts and reconnoissances which were in the hands of national authorities. A great deal was done by Baron Alexander Humboldt, during his visit to New Spain early in this century, towards gathering the geographical, geological and statistical information which was then in existence, though scattered, far and wide, over the viceroyalty, in a thousand different hands. His voluminous work is an enduring monument to his industry and talent; but there is necessarily a great deal of it that was altogether transitory in its character both on account of the political and social revolution which has

since occurred, and in consequence of the opening, by the republic, of Mexican ports to the commerce of the world.

Nevertheless, at the period of Humboldt's visit, the main bold geographical and geological features of Mexico were sufficiently well known for practical purposes, and as his descriptions have, in most cases, stood the test of criticism during near half a century, we may still safely appeal to him, and to his industrious countryman, Muhlenpfordt,^[1] as the most reliable authorities upon these topics.

According to Humboldt, Mexico presented a surface of one hundred and eighteen thousand four hundred and seventy-eight square *leagues*, of twenty-five to the degree, yet this calculation did not include the space between the northern extremity of New Mexico and Sonora, and the American boundary of 1819. Thirty-six thousand five hundred square leagues, comprising the States of Zacatecas, Guadalajara, Guanajuato, Michoacan, Mexico, Puebla, Vera Cruz, Oajaca, Tabasco, Yucatan, Chiapas, were within the torrid zone; while New Mexico, Durango, New and Old California, Sonora and a great part of the old Intendancy of San Luis Potosi, containing in all eighty-six thousand square leagues, were under the temperate zone.^[2]

A more recent, and, generally, an accurate writer,^[3] has estimated the boundaries of Mexico, prior to the treaty of 1848, at Guadalupe, between the United States and Mexico, to have embraced an area of one million six hundred and fifty thousand square miles, including Texas. By the treaty just mentioned we acquired an undisputed title to Texas, and a territorial cession of New Mexico and Upper California.

Texas is estimated to contain,	325,520	square miles.		
New Mexico	"	"	77,387	" "
Upper California	"	"	448,691	" "
			<u>851,598</u>	" " [4]

If we, therefore, deduct from the preceding estimate of one million six hundred and fifty thousand square miles, the sum of eight hundred and fifty-one thousand five hundred and ninety-eight square miles, we shall have, as the best approximate calculation, that we can now make, seven hundred and ninety-eight thousand four hundred and two square miles, for the total superficial extent of the Republic of Mexico, as at present bounded since the ratification of our recent international treaty. By that negotiation it consequently appears that we have

obtained one half the former territory of Mexico and twenty-six thousand five hundred and ninety-eight square miles besides.

The geological structure or physiognomy of Mexico is peculiar. The great Cordillera of the Andes, which traverses the whole of South America, from its southernmost limit, is exceedingly depressed at the Isthmus of Panama, where its gentle swells serve merely to form a barrier between the union of the Pacific and Atlantic. But, as soon as this massive chain enters the broader portion of North America, it divides into two gigantic *arms*, to the east and west along the shores of the Gulf and of the Pacific, which support between them a continuous lofty platform, or series of table lands, crossed, broken, and intersected by innumerable and abrupt *sierras*, some of which rise to the height of seventeen thousand feet above the level of the sea. This geological structure prevails throughout the whole of Mexico, as now bounded; for, at the Rio Grande, the southern limit of Texas, the land sinks to comparative levels, and affords channels for the numerous and important streams with which, Louisiana, Florida and Texas are abundantly irrigated. Whilst this is the case on the *northern* and *eastern* confines of Mexico, the *western* portion is still traversed by the main body of the gigantic Cordillera, which, penetrating California with its icy peaks of the Sierra Nevada, passes onward to the north until its rocky walls are lost, beyond Oregon, in the wilderness that bounds the Frozen Sea.^[5]

The reader who pictures to himself such a country will easily understand that all temperatures are gained in Mexico on the same parallel of latitude,—or that eternal heat and eternal frost are encountered in crossing the country in a straight line from Vera Cruz to the Pacific coast. It is a country hanging on the two slopes of a mountain, one of which descends to the Gulf and the other to the Western Ocean; and the traveller, in penetrating it, even by the road usually traversed by public conveyances, must attain a height of ten thousand six hundred and sixty feet, before he begins to descend into the valley of Mexico, which is, still, seven thousand five hundred and forty-eight feet above the level of the sea! Thus it is, that throughout the table lands, the geographical position, as far as latitude is concerned, is entirely neutralized by the extreme rarefaction of the atmosphere obtained by ascending through loftier regions. Humboldt graphically declares that climates succeed each other in *strata* or *layers*, as we pass from Vera Cruz to the capital, or from the capital, descend to Acapulco or San Blas on the west coast,—beholding in our varied journey, the whole scale of vegetable life. The wild abundance of vegetation on the shore of the Gulf,—its beautiful palms whose stems are wreathed by a myriad of impenetrable parasites which grow with such rank luxuriance in the hot and humid air of the tropics,—

are exchanged, as we begin to rise from the level of the sea, for hardier forest trees. At Jalapa the air is milder, though the vapors from the Gulf which concentrate and condense at about this height on the sides of the mountains, sustain the perpetual freshness of the verdure. Further on, the oak and the orange give place to the fir and pine. Here the rarefied air becomes pure, thin and perfectly transparent; but as it necessarily lacks moisture, which condenses below this region, the vegetation is neither so luxuriant nor so constantly vigorous. Great plains or basins, spread out in silent and melancholy vistas before the traveller,—many of them, cold, bleak and lonely moors, whose dreary levels sadden the heart of the spectator. The sun which comes down through the cloudless medium of an atmosphere unshielded by the usual curtain of vapor, parches and crisps the thirsty soil, whilst the winds that sweep uninterruptedly over the unbroken expanse, fill the air, during the dry season, with sand and dust. These high barren plains occupy a large portion of the centre of the country between Zacatecas, Durango and Saltillo; and such is in fact the character of large portions of the whole of Mexico, except when the comparatively level nature of the soil permits the small rivulets that filter from the Cordillera through the narrow vallies, to form themselves into rivers which may be used for irrigation. Wherever this is the case nature at once recovers her vigor under the influence of heat and moisture.

These physical features, and consequent diversities of temperature, have caused the division of Mexico, as it rises from the two Oceans, into three regions, or superficial strata, which are called, the *tierras calientes*, or *hot lands*; the *tierras templadas*, or *temperate lands*; and the *tierras frias* or *cold lands*. The *tierra caliente* covers chiefly that portion of the territory which lies on the borders of the Atlantic and Pacific; yet it is not confined exclusively to the coast, inasmuch as all those parts of Mexico in which there is heat and moisture enough to produce the fruits and maladies of the tropics, are classed under this head. The *tierra fria* comprises the mountainous districts rising above the level of the capital up to the limit of constant snow; while the *tierra templada* embraces those milder middle regions not comprehended in the two other sections. Classing them by elevation *in feet*, we may suppose that the *tierras calientes* extend to between 3,000 and 4,000 feet above the level of the sea; the *tierras templadas* to between 4 and 8,000 feet; and that the *tierras frias* embrace all the remaining portions up to the region of eternal ice.

POLITICAL DIVISIONS AND BOUNDARIES OF MEXICO.

It is, perhaps, more of historical or antiquarian interest, than of actual present

value, to recur to the ancient divisions of the viceroyalty of New Spain. Nevertheless, there are readers who are naturally anxious to trace the territorial aggrandizement as well as the recent curtailment of Mexico, and we have, therefore, thought it proper to present a picture of the limits and apportionment of the country at several periods.

The territorial limits of that region generally called NEW SPAIN, were comprised between the degrees of $15^{\circ} 58'$ and 42° of north latitude; and between $89^{\circ} 4'$ and $126^{\circ} 48' 45''$ west longitude from Paris,—calculating from the easternmost point of Cape Catoché, in Yucatan, to the extreme western limit of the land at Cape Mendocino, in California. The Gulf of Mexico and the Carribean Sea bounded this country on the east and south-east; the Pacific Ocean on the west; Guatemala on the south; and the United States, on the north. There was a multitude of islands comprehended under this territorial dominion. On the east coast of Yucatan were the isles of Holvas, Comboy, Mugeses, Cancun, Cozumel and Ubero;—in the Gulf of Mexico, the island of Bermejós and several smaller ones;—in the Pacific, the isles of Revilla-gigedo, of Maria, Cedros, San Clemente, Santa Catalina, San Nicolas, Santa Barbara, Santa Cruz, San Bernardo, San Miguel;—and in the Gulf of California, or Cortéz, the isles of Cerralvo, Espiritu Santo, San José, Santa Cruz, Carmen, Tortugas, Tiburon, Santa Iñez, and numerous insignificant islets or keys.

The limit between the United States and New Spain was defined by a treaty negotiated between the Chevalier de Onis, then Spanish minister at Washington, and John Quincy Adams, American Secretary of State, after long and learned historical as well as legal discussions of territorial rights and limits, which the student will find, at large, in the second and fourth volumes of "American State Papers," published by the government of the United States. This treaty was signed on the 22d of February, 1819, and, according to its third article, the boundary between Mexico and Louisiana, which was then ceded to the Union, commenced with the river Sabine at its entrance into the Gulf of Mexico, at about latitude 29° , west longitude 94° , and followed its course as far as its juncture with the Red river of Natchitoches, which then served to mark the frontier up to the 100th degree of west longitude, whence the line ran directly north to the river Arkansas, which it followed to its source at the 42° of north latitude,—whence another straight line was drawn upon the said 42° parallel, to the coast of the Pacific Ocean.

This line, it was supposed, would interpose a perpetual barrier of wilderness, tenanted only by Indians and wild animals, between the republic of the north and

the treasured colonies of the Spanish crown. But subsequent events have shown in the course of little more than the quarter of a century, how rapidly the population of the old world and the new has swelled beyond the limits prescribed by statesmen, until the savage and the beast have been made to yield their hunting grounds and forests for the use of civilized man.

At the earliest period of which we have any authentic information, this territory of Spain was divided into the kingdoms of Mexico, New Galicia, and New Leon; the colony of New Santander; and the provinces of Coahuila, Texas, New Biscay, Sonora, New Mexico and the two Californias. This arrangement was extremely indefinite; but, in 1776, the country was divided into twelve intendancies: Merida, Oajaca, Vera Cruz, Puebla, Mexico, Valladolid, Guanajuato, Guadalajara, Zacatecas, San Luis Potosi, New Biscay, and Sonora; and the three provinces of New Mexico, and Alta and Nueva California. The intendancy of San Luis Potosi, included New Leon, New Santander, Coahuila and Texas, and San Luis Potosi, proper;—the intendancy of New Biscay embraced the provinces of Durango and Chihuahua; and the intendancy of Sonora took in the provinces of Sinaloa, Ostimuri, and Sonora. Each intendancy was subdivided into *subdelegaciones*. Another division cut off New Spain, proper, from the *Provincias Internas*. These last named provinces included all the territory lying north and northwesterly of the intendancies of Zacatecas and Guadalajara, or the kingdom of Nueva Galicia. The "*Provincias Internas del Vireynato*," must be distinguished from the "*Provincias Internas de la Commandancia de Chihuahua*," which, in 1779, were comprised in a General-Captaincy. The two intendancies New Biscay and Sonora, then part of San Luis Potosi, belonged to the provinces of Coahuila and Texas. The interior provinces of the viceroyalty were the intendancy of San Luis Potosi, including the provinces of New Leon and New Santander. The *actual* kingdom of New Spain was composed of the intendancies of Mexico, Puebla, Vera Cruz, Guadalajara, Valladolid, Zacatecas, Guanajuato, Oajaca, Merida, and San Luis, proper, and the two Californias. In the year 1807, the "*Provincias Internas*" were divided into *western* and *eastern*, and two general commandancies created.

1st. The *Provincias Internas Occidentales*, or *Western*, were the intendancies of Sonora, Durango, with Chihuahua (new Biscay); the province of New Mexico, and the two Californias.

2d. The *Provincias Internas Orientales*, or *Eastern*, were, Coahuila, Texas, New Santander and New Leon.

Such were the main territorial divisions of New Spain during the concluding years of the Spanish government,—whilst the revolution was in progress,—and until the nineteen provinces of the empire of Iturbide were erected by the federal constitution of 1824 into the nineteen States of Chiapas, Chihuahua, Coahuila and Texas, Durango, Guanajuato, Mexico, Michoacan (Valladolid), New Leon, Oajaca, Puebla, Queretaro, San Luis Potosi, Sonora and Sinaloa, Tabasco, Tamaulipas, Vera Cruz, Jalisco (*Guadalajara*), Yucatan, and Zacatecas,—and the TERRITORIES of Old and New California, Colima, New Mexico, and Tlascala. In 1830 the State of Sinaloa and Sonora, separated into its natural divisions, since which each has been a distinct, independent State. In 1836, the revolution which destroyed this federal constitution, changed these STATES into DEPARTMENTS; by which name they were recognized until the month of May, 1847, when the old federal constitution of 1824, with some amendments, was reenacted, and the departments once more converted into states; whilst provision was made for the creation of the new *state of Guerrero*, to be composed of the districts of Acapulco, Chilapa, Tasco and Talpa, and the municipality of Coyucan—the three first of which pertain to the state of Mexico, the fourth to Puebla, and the fifth to Michoacan,—provided these three states gave their consent within three months from the 21st of May, 1847, at which period the act reforming the constitution of 1824 was passed.

The war between Mexico and the United States was happily terminated by the treaty negotiated at the town of Guadalupe, by Mr. Trist, on the 2d of February, 1848; and, by this compact, the limit between our respective territories was greatly changed from that which had been fixed by the treaty with Spain in 1819. According to the convention of Mr. Trist, the boundary between the republics commences in the Gulf of Mexico, three leagues from land, opposite the mouth of the Rio Grande, otherwise called Rio Bravo del Norte, or opposite the mouth of its deepest branch, if it should have more than one branch emptying directly into the sea; from thence it passes up the middle of that river, following the deepest channel, when it has more than one, to the point where it strikes the southern boundary of New Mexico, thence, westerly, along the whole southern boundary of New Mexico, which runs north of the town of El Paso, to its western termination;—thence northward, along the western line of New Mexico, until it intersects the first branch of the river Gila, or, if it does not intersect any branch of that river, then to the point on the said line nearest to such branch, and then in a direct line to the same;—thence down the middle of the said branch and of said river, until it empties into the Rio Colorado;—thence across the Rio Colorado, following the division line between Upper and Lower California, to

the Pacific Ocean.

It will be perceived by inspecting the map that this new boundary cuts off a large portion of northern Mexico, and gives us the valuable territories of New Mexico and Upper California, together with an undisputed right to the enjoyment of Texas, which had previously been united to the North American confederacy by international contract, after the independence of Texas had been recognized by foreign nations and maintained by its own people.

The states of the Mexican Republic and its territories are, consequently, under the existing constitution, the following:

STATES.

- | | | |
|----------------|---------------------------------------|----------------------|
| 1. Coahuila. | 8. Puebla. | 15. Durango. |
| 2. Tamaulipas. | 9. Mexico, with the Federal District. | 16. New Leon. |
| 3. Vera Cruz. | 10. Michoacan. | 17. Zacatecas. |
| 4. Tabasco. | 11. Jalisco. | 18. San Luis Potosi. |
| 5. Yucatan. | 12. Sonora. | 19. Guanajuato. |
| 6. Chiapas. | 13. Sinaloa. | 20. Queretaro. |
| 7. Oajaca. | 14. Chihuahua. | 21. Guerrero. |

TERRITORIES.

- | | | |
|----------------------|------------|-------------|
| 1. Lower California. | 2. Colima. | 3. Tlascal. |
|----------------------|------------|-------------|

RIVERS AND LAKES OF MEXICO.

I. ON THE EASTERN COASTS.

1st. The RIO GRANDE DEL NORTE, or RIO BRAVO, which is the largest of all Mexican streams, and rises, in about $40\frac{1}{2}^{\circ}$ north latitude, and 100° west longitude, from Paris, in the lofty sierras which are a continuation of the gigantic chain that forms the spine of our continent. It pursues a southeasterly direction towards the Gulf of Mexico, and traverses a distance of nearly eighteen hundred miles.

2d. The RIO DEL TIGRE, rises in the state of Coahuila, and passes, in a southward and easterly direction, through the states of New Leon and Tamaulipas, and finally, after traversing about three hundred miles, debouches in the Gulf of Mexico.

3d. The RIO DE BORBON, or RIO BLANCO. The sources of this stream are in New Leon, whence it runs towards the east, and, crossing the state of Tamaulipas,

falls in the LAGUNA MADRE.

4th. The RIO DE SANTANDER, rises in the state of Zacatecas, crosses the state of San Luis Potosi, passes by Tamaulipas, winds to the north, and falls, near the bar of Santander, into the Gulf.

5th. The RIO DE TAMPICO, is formed by the union of the rivers PANUCO and TULA. The upper source of the PANUCO is in the neighborhood of the city of San Luis Potosi, the capital of the state of that name. Near half a league north north-east of this city, in the valley de la Pila, rises a spring which is protected by a basin of fine masonry, and conveyed by an aqueduct to town. Several other streams, coming from the south-west, unite with this source and form the PANUCO. West of the first of these streams, swells up the mountainous ridge which divides the waters of Mexico between the Pacific and the Atlantic. The Panuco courses eastwardly,—and, passing rapidly through the LAGUNA CHAIRÉL, unites with the TULA. This latter stream mingles the waters of the rivulets Tepexi, Tequisquiac, and Tlantla, in the northern part of the state of Mexico; and receiving, by the canal of Huehuetoca, the water of the Rio Quautitlan, it winds onward through the valley of Tula, and near the limits of the states of Queretaro and Vera Cruz, until it joins the Panuco. These united rivers receive in the state of Tamaulipas, the name of the RIO DE TAMPICO, which debouches, finally, in the Gulf of Mexico.

6th. The RIO BLANCO rises in the state of Vera Cruz, near Aculzingo, at the foot of Citlaltepétl, or the mountain of Orizaba. It courses onward through a varying and rough channel among the mountains and plains, until it is lost in the lagunes near Alvarado.

7th. The RIO DE SAN JUAN. The sources of this river lie partly in the metallic mountains of Ixtlan, in the state of Oajaca, and partly in the neighborhood of Tehuacan de las Granadas. Many large, but wild streams, spring up in these mountain regions, and form the broad but shallow RIO GRANDE DE QUIOTEPEC. This river, after winding through the valley of Cuicatlan, receives, from the south, the large stream of LAS VUELTAS; and all these unite to form the RIO DE SAN JUAN, which pursues its eastern course until it approaches the coast near Alvarado, when it divides into two arms. One of these, named TECOMATE, joining the COSOMALOAPAN and PASO, form the large lagunes of TEQUIAPA and EMBARCADÉRO,—whilst the other arm, by a different course, also debouches in the same lagunes.

8th. The RIO DE GUASACUALCO, rises at about $16^{\circ} 58'$ of north latitude, and $96^{\circ} 19'$ west longitude, from Paris, in the mountains of Tarifa, and pours onward towards the east, receiving accessions from a great number of small mountain

streams and rivulets, until it falls into the Gulf of Mexico.

9th. The RIO DE TABASCO, or RIO DE GRIJALVA, or RIO GUICHULA, rises in the mountains of Cuchumatlanes towards the centre of Guatemala, and falls into the gulf at the port of Tabasco.

10th. The RIO DE USUMASINTA, rises also in Guatemala, and debouches in the LAGUNA DE TERMINOS.

II. SMALL EASTERN COAST STREAMS.

RIO GARCES.	RIO ANTIGUA.
RIO DE TUSPAN.	RIO DE JAMAPA, OR MEDELLIN
RIO DE CAZONES.	RIO AQUIVILCO.
RIO DE TENISTEPEC.	RIO DE TONALA.
RIO DE JAJALPAM, OR TECOLUTLA.	RIO DE SANTA ANNA.
RIO DE NAUTLA.	RIO DE CAPILCO.
RIO DE TLAPACOYAN.	RIO DE DOS BOCAS.
RIO DE PALMAR.	RIO DE CHILTEPEC.
RIO DE MIZANTLA.	RIO DE SABOJA.
RIO DE MAGUILMANAPA.	RIO DE CHAMPOTON.
RIO DE YEGUASCALCO.	RIO DE CHEN.
RIO DE ACTOPAN.	RIO DE ESCATALLO.
RIO DE CHUCHALACA.	RIO DE SAN FRANCISCO.
RIO DE SAN ANGEL.	RIO DE SILAN.
RIO DE SAN CARLOS.	RIO CEDROS.
RIO CONIL.	RIO DE LA ASCENSION.
RIO BOLINO.	RIO SAN JOSÉ.
RIO NUEVO.	RIO HONDO.
RIO BACALAR.	

Many of these streams are, in fact, not entitled to the name of rivers, though a few of them are important, whilst all are valuable to some extent for agriculture, transportation, irrigation, or occasional water power.

III. RIVERS ON THE WEST AND SOUTH COAST OF MEXICO.

1st. RIO DE CHIMALAPA, sometimes called also, RIO DE CHICAPA, rises in the forests and mountains of Tarifa in about $16^{\circ} 43'$ north, $96^{\circ} 33'$ west from Paris, and debouches in the Pacific, after passing the village of Tehuantepec. The rivers OBSTULA, NILTEPEC or ESTEPEC,—DE LOS PERROS or JUCHUITAN, ARENAS, LAGARTERO, OTATES, are small coast streams falling into the lagunes that border the ocean.

2d. The RIO DE TEHUANTEPEC is formed by the union of two streams, one of which rises about fifty leagues west north-west of Tehuantepec, near the village of San Dionisio, whilst the other springs from the mountains of Lyapi and Quiégolani, in the lands of the Chontales. The two unite seven leagues north-west of Tehuantepec; and, passing by the village of that name, this river finally pours into the Pacific, near the small port of Las Ventosas.

3d. The RIO VERDE rises in the Upper Misteca, eight leagues north of Oajaca, and falls west of the Cerro de la Plata and of the Lagunas of Chacahua, into the Pacific. On the coast of Oajaca there are many smaller streams and rivulets, such as the CHACALAPA, the MANIALTEPEC, the COLOTEPEC, the SANTA HELENA, the CAPUTITA, the COMUN, the AYUTLA, the CHICOMETEPEC and the TECOYAMA,—the last of which is the boundary between the states of Oajaca and Puebla.

4th. The RIO DE TLASCALA, or RIO DE PAPAGALLO, has its source in the vicinity of the town of Tlascala, in the mountain Atlancatepetl; passes through the state of Puebla, receives the RIO MEZCALA, out of the state of Mexico, and enters the Pacific south of the village of Ayulta.

5th. The RIO DE ZACATULA, or RIO BALSAS, originates in the valley of Istla, in the state of Mexico, and after winding west south-westerly, it receives the RIOS ZITACUARO, de CHURUMUCO, and del MARQUEZ out of the state of Michoacan, and passes into the Pacific.

6th. RIO DE AZTALA rises two leagues south-west of the village of Coalcoman, receives the AGAMILCO, MARUATO and CHICHUCUA, and flows into the sea between Cachan and Chocóla.

7th. RIO DE TOLOTLAN, RIO GRANDE DE SANTIAGO. This is one of the longest and most important of Mexican rivers, formed by the junction of the LAXA and LERMA, near Salamanca, in the state of Guanajuato, and falls into the Pacific near San Blas after a course of about two hundred leagues. The Rio Bayóna or Cañas is an important stream on the coast near the boundary between Jalisco and Sinaloa.

8th. The RIO DE CULIACAN rises in the north of the state of Durango, where it is called RIO SANZEDA, thence it takes its course towards the north-west, receiving some smaller streams, and then passing by the town of Culiacan, falls into the Gulf of California. The RIO DE ROSARIO, RIO DE MAZATLAN, debouche in the same gulf. The rivers PIASTLA, ELOTA, TAVALA, EMAYA, MOCORITO, SINALOA or OCRONI, AHOME, are small streams on the coast of Sinaloa.

9th. The RIO DEL FUERTE has its source in the metalliferous mountains of Batopilas and Uruachi, in the state of Chihuahua, where it is known as the river

BATOPILAS. It takes a westerly course across the state of Sinaloa about 27° north;—it receives a number of other streams, on the western slope of a range of the Cordilleras, and finally flows into the California Gulf.

10th. The RIO MAYO is the boundary stream between the states of Sinaloa and Sonora; at its mouth in the Gulf of California is the small port of Santa Cruz de Mayo, or Guitivis.

11th. The RIO HIAQUI, or YAQUI, rises on the west slope of the Sierra Madre, near the village Matatiche in the state of Chihuahua, whence its course is west south-west, across the state of Sonora; it receives the RIO GRANDE DE BAVISPE which rises in the state of Chihuahua, and also the RIOS OPOSURA and CHICO, and, finally, is lost in the Gulf of California, at about $27^{\circ} 37'$ north latitude.

12th. RIO DE GUAYAMAS. This river rises at San José de Pimas, in latitude $28^{\circ} 26'$ north, its course is west south-west, and its mouth in the Californian Gulf, at the fine and favorite harbor of San-Jose de Guayamas in latitude $27^{\circ} 40'$.

13th. The RIO DE LA ASCENSION rises at about $31^{\circ} 40'$ north and $112^{\circ} 37'$ west longitude. On its south-westerly course it receives the tributary waters of the RIO DE SAN IGNACIO and falls at about $30^{\circ} 20'$ north into the Gulf of California.

14th. RIO DE COLORADO. This important stream is formed of the river RAFAEL in about $40^{\circ} 15'$ north, and $110^{\circ} 50'$ west longitude from Paris, on the western declivity of the Sierra de las Grullas, whence it takes a south-west course and receives, at the foot of the Monte de Sal Gemme, the RIO DE NUESTRA SEÑORA DE DOLORES, which springs about $1^{\circ} 30'$ west of the RAFAEL, in the Cerro de la Plata; and, thus, receiving the accretions of a number of other streams, it courses onward until it is lost at the head of the Gulf of California. The whole length of the COLORADO is estimated at about two hundred and fifty leagues. For about fifty leagues it is navigable by small sea going vessels; and, for about a hundred leagues higher, it may be traversed by large boats. The sea is said to ebb and flow between thirty-five and forty leagues beyond the mouth of this river. The sources of the ARKANSAS and of the RIO GRANDE DEL NORTE lie very near those of the COLORADO; so that the waters of the Gulf of Mexico and of the Gulf of California are nearly united by these streams across our continent.

15th. The RIO GILA rises in the Sierra de los Mimbres, and descends to the south, through a small and mountain bound valley until it unites with the Colorado.

IV. LAKES, LAGUNES, &c.

1. TIMPANOGOS and TEYUGO or SALADO.

2. LAGUNAS DE BAVISPE, SAN MARTIN, DE GUZMAN, DE PATOS, DE ENGINILLAS and

DE CASTILLA in the state of Chihuahua.

3. The LAGUNA DE CAYMAN in the BOLSON DE MAPIMI.

4. The LAKES of PARRAS and AGUA VERDE on the west boundary of Coahuila.

5. The LAKES of CHARCAS, CHAIREL and CHILA in the state of San Luis Potosi.

6. Nine small SODA LAKES in Zacatecas.

7. The large and important LAKE OF CHAPALA and others in Jalisco.

8. PAZCUARO, CUIZCO, ARARON, HUANGO, TANGUATO, and HUANIQUO in Michoacan.

9. The five large LAKES of TEZCOCO, CHALCO, XOCHIMILCO, SAN CRISTOVAL and ZUMPANGO in the valley of Mexico.

10. The LAKES of ATENCO, COATETILCO, and TENANCINGO in the valley of Toluca.

11. A number of small ones in Oajaca.

12. The LAKES of TAMPICO, CATEMACO, ALIJOYUCA, TENANGO, CHIAPA on the gulf coast or near it.

13. The LAKE of YURIRAPUNDARO in Guanajuato.

CHAPTER II.

MEXICAN CLASSES.

DIVISION OF POPULATION—WHITES—INDIANS—AFRICANS—LEPEROS—RANCHEROS—CHARACTERISTICS—INDIFFERENCE—PROCRASTINATION.—FEMALES—BETTER CLASSES—THEIR SOCIAL HABITS—ENTERTAINMENTS.—LEPEROS—THEIR HABITS—EVANGELISTAS—THIEVING.—THE RANCHERO—HIS CHARACTER AND HABITS.—THE INDIAN RACE—AGRICULTURISTS—TRADITIONAL HABITS ADHERED TO—IMPROVIDENCE—SUPERSTITION—DRUNKENNESS—INDIAN WOMEN—SERVILE CONDITION—LOCAL ADHESIVENESS—PEONAGE—WHIPPING.—PLANTER-LIFE—ITS SOLITUDE AND RESULTS.—MUHLENPFORDT'S CHARACTER OF THE INDIANS.—INDIAN TRIBES AND RACES IN MEXICO.—TABLE OF CASTES IN MEXICO.

AN adequate and proper classification of the Mexican population, for descriptive purposes, may be made under the general heads of: Whites, Indians, Africans, and the mixed breeds, who are socially sub-divided into—1st, the educated and respectable Mexicans dwelling in towns, villages or on estates; 2d, the Leperos; and 3d, the Rancheros.

The whites are still classed in Mexico as *creoles*, or, natives of the country; and *gachupines* and *chapetones*, who are Spaniards born in the Peninsula. The Spanish population yet remaining in the country, its immediate descendants, and the emigrants from Spain, form a numerous and important body. Her Catholic Majesty's Consul General in Mexico derives a lucrative revenue from supplying this large class of his countrymen with annual "protections," or "*cartas de seguridad*," granted by the Mexican government, but procured from it through the instrumentality of this functionary.

The Spaniard no longer holds his former rank in the social scale of the ancient colony. There are many wealthy mercantile families in the republic, who owe allegiance to the crown; but among the mechanical classes there are numbers of poor Castilians whose fate would be melancholy in Mexico, were they not succored and protected by their wealthier countrymen.

The Mexican native, in whose veins there is almost always a few drops of indigenous blood, is commonly indolent and often vicious. The bland climate and his natural temperament predispose him for an indulgent, easy and voluptuous life; yet the many

RANCHEROS. RANCHEROS.

faults of his character may be fairly attributed to the want of education, early self-restraint and the disordered political state of his country which has produced a bad effect upon social life. With quick and often solid talents, the Mexican

citizen is not devoted, early in his career, by thoughtful parents, either to intellectual pursuits or to that mental discipline which would regulate an impulsive temperament or fit him for the domestic, scientific, or political position he might attain in other countries, under a different social *régime*. He recollects that in the best days of the colony his family had been distinguished, powerful and rich, and he finds it difficult, in his present impoverished state, to forget this traditional position. Accordingly, he acts upon the memorial basis of the past, as if it were still within his grasp or control. This renders him thriftlessly improvident. Mexicans still speak of the epoch when they or their parents "swam in gold," or dispensed ducats to the dependants on whom they now reluctantly bestow coppers. Besides this, their indolent indifference, which almost amounts to Arab fatalism, makes them not only subservient to the past, but idolaters of a hope which is quite as fallacious. According to their belief, better times are continually approaching. Something, they imagine, will shortly occur to improve their broken or periled fortunes. "*Paciencia y barajar*,"—"patience and shuffle the cards," is a maxim on the lips of every one who is overthrown by a revolution, loses his friends, incurs censure, or finds himself starving for want of a dollar. If you enquire as to their prospects, their friends, their interests, or, indeed, in regard to almost any subject that requires some reflection for a reasonable reply,—they answer with the habitual—" *Quien Sabe!*"—"who can tell!" which in the vocabulary of a common Mexican is the—" *quod erat demonstrandum*" of any social or political problem.

Such qualities and habits do not prepare a nation for resolute action upon progressive principles. We consequently find, throughout Mexico, an universal predisposition to *dependence* upon others, or to a blind reliance upon *chance*. The drum and the bell which ring forever in our ears in Mexico, apprise us that immense numbers who possess sufficient influence to introduce them into the army or the church, repose comfortably under the protection of those two eleemosynary institutions. Such is, moreover, the case in all the administrative departments of the government. Indeed, the state seems only to be constitutionally organized in order to supply the wants of those it employs, or to found a genteel hospital in which intriguing idlers are supported either at the expense of industrious men or by contracting national loans which may finally overwhelm the republic.

The church, the army, and the government, are thus three permanent resources for young persons who are too indolent to engage in mercantile pursuits, or too proud to stoop from their hereditary family rank either into trade or the workshop.

Bad as are these social features, there is another which may be reckoned still worse. There are thousands in the republic whose daily reliance is exclusively on fortune, and for whom the turn of a card decides whether they are to return to their comfortless families with a plentiful dinner, or without a cent upon which they may, to-morrow, recommence their contest with luck at the gambling table. This is a dreadful vice when it becomes habitual among a naturally susceptible, thriftless and procrastinating people like the Mexicans. Prodigal not only of their gold but of their time, they squander the latter without ever reflecting that it is the capital of industrious men. They regard business as a burden, and put off, whenever they are permitted, a debt, an engagement, or a duty, "*hasta manana*"—until to-morrow!

We are perhaps wrong in alleging that every duty is procrastinated, and life given up exclusively to pleasure; for the genuine Mexican is strict and punctual in the performance of, at least, the externals of religion. The pious observances of the church, are, however, even more generally rigorous among the women than the men.

The Mexican females in the upper ranks are badly, if at all, educated. Few foreign modern improvements have been engrafted on the old Spanish system of teaching, whilst the subjects taught, and the text-books used, are quite as primitive. At home, the Mexican lady is obsequiously served by devoted domestics, but is brought up without a personal knowledge of a housewife's thrifty duties. The evil influence of such vacant minds upon the male sex must, necessarily, be very great. If the intellect does not suggest topics for conversation, it is natural that the instincts will supply the deficiency. Thus it is that the life of large numbers of Mexican men is summed up in devotion to their horses, their *queridas*, and their favorite gambling tables; whilst the existence of Mexican women is as easily divided between mass, meals, dress, driving, and the theatre.

Yet we will not be tempted by an epigrammatic sentence, into condemnation of the whole of Mexican society. It would be unjust to convey an unqualified idea that such are the characteristics of the entire white race whose birth or rank entitle it to an exalted social position. Nevertheless, it is a true picture of perhaps the most numerous class. The Mexican revolution—its struggles, endurance and success,—disclose many manly features of national character, and prepare us to appreciate that patriotic and cultivated body of men and women who form the national heart and hope of the republic.

The Mexicans have been so harshly dealt with in the descriptions of

foreigners, that they are not always disposed to welcome them beyond their thresholds. This arises neither from fear nor jealousy, but from the natural distrust of persons whom they imagine visit their country with but little sympathy for its institutions and less consideration for their personal habits. Nor is this repulsiveness to strangers exhibited so much in the fashionable circles of society as it is among that loftier description of persons we have already referred to. Yet there are occasions upon which the houses and hearts of this very class are cordially opened to intelligent and discreet foreigners, and it is then that an opportunity is afforded of seeing the best phases of Mexican character. The fine benevolence of ancient friendship, the universal respect for genius, a competent knowledge of the laws and institutions of other countries, a perfect acquaintance with the causes of Mexican decadence, and a charming regard and care for all those domestic rites which cement the affections of a home circle, may all be observed and admired within the walls of a Mexican dwelling.

When a stranger is thus received in the confidential intimacy of a household, there is no longer any restraint put upon the inmates in his presence. The courteous expressions which are ordinarily used in the commerce of society, and whose formal but excessive politeness have induced careless men to imagine the Mexicans insincere, are now only expressive of the most cordial devotion to your interests and wants. "Mi casa esta á su disposition," "my house is at your disposal," means exactly what it says. You are at home.

As the Mexicans are not a people addicted to the same mode or extent of informal social intercourse among themselves as the Germans, the English, or the Americans, it is not strange that they should guard their doors so carefully against foreigners who visit their country for the purpose of acquiring fortunes rapidly, in order to enjoy them in the society of their native land. The reception of a stranger upon an intimate footing is therefore the greatest compliment he can receive from the meritorious classes. It is not alone with public affairs or purely intellectual discussions that we are entertained in such re-unions of cultivated society. In the free conversation of the intimate circle there is always a cordial display of sincere interest for the welfare of each other. The aspirations of the rich or the hopes of the poor, are always tenderly discussed. There is abundant evidence of *heart*; and, even after years have elapsed, and the sojourner in Mexico has returned to his home, he will find by his correspondence that he is still remembered by the intelligent friends, who made him forget that he was "a stranger in a strange land."

The Mexicans have generally supposed that it was impossible to entertain their friends without an extravagant expenditure which was perhaps the standard

that measured the value of their guests. They have still to learn that a simple style and a cordial welcome together with the refined conversational intercourse are more valued than imported champagne and "*pâté de foie gras*." As soon as their society becomes less old fashioned and formal, they will find themselves more comfortable in the presence of strangers. In Mexico, as in all countries, there are notorious specimens of egotism, haughtiness, ill-breeding, and loose morals, both among men and women; and although we find these worthless elements floating like bubbles on the surface of society, they must not be regarded as exclusive national characteristics. "A nation, in which revolutions and counter-revolutions are events of almost daily occurrence, is naturally prolific in desperate and crafty political adventurers;" but the evils that have been begotten by the past, must not be considered as permanent.

The *Lepero* is a variety of the Indian, and combines in himself most of the bad qualities of the two classes from whose union he derives his being. He is the inhabitant of cities, towns or villages, and, in Mexico, what the *lazzaroni* are in Naples. Neither white, black nor copper colored; neither savage nor civilized; neither an agriculturist nor a mechanic, the *lepero* occupies an equivocal position upon the boundaries of all these characters. His existence is altogether a matter of chance. He has scarcely ever a permanent home. His wife and children, or his *amiga*, are lodged on the ground floor of a hovel in the outskirts of the town, from which he is often expelled in consequence either of his poverty, intemperance, or quarrelsome behavior. If unmarried, he finds a resting place, in these delicious climates, on a mat beneath the sky, or within the friendly shelter of a wall

FANDANGO.

FANDANGO.

or portico. He is devoted to *pulque* and music; for, whilst he drains his social glass in the *pulqueria* amid a crowd of companion *leperos*, he is ever ready to sing a stave or make a verse in which a spice of wit or satire is certainly found. When he has earned a dollar by toil, he quits his labor even before it is completed, in order to spend his enormous gain. His wants are so small that he may be liberal in his vices. He regards work as an odious imposition upon human nature; and, created merely *to live*, he takes care only of to-day leaving to-morrow to take care of itself. Prudence, he thinks, would be a manifest distrust of Providence. His food, purchased at the corner of a street from one of

the peripatetic cooks, consists of a few *tortillas* or corncakes, steeped in a pan of Chili peppers compounded with lard. A fragment of beef or fowl sometimes gives zest to the frugal mess. His dress, of narrow cotton or leather trowsers, and a blanket which is at once, bed, bedding, coat and cloak,—is worn season after season without washing, except during the providential ablutions of rain, until the mingled attrition of dirt and time entirely destroy the materials. An occasional crime, or quarrel, which is terminated by a resort to knives and copious phlebotomy, sends him several times every year to the public prison, where he is faithfully visited, fed and consoled by his spouse or *amiga*. As he passes along the streets with the manacled chain-gang to sweep the town, he begs a *claco* with such bewitching impudence that the man who refuses the demanded alms must be insensible to humor. Like the Indian, he is remarkably skilful in imitation, and makes figures of wax or rags, which are not only singularly faithful as portraits, but possess a certain degree of grace that is worthy of an artist. Some of the tribe read and write with ease and even elegance. Among this class are to be found the *evangelistas* or letter writers, who, seated around the *portales* and side walks of the *plaza*, are ready, at a moment's notice, to indite a sonnet to a mistress, a petition to government, a letter to an absent husband, or a wrathful effusion to a faithless lover. Another branch of this nomadic horde is engaged in the profitable occupation of "thieving," which requires no capital in trade save nimble fingers, rapid action, and a bold look with which detection may be defied. The narrow streets and lanes of towns are the theatres in which these accomplished rogues perform. No man in Mexico dares indulge in the luxury of carrying a handkerchief in his pocket. The attempt would be useless, for a *lepero* would appropriate it before the stranger had walked a square. Upon one occasion a hat was actually taken off an Englishman's head by a *lepero* in a dense crowd; but the act was so adroitly done, that the jolly foreigner joined in the shout of laughter with which the hero was hailed as he vanished among the masses. Should the priest pass at such a moment with the *host*, on his way to the chamber of a dying citizen, the *lepero* would fall on his knees with the rest of the townspeople, yet whilst he beat his breast with one hand, he might be seen to keep the other tenaciously in his victim's pocket. If caught in the felonious act, which rarely happens, the *lepero* takes the inflicted blows or choking with craven humility, and, whilst he shouts—"ya esta, Senor amo,—ya esta!" "enough, my master, oh enough!" he is seeking for another opportunity to pilfer his punisher's watch or purse, during the conflict.

Such is the Mexican *lepero*. The sketch may seem broad or even caricatured

to those who are unacquainted with the country, but its accuracy will be acknowledged by all who have resided in Mexico and been haunted by the filthy tribe.

The RANCHERO comes next in our classification of the Mexicans. He is a small farmer, or *vaquero*, who owns or hires a few acres on which he cultivates his corn or grazes his cattle. He is not an Indian, a white man, an African, or a lepero, yet he mixes the qualities of all in his motly character. He is a person of lofty thoughts and aspirations;—a devoted patriot;—a staunch fighter in all the revolutions whenever *guerillas* are required;—a hard rider and capital boon companion over a bottle or in a journey among the mountains.

On his small estate he devotes himself to the cultivation of the ground, or leaves this menial occupation to his family whilst he goes off to the wars or to carousals and *fandangos* in the neighboring village *pulquerias*. He is an Arab in his habits, and especially in his love and management of the horse. Dressed in his leather trowsers and jerkin; with his serape over his shoulders, his broad brimed and silver corded *sombrero* on his head; his heels armed with spurs whose three-inch rowels gleam like the blades of daggers; his sword strapped to the saddle beneath his *armas de agua*, and, grasping his gun in his hand,—the Ranchero is ready, as soon as he mounts, to follow you for months over the republic. He is the *nomade* of the country, as the *lepero* is of the town. His devotion to his animal is unbounded. The faithful quadruped is his best friend and surest reliance. His *lazo* lies curved gracefully in festoons around the pommel of his saddle. Thus, with his trusty weapons and his horse, the mounted *ranchero* is at home in the forest or in the open field; on hill side or in valley. Few riders, elsewhere, can equal him in speed or horsemanship; and few can excel him as a herdsman, a robber, an enemy, or even a *friend* whenever you hit his fancy or are willing to understand his character and pardon his sins.

INDIAN RACE OF MEXICO.

Notwithstanding the brilliant pages which Aztec history contributed to the annals of America and the civilization which prevailed, not only in the valley of Mexico, but also in other portions of the territory now within the limits of the republic, we find that the indigenous descendants of these heroic and intelligent ancestors have degenerated to such a degree that they are at present in general, fitted only for the servile toils to which they are commonly and habitually devoted. Three hundred years of oppression may have done much to produce this sad result. Without union among the tribes; without community of feeling,

language or nationality; the Indians became an easy prey to the Spaniards after the conquest of the great central power. Old prophecies were accomplished, according to the Aztec belief, by the arrival of the Spaniards. "It is long since we knew from our ancestors,"—said Montezuma to Cortéz,—"that neither I nor all who inhabit these lands were *originally* of them, but that we are strangers, and came hither from distant places. It was said that a great lord conveyed our race to these regions and returned to the land of his birth, and yet, came back once more to us. But, in the meantime, those whom he first brought had intermarried with the women of the country; and when he desired them to return again to the land of their fathers they refused to go. He went alone; and ever since have we believed, that from among those who were the descendants of that mighty lord, one shall come *to subdue this land, and make us his vassals!* According to what you declare of the place whence you come, which is *toward the rising sun*, and of the great lord who is your King, we must surely believe that he is our natural lord."

Such were the superstitious opinions amongst the most civilized of all the Indian nations at the period of the conquest. It is not surprising therefore to find the other nomadic, predatory hordes,—whose ferocity was not so keen as that of their northern kindred, but had been tempered and softened in some degree by the genial climate of the tropics,—soon yielding to the superior will of a masculine race, eager, not only for gold, but for the establishment of estates which were in fact principalities, and whose beneficial improvement required the employment of large bodies of continual and compulsory laborers. The Indians afforded the staple of this stock at once. The conquest rooted out all their old institutions by violence. Their government and laws were overthrown by force; their religion was changed by power; their graven idols, the material emblems of their gods, were ground to dust; their social system was completely overturned; and thus, perfectly annihilated as a nation, in politics, theology, and domestic life or habits, they were, in the end, but wretched outcasts in their own land.

The Indians may therefore be regarded as somewhat prepared by degradation for the system of *repartimientos*, which, as we have already seen in the historical part of this work, was instituted immediately after the conquest.

The aborigines throughout Mexico have been devoted as a class to agricultural labors. Immediately after the conquest the Spaniards forced them to toil in the mines as well as in the fields; but as soon as a race of mixed blood was found to replace these original laborers in the bowels of the earth, the native Indian escaped to wilder districts where there were no mines, or where his services were required on the surface of the earth. Besides this, since the

revolution, labor has been somewhat more free than before that epoch. The Indian, if not bound to the estate, by the slavery of debt, as we shall see hereafter, has the right to do what he pleases, and consequently he selects that labor which will give him support with least fatigue in a country whose soil is almost spontaneously productive.

The Mexican Indian, may therefore be generally designated as an agriculturist. A few of them engage in the manufacture of certain elegant fabrics of wool and cotton; in some of the *imitative* arts, in which they greatly excel; and in the formation of utensils for domestic use.

In the field, the Indian executes all the labor,—sometimes in the midst of the great plantations of sugar, cotton, coffee, corn, tobacco, wheat, and barley—or, at others, in the midst of the beautiful gardens for which some parts of the republic are celebrated. In all these positions his labor is faithfully performed;—but he is the enemy of all changes in the modes or utensils of his work. He prefers the old system of drawing water for irrigation; the old system of rooting the earth with the Arab stake instead of the American plough; the old system of carrying offal, stones, or whatever is to be removed from his fields, in bags, instead of in barrows or carts; and the old system of bearing every burden, no matter how onerous, on his shoulders instead of a dray or a wagon. It offends him to speak of changes, which he regards as unrighteous innovations. His character, like that of the Chinese, is one of excessive tenacity for old customs. After three centuries of constant intercourse with strange races, he still segregates himself from the foreigner, and, nestling in his native village, keeps aloof from the Spaniard. He speaks his hereditary language; clings to his old habits; and,—according to the report of reliable travellers,—worships, occasionally in private, his ancestral idols. In the capital, garlands which have been secretly suspended on the images by Indians, are still sometimes found around the hideous Aztec divinities preserved in the court yard of the University. "You gave us three very good gods"—said an Indian once to a respectable Catholic curate,—"yet you might as well have left us a few of our own!"

Grave, taciturn and distrustful,—types, in manners, of a crushed and conquered race,—the Indians of Mexico, wear a sombre look and demeanor, accompanied by an air of evident submissiveness. It is rare to find them merry, except at the end of harvest on the large estates, when an annual festival is prepared, in which they are accustomed to unite with great zest. They have other periods of cessation from toil, such as the Sabbath day, the feasts of the patron saints of their village or parish church. Upon these occasions their devotion to the externals of religion is exhibited by a lavish expense in articles which they

imagine may contribute to the honor or glory of their spiritual protector in heaven. In order to celebrate the occasion with due decorum, according to their simple ideas, they not only spend whatever money they happen to possess at the moment, but *pledge themselves*, in advance, at the *haciendas*, for the loan of sums which they must repay by future labor. The result is that these superstitious frivolities consume a large share of the Indian's substance; and, notwithstanding his economy and frugality, he and his family are obliged to spend the greater part of the year in misery, in recompense for the rockets, fire crackers, music, wax candles, and flowers, which he purchased on the Festival of his *Santo*. In addition to these ecclesiastical costs, we must not omit his personal expenses, for the Indian does not forget his bodily condition whilst he pays attention to his spiritual wants. Liquor and gambling, fill up the occasional pauses in the pious ceremonials, so that after the Indian has finished his religious services and his dinner for the day, it is quite likely that he is prepared to creep into a hovel or shelter with his family, where they may sleep off the debauch that universally finishes these ecclesiastical functions. Similar wild indulgences are permitted among them at marriages, baptisms and interments, and in consequence of this thriftlessness, these miserable wretches are never able either to leave property to their offspring or to afford them an education by which they may improve their lot in life.

The Indian woman is the true and faithful companion of her husband's fortunes. She works incessantly at her appropriate tasks. She grinds the corn for the *tortillias* and *atolé* of the family, and carries them to her husband wherever he is at work; she weaves, in her rude manner, all the materials of cotton or wool that are worn by her household; she makes the garments of her spouse and children; she keeps the domestic premises in order without an assistant; nor does she cease, for a moment, to nourish and watch her offspring during their infancy. If her husband departs to another district, or is enlisted as a soldier, she straps her pack and her youngest child on her back, and accompanies her liege lord, whilst a train of their mutual descendants, "small by degrees and beautifully less," follows in their rear.

We have said that the Indians are frugal in their food and economical in their dress, for in reality, their meals commonly consist only of cereal products, and, especially, of corn. *Atolé*, *tortillias*, Chili peppers and frijoles, are sufficient to support them. They do not eat flesh habitually, and yet they are healthy and robust, nor is it extraordinary to see individuals among them who attain the advanced age of more than of ninety years.

Their occasional indulgence in drunkenness, disgusting and injurious as it is

at the moment, does not generally destroy the constitutions of these hardy laborers, whose subsequent compulsory temperance, not only in drink but in food, soon repairs the momentary inroads of a day's debauch.

The dress of both men and women is the simplest and the cheapest possible. In the state of ignorance and abjection in which this race has been so long held, it is not easy to conceive whether their intellectual faculties might be again aroused. In some of the colleges of Mexico, individuals have applied themselves with great care, have received classical educations, and made remarkable progress even in the sciences, in some of which they excelled. But generally speaking, these instances may be regarded as remarkable exceptions. The Indian, as we have

INDIAN'S OF THE SIERRA. **INDIAN'S OF THE SIERRA.**

HACIENDADO. **HACIENDADO.**

before observed, when he quits the agricultural field, exhibits most talent in the imitative arts. The instruments and materials he uses are of the simplest and rudest kind, and, although the imitations produced by him are wonderfully accurate, yet they want that lively variety which is only produced by vivid imaginations.

Upon the plantations the Indians are in reality slaves, notwithstanding the Mexican laws prohibit slavery. This condition is produced chiefly by two causes. The Mexican Indian who cherishes, as we have seen, a remarkable devotion to his old habits, customs, utensils and implements, is gifted with an equal tenacity or adhesiveness for the place of his birth. Nomadic as were his ancestors, the modern Mexican Indian is no wanderer. The idea of emigration, even to another state or district, never originates in his brain, or is tolerated if proposed to him as a voluntary act. So helpless is his condition if placed beyond the limits of his habitual neighborhood or hereditary haunts, that he feels himself perfectly lost, abandoned and cast off, if compelled to change either his residence or his occupation. He has no variety of resources. He knows nothing of alternatives. The operations of his mind, as well as of his hand, are perfectly mechanical. The

utter helplessness of such an individual, if suddenly transferred from the midst of his companions and all the scenes of his life-long associations or duties, may be easily conceived, and consequently the greatest punishment that a *haciendado*, or Mexican planter, can inflict upon his Indian serf is to expel him from the estate upon which he and his ancestors have worked from time immemorial. When other punishments, which elsewhere would be thought severe, fail to produce reform or amendment in the Indian's conduct, it usually happens, that the serious threat of expulsion from the estate, made by the owner himself, or his authorised representative, to the native, reduces the refractory individual to subjection. Thus it is, that this peculiar territorial and local adhesiveness contributes to making the Indian's condition not only *menial* but *servile*.

The second cause may be found in the habits of wild and extravagant indulgence which we have already described. These licentious outbursts of recklessness create a pecuniary bond between the proprietor and his laborer. The Indian becomes his debtor. It is the policy of the landholder to establish this relation between himself and the Indian, and consequently he affords him every facility to sell himself in advance, even for life, to his estate. The Indian, is thus at least completely mortgaged to the landed proprietor, and as that personage usually possesses considerable influence in his neighborhood, the laborer finds it extremely difficult or nearly impossible to enforce his freedom even by appeals to the legal authorities. Such is the origin and system of *peonage*, which still curses Mexico although the *repartimientos* and slavery have been abolished by fundamental laws.

We have observed that there are other punishments of the Indians resorted to on Mexican plantations for trifling faults or misdemeanors, besides the great and final calamity of expulsion. They are fined and they are flogged. "Looking into the corridor," says Mr. Stephens, in his work on Yucatan, "we saw a poor Indian on his knees, on the pavement, with his arms clasped around the knees of another Indian, so as to present his back fairly to the lash. At every blow he rose on one knee and sent forth a piercing cry, he seemed struggling to retain it, but it burst forth in spite of all his efforts. His whole bearing showed the subdued character of the present Indians, and with the last stripe the expression of his face seemed that of thankfulness for not getting more. Without uttering a word, he crept to the major-domo, took his hand, kissed it, and walked away. No sense of degradation crossed his mind. Indeed, so humbled is this once fierce people that they have a proverb of their own: "Los Indios no oyien sino por las nalgas,"—"The Indians only hear through their backs."

This hereditary condition or relation between the Indian and the original Spanish races has acted and re-acted for their mutual degradation. With a large population under his control, for all purposes of labor and menial toil, the Spaniard, of whatever class, found himself entirely free from the necessity of manual labor or mechanical pursuits. Notwithstanding this immunity from bodily toil, the native of Castile did not devote the leisure he enjoyed, whilst the Indians were working for him, either to the improvement of his mind, or the preparation of philanthropic plans for the amelioration of his servant's lot. A mere physical life of personal indulgence, or an avaricious devotion to the rapid acquisition of fortune, absorbed the whole time of these planters, who lived in almost utter seclusion amid the lonely wastes of their large territorial possessions. The planter who resides in a populous nation, or who is enabled to visit easily the capitals of commerce, literature, and art, is a man, who, from his personal independence, culture, and wealth, is usually in our own country to be envied for the peculiar privileges which his station affords him. But in Mexico, the position and education of the planter, if he lives constantly on his estate,—which is not universally the case,—are altogether different from those of the North American land-holder. The Mexican possesses few or none of those social and intellectual qualities that have been cultivated by the North American in the best colleges and circles of his country; nor does he enjoy equal facilities of intercommunication between the cities or rural districts of Mexico. The immense size of his plantation which sometimes extends several leagues in length and breadth, necessarily disperses instead of congregating a populous neighborhood. "He is master of all he surveys,—he is lord of the fowl and the brute," but his dominion is a solitary and cheerless one. Few, and irregular posts rarely bring him the news of what occurs in the great world. Visits are seldom and ceremoniously paid. He must find within himself the constant springing source of vivacity and of an ambitious desire for progress, or he must subside into mere animal existence. The latter is unfortunately in most instances the natural result, and it is therefore not at all astonishing to find Mexican planters or their mayordomos devoting all their energies to the maintenance of the servile system we have described, whilst their statute-book and constitution profess to have abolished slavery.

Whilst such is the effect upon the character of the master or his representative, it is natural to suppose that the character of the servant will be equally degraded by the want of those new ideas with which the constant refreshing intercourse of society ventilates the mind. The Indian knows no world but that bounded by his horizon. Slavery, when involuntary, may even be

respected in the sufferer, but the Indian who becomes a slave in spite of law, by religious superstition, loathsome vices, and time-hallowed servility, sinks far below the level of the African, who is sober, careful, faithful to his master and his family, and either from imitation, or a degree of natural dignity, seeks to acquire respectability among his fellow slaves.

"It is hardly possible," says Mühlentfordt, "to judge of the true character and intellectual capacity of the Indian at a time when he has but just partially recovered his rights as man, and has had little opportunity of giving independent culture to his mental faculties. Though the civic oppression under which the Spaniards and Creoles held all the copper colored race and the colored people generally before the revolution, has, for the most part disappeared, yet their emancipation has, as yet, only nominally taken place. Hierarchical oppression has yet hardly decreased, and the clergy, both the inferior secular priests and the monks who have the greatest influence over the Indians, find their account in declining to promote, if they do not positively retard, their intellectual development. Time only can inform us what advantages will accrue to the Indians from the new order of things. Up to this period the introduction of the boasted civilization of Europe, as well as of the Catholic religion, has been of but trifling benefit to them, and only a trace here and there of progress to an amelioration of their condition is to be remarked.

"The Mexican Indian of the present day is generally grave and taciturn, and almost sullen, when not excited by music and intoxicating drinks to loquacity and pleasure. This serious character may be remarked even in the children, who appear more knowing at the age of five or six, than those of northern Europeans at that of nine or ten. But this appearance of steadiness is by no means consequent on a quicker development of mind, and the looks of these young people, dejected and void of all the cheerfulness and confidence of children, have nothing that gladdens the observer. Gruffness and reserve appear to be essential features of the Indian character, and it cannot, I think, be assumed that these qualities were implanted in them only by the long oppression that weighed down the Mexican race, first under their native rulers, and afterwards under the Spaniards; inasmuch as they occur among the aborigines almost universally throughout America, even when these have never suffered any curtailment of political liberty. To that cause may be rather attributed the stubbornness and selfishness which constitute a striking trait in the character of the present Indians. It is almost impossible to move any Indian to do a thing which they have resolved not to do. Vehemence, threats, even corporal punishment, are of as little avail as the offer of gold or reward; persuasion, coaxing, entreaties help as

little. The Mexican Indian loves to give an appearance of mystery and importance to his most indifferent actions. If stirred up by weighty interests, he breaks his accustomed silence, and speaks with energy but never with fire. Jokes are as rare with him as raillery and laughter. I never heard an Indian laugh heartily, even when excited by spirituous liquors. His uncommon hardness of character allows him long to conceal the passions of indignation and vengeance. No sign betrays externally the fire that rages within until it suddenly breaks out with uncontrollable violence. In this condition the Indian is most likely inclined to commit the most dreadful cruelties and the most fearful crimes. The Mexican aborigines bear with the greatest patience the torments which the whites were formerly and are still inclined to indulge against them. They oppose to these a cunning which they dexterously hide under a semblance of indifference and stupidity. Despite their long slavery; despite every effort which has been employed to rob them of their historical recollections, they have by no means forgotten their former greatness. They know right well that they were once sole lords of the land, and that those Creoles who are so fond of calling themselves Americans, are but the sons and heirs of their oppressors. I have myself frequently heard Indians, when their ordinary reserve has been overcome by spirituous liquors, declare that they were the true masters of the country, that all others were mere foreign intruders, and that if the Creoles could expel the Spaniards they had a far better right to expel the Creoles. May the latter be taught by their own acuteness to grant the Indians, while it is yet time, the practical exercise of these civic rights theoretically conceded to them, for the revolt of the copper colored race would indeed present a fearful spectacle!"

INDIAN TRIBES OR RACES IN MEXICO

IN THE STATE OF YUCATAN.

1. Mayas.

IN THE STATES OF CHIAPAS AND TABASCO.

2 Teochiapanécos,
5 Mames.

3 Zoques,

4 Cendáles,

IN THE STATE OF OAJACA.

6 Zapotécas, 7
Mixtecos,
8 Mixes,
9 Chinanutécos,
10 Chontáles,
11 Cuicatécos.

12 Chochos,
13 Chaténos,
14 Huabes,
15 Huatequimánes,
16 Izcatécos,
17 Almoloyas, a few.

18 Soltécos,
19 Trìques,
20 Pabúcos,
21 Amúsagos,
22 Zoques,
23 Aztécos.

IN THE STATES OF MEXICO, PUEBLA AND VERA CRUZ.

24 Aztécos,	27 Tlapanécos,	29 Huastécos,
25 Totonáques,	28 Mixtécos,	30 Cuitlatecos.
26 Popolúcas,		

IN THE STATE OF QUERETARO.

31 Otomés,	32 Chichimecas, and a few Aztécos.
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IN THE STATE OF MICHOACAN.

33 Tarráscos,	34 Otomés.
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IN THE STATE OF GUANAJUATO.

35 Pamos,	37 Samues,	39 Guamánes,
36 Capúces,	38 Mayolias,	40 Guachichiles.

IN THE STATE OF JALISCO.

41 Cazcánes,	43 Guamánes,	45 Matlacingos,
42 Guachichiles,	44 Tenoxquínes,	46 Jaliscos.

STATES OF SAN LUIS POTOSI, NEW LEON AND TAMAULIPAS.

47 Chichimecas,	Aztecos, or	Tlascaltecas.
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IN THE STATES OF DURANGO AND CHIHUAHUA.

48 Tepehuanés,	52 Sicurabas,	56 Cocoyámes,
49 Topías,	53 Himas,	57 Yanos,
50 Acaxis,	54 Huimis,	58 Tarahumares.
51 Xixímes,	55 Acotlánés,	

IN THE STATE OF SINALOA.

59 Coras, 60 Nayarítes,	61 Hueicolhues, 62 Tubaras,	63 Cinaloas, 64 Cahitas.
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IN THE STATE OF SONORA.

65 Mayos,	85 Sonoras,	
66 Zuáques,	86 Eudebes,	
67 Hiaquis,	87 Opatas,	105 Apaches-mimbrenos,
68 Yaquis,	88 Seres,	106 Apaches-Chiricaguís,
69 Guazare,	89 Tiburones,	107 Yabipaís or Yabipias,
70 Ahome,	90 Pípos-altos,	108 Jalchedumes,
71 Ocoromi,	91 Papagos or Papahi-	109 Juníguís,
72 Teguéca,	Ootam,	110 Yamágas,
73 Tepahue,	92 Yumas,	111 Chemeonahas or
74 Zoe,	93 Cucapachas,	Chemeguabas,
75 Huíte,	94 Coanopas,	112 Cosnínas,
76 Guaymas,	95 Cajuenches,	113 Moquis,
77 Pimas-bajos,	96 Cutguanes,	114 Navajos,

78 Mobas,	97 Hoahonómos,	115 Timpachis,
79 Onabas,	98 Bagiópas,	116 Yutas,
80 Nures,	99 Quiquimas,	117 Tabeguachis
81 Saboribas or	100 Cocomaricopas,	118 Payúches,
Sisibolaris,	101 Apaches-tontos,	119 Talarénos,
82 Huras,	102 Pimas-gileños,	120 Raguapuis.
83 Heris,	103 Apaches-gileños,	
84 Sabaipures,	104 Nijoras,	

IN OLD CALIFORNIA.

121 Pericuis,	124 Coras,	128 Utschetas,
122 Monquis or	125 Cochimas,	129 Vehitis,
Menguis,	126 Colimies,	130 Icas.
123 Guaycúras,	127 Laimones,	

IN NEW CALIFORNIA.

131 Rumsenes,	134 Achastlies,	136 Salses, 137 Quirotes.
132 Escelenes,	135 Matalanes,	
133 Eclémaches,		

IN NEW MEXICO AND PART OF TEXAS.

138 Keras,	144 Jetans,	149 Nanahas,
139 Piras,	145 Tetans or Tetaus,	150 Apaches- <i>llaneros</i> ,
140 Xumanas,	146 Yutas,	151 Lipans,
141 Zuras,	147 Kiaways,	152 Faraones,
142 Pecuris,	148 Apaches,	153 Mescaleros.
143 Cumanches,		

The following table exhibits, in separate groups, the varieties of parentage and blood, forming the castes in Mexico and throughout Spanish America:

TABLE OF CASTES

1. ORIGINAL RACES.

PARENTS.

White.	{ European <i>whites</i> are called <i>gachupines</i> or <i>chapetones</i>
	{ <i>Whites</i> , born in the colonies, are called <i>creoles</i> .
Negro.	
Indian.	

2. CASTES OF WHITE RACE.

PARENTS.

CHILDREN.

White father

and		Negro mother, Mulatto.	
White	"	Indian "	Mestizo.
White	"	Mulatto "	Quarteron.
White	"	Mestiza "	Creole, (only distinguishable from the white by a pale brown complexion.)
White	"	China "	Chino-blanco.
White	"	Quarterona	Quintero.
White	"	Quintera "	White.

3. CASTES OF NEGRO RACE.

PARENTS.		CHILDREN.	
Negro father and		Mulatto mother, Zambo-negro.	
Negro	"	Mestiza "	Mulatto-oscuro.
Negro	"	China "	Zambo-chino.
Negro	"	Zamba "	Zambo and Negro, (perfectly black.)
Negro	"	Quarterona or Quintera "	Dark Mulatto.

4. CASTES OF INDIAN RACE.

PARENTS.		CHILDREN.	
Indian father and		Negro mother, Chino.	
Indian	"	Mulatto "	Chino-oscuro.
Indian	"	Mestiza "	Mestizo-claro, often very beautiful.
Indian	"	China "	Chino-cholo.
Indian	"	Zamba "	Zambo-claro.
Indian	"	China-cholo	Indian, with short frizzily hair.
Indian	"	Quarterona or Quintera	Brown Mestizo.

5. MULATTO CORRUPTION.

PARENTS.		CHILDREN.	
Mulatto father and		Zamba mother,	Zambo, (a miserable race.)
Mulatto	"	Mestiza "	Chino, (rather clear race.)
Mulatto	"	China "	Chino, (rather dark.)

Besides these specified castes there are several others not distinguished by particular names; such, for instance, as the produce of unions between the Mexican Indians or Spaniards and the people of the East Indian continent or Philipines, numbers of whom came over during the old viceroyal government. The best criterion for judging of the purity of blood, is the hair of the women, which is much less deceiving than their complexion. The short woolly hair, or coarse Indian locks, may always be detected on the head or on the back of the neck. This tabular statement exhibits at a glance the mongrel corruptions of the human race in Mexico, and presents an interesting subject for students of physiology and ethnology.^[6]

CHAPTER III.

POPULATION.

POPULATION.—CENSUS.—TABLES OF POPULATION.—RELATIVE DIVISION OF RACES.—
RELATIVE INTELLECTUAL CULTIVATION.—RELATIVE POPULATION IN HOT AND COLD
DISTRICTS.

It is to be regretted that no very accurate census of Mexico has ever been made, and that since the year 1831, no effort has been persistently pursued by the government to enumerate its citizens and collect such statistical data as may always be easily gathered by persons engaged in this important task. The irregularity of the central or executive power; the instability of all governments since the establishment of independence; the intestine quarrels, not only in the capital but in the departments or states, have all contributed to, and even partially compelled, this neglect of a great national duty.

In the absence, therefore, of official statistics and reports, we are obliged to rely upon approximate results, founded on the *partial* enumerations of preceding years and the calculations of experienced statesmen and writers. In the following table we shall exhibit all the most trustworthy statements existing either in Mexican works or in the writings of reliable authors:—

VARIANCES BETWEEN THE DIFFERENT CALCULATIONS AND CENSUSES OF THE
POPULATION OF MEXICO.

Years.	No. of Inhabitants.
1793—Census of the Viceroy Revilla-Gigedo, including Vera Cruz and Guadalajara, according to an estimate in 1803,	5,270,029
1803—Geographico-political tables of New Spain,	5,764,731
1810—Semanario economico of Mexico,	5,810,005
1820—Navarro's Memorial on the population of the kingdom of New Spain,	6,122,354
Calculation of the first Congress,	6,204,000
1831—Actual census of the Mexican Republic, published by Valdes,	6,382,264
1824—Hon. J. R. Poinsett,	6,500,000
1825—Humboldt, about,	7,000,000
1838—Report of Commissioner of Chamber of Deputies,	7,009,120
1834—Galvan's Mexican Calendar,	7,734,292
1836—Notices of the states and territories of the Mexican nation,	7,843,132
1830—Mr. Burkhardt—a German author,	7,996,000
1842—An estimate made as the basis for the election of a	7,015,509

Congress, (exclusive of Texas,)

In the year 1838, Señor Jose Gomez de la Cortina,—ex-Conde de la Cortina, one of the most enlightened citizens of Mexico, published a carefully prepared essay upon the population of Mexico, in the 1st No. of the Bulletin of the National Institute of Geography and Statistics of the Mexican Republic; and his opinion was that the number of inhabitants greatly exceeded any of the above amounts. By observing the increase of population in different periods of five years, he considered it satisfactorily proved by the *Tablas Geographico-politicas*, of 1803, that the augmentation, in favorable years, was at the rate $1\frac{4}{5}$ per cent. By applying this ratio to the census of the *Tablas*, which gave in 1803, 5,764,731 inhabitants, we shall have an increase of about 105,000 yearly; and if we calculate at this rate of augmentation for the 46 intervening years, we find in 1850 an increase of 4,830,000, or a grand total of 10,594,731.

In the year 1842, however, when an estimate was made of a basis of population, upon which to found a call for a Congress to form a new constitution under the plan of Tacubaya, in 23 Departments or States and Territories, exclusive of Texas, the government calculated that there were 7,015,509 inhabitants.

TABLE OF POPULATION IN 1842.

Departments.	Population.
Mexico,	1,389,502
Jalisco,	679,311
Puebla,	661,902
Yucatan,	508,948
Guanajuato,	512,606
Oajaca,	500,278
Michoacan,	497,906
San Luis Potosi,	321,840
Zacatecas,	273,575
Vera Cruz,	254,380
Durango,	162,618
Chihuahua,	147,600
Sinaloa,	147,000
Chiapas,	141,206

Sonora,	124,000
Queretaro,	120,560
Nuevo Leon,	101,108
Tamaulipas,	100,068
Coahuila,	75,340
Aguas Calientes,	69,698
Tabasco,	63,580
Nuevo Mexico,	57,026
Californias,	33,439
	<hr/>
	7,015,509
Deduct for—	
New Mexico,	57,026
Upper California, since	25,000
added to the United States.	<hr/>
	82,026 —82,026
Estimated actual population in 1842,	6,933,483
Add 10 per cent. for the probable increase in 7 years	693,348
Proximate actual population in 1850,	<hr/>
	7,626,831

This population may be relatively classed among races and castes as follows:

4,354,886 Indians.
1,100,000 Whites.
2,165,345 Meztizos, Zambos, Mulattoes, &c.
6,600 Negroes.
<hr/>
7,626,831

As Mexico, since the treaty of Guadalupe Hidalgo, in 1848, possesses 798,402 square miles, this will give nine inhabitants and a fraction, to the square mile.

From these calculations we deduce some very important facts as to the physical and intellectual condition of Mexico, which are very significant in the illustration of history. It appears that the total number of pure whites in the republic, is, in all probability, not more than 1,100,000; while the Indians, Negroes, Zambos, Mulattoes, Meztizos, and all the mixed bloods, amount to 6,526,831. During our residence in Mexico we ascertained from reliable authority that among the Indians and negroes but two *per cent.* could read and write, while among the whites, and castes, but twenty *per cent.* were estimated to

enjoy those benefits. Thus we have:

87,229 Indians and Negroes able to read and write.

653,069 Whites and mixed castes able to read and write;

or, only seven hundred and forty thousand, two hundred and ninety-eight individuals, either completely educated or instructed in the simplest rudiments, out of a population of more than seven and a half millions. These are startling statistics in regard to the citizens of a nation whose government is theoretically and practically based on the culture of the people or their capacity for self-rule; and, when considered in connexion with the historical details presented in the first volume of this work, they will show that the distracted condition of Mexico is a mingled cause and consequence of her intellectual darkness.^[7]

One of the most interesting investigations in Mexican statistics would be to compare the number of births in the regions called the *tierras calientes*—or hot country, with those in the *tierras frias*, or *cold region*. From calculations made by Cortina in 1838, from data derived from nine departments, he concluded that the excess of births in the warm regions or *tierras calientes* was $1\frac{5}{10}$ per 100, over the *tierras frias*.

He gives the following actual statistics in evidence:

1st. Result of the general census of the department of ZACATECAS since the year 1824, and progressive increase of population therein before the separation of the portion of Aguas Calientes:—

Years.	Total population.	Increase of population biennially.
1824	247,295}	
1826	272,901}	25,606
1828	274,537}	1,636
1830	290,044}	15,507
1832	314,121}	24,077
1834	331,781}	17,660

2d. In 1836, after the separation of the portion of Aguas Calientes, this department had 264,505 inhabitants.

In June, 1838, it had 273,575 "

Increase in one year and a half, 9,070

3d. In the period from 1st of January, 1837 to 30th of June, 21,941

1838, there were born in the said department,	
Died in the said department,	12,871
Increase of population,	<u>9,070</u>

4th. In the department of Oajaca in 1834, it was calculated that there were	457,033 inhabitants.
In December, 1838,	500,278 "
Increase in four years,	<u>43,245</u>

RESULTS.

Maximum of annual increase of population in Oajaca,	15,000
Minimum " " "	6,000
Maximum " " " Zacatecas	12,000
Minimum " " "	500

Of not less importance are the investigations upon the excess observed in one sex over the other. Before the appearance of Humboldt's work it was the opinion that in the New World nature did not follow the same law of equilibrium in the difference between the sexes as in Europe, and especially that in the tropical regions, the number of females exceeded greatly that of the males. Baron Humboldt combated this notion and demonstrated its error. He presents in his political essay upon New Spain a table of the population of eight Intendencies, in which it appears that out of 1,352,835 inhabitants there were 687,935 males and 664,900 females, which establishes a relative proportion of 100 to 95. In the *Tablas Geografico politicas*, already cited, it is expressly said that in New Spain, in the Intendencies of the *tierras frias*, or cold regions, as well as in those of the *tierras calientes*, or hot regions, the population inclines to a preponderance of males. Don Fernando Navarro y Noriega gives in his tables of population 71,642 more males than females; and, in the account of the taxes made by order of the government in 1781, it appears that the excess is still in favor of males, though in a much less proportion than assigned by Baron Humboldt. We present the following table, prepared in Mexico for the purpose of throwing more light on the subject:

TABLE OF POPULATION IN VARIOUS DEPARTMENTS IN DIFFERENT YEARS—RELATIVE EXCESSES—BIRTHS AND DEATHS.

Departments, States, or Cantons of	Excess Excess
------------------------------------	-----------------

Years.	States.	Males.	Females.	males.	females.
1829	New Mexico	21,799	21,640	159	
1819	Alta California	10,979	9,107	1,872	
1830	Do. do.	12,473	10,011	2,462	
1832	Nuevo Leon	49,571	48,601	970	
1829	San Luis Potosi.—See following table.				
1832	Oajaca	237,127	247,887		10,760
1823	Michoacan	178,052	187,028		8,976
1831-	<i>Canton of Vera Cruz</i>	29,851	31,695		1,844
	" of Misantla	2,451	2,658		207
	" of Papantla	4,279	4,225	54	
	" of Tampico	11,112	12,265		1,153
	" of Jalacingo	7,816	8,046		230
	" of Jalapa	19,837	22,867		3,030
1826	Guanajuato	165,896	179,288		13,392
1834	Chihuahua	75,303	69,879	5,424	
1838	Tamaulipas	49,235	45,460	3,775	
1838	Aguas calientes	33,661	36,032		2,371
1831	Jalisco.—See following table.				
1838	Zacatecas.—See following table.				
1821	Tamaulipas	34,356	33,428	928	
1833	New Mexico	31,012	26,164	4,848	

	Births.	Deaths.		Excess.		
		Males.	Females.	Males.	Females.	
1829	San Luis Potosi—first six months	4,882	5,159	2,029	1,885	421
1830	Jalisco—whole year	14,307	13,905	13,194	11,972	820
1837	Zacatecas—18 mo's.	10,935	11,006	6,376	6,495	48
1834 ^[8]	State of Mexico,	18,410	18,804	cholera this year.		

	except 2 prefectures					
1830	Guanajuato— whole year	14,699	14,252	7,235	7,511	276

It may, generally, be said that the excess of one sex over the other is in inverse proportion to the latitude; or, in other words, that, as we advance from the equator, the excess of females over males decreases, until the reverse occurs as the degrees of latitude augment. We must, however, except from this rule the department or state of Tamaulipas, in which the constancy with which nature sustains the excess of males, is somewhat extraordinary. The most ancient document possessed upon the subject, relative to this State, is of the year 1793, and from this we discover that, from that year until 1807, 124 more males than females were born therein, and that 30 more females than men died during the period—

More <i>females</i> than males are born in the following States, in the order in which they are placed:	More <i>males</i> than females are born in the following States, according to the order in which they are placed:
1. Vera Cruz—greatest number.	1. Alta California—greatest No.
2. Oajaca.	2. New Mexico.
3. Puebla.	3. Sonora.
4. Michoacan.	4. Chihuahua.
5. Guanajuato.	5. Coahuila.
6. Jalisco.	6. New Leon. [9]

INDIANS OF THE TIERRA CALIENTE.
INDIANS OF THE TIERRA CALIENTE.

CHAPTER IV.

AGRICULTURE—AGRICULTURAL PRODUCTS

AGRICULTURE—DRY AND RAINY SEASONS.—IRRIGATION—YIELD OF CORN LANDS.—COLONIAL RESTRICTIONS.—COLONIAL DEPENDENCE—BAD INTERCOMMUNICATION—ARRIROS.—CORN LANDS—DIFFERENT KINDS OF CORN IN MEXICO—MODE OF CULTIVATION—PRODUCTION—VARIOUS USES OF CORN.—BANANA—MAINOC—RICE.—THE OLIVE—VINE—CHILE PEPPER—TOMATO—FRIJOL—MAGUEY.—MAGUEY

ESTATES.—MAKING PULQUE.—ALOES—CACTI.

SUN, seasons, temperature, soils and moisture are the chief elements of agricultural success or failure, according as they are beneficially harmonized or unfortunately disunited. In our geological and geographical descriptions we have already indicated the rapid changes of temperature in Mexico experienced by rising gradually from the sea shore to the summit of the table land, and passing through the *tierras calientes*, *templadas* and *frias*. This is the origin of the variety of Mexican productions and the reason why the pine and the palm are encountered upon the same parallel of latitude; but the *fertility* of Mexico is very much governed by the moisture with which it is annually favored, and for which it is obliged to rely chiefly on the clouds. The Mexicans are not accustomed to separate the year as we do into the four seasons of spring, summer, autumn and winter, for the variation of temperature scarcely authorizes such marked distinctions of climate; yet they divide the twelve months into two grand divisions of *El Estio*—or the dry season, and *La Estacion de las aguas*, or the rainy season. The latter commences about May and lasts usually four months, whilst the dry season comprises the remainder of the year.

The curving shores of Mexico along the gulf and interior highlands gather and hem in an immense body of vapor, which is carried on by the trade winds and condensed against the cold and lofty inland mountain peaks which rise above the limit of perpetual congelation. This occurs during the dry season whilst the sun is at the south. But when the power of that luminary increases as it advances northward, and until it has long turned back again on its southern course, these vapors are dissolved by the hot intertropical air and descend, almost daily, in fertilizing showers. The

GROUP OF PLANTS. GROUP OF PLANTS.

formation of rain clouds and the precipitation of their moisture usually begin on the coast near Vera Cruz, and the course of the rain storms advances from east to west, inundating the *tierra caliente* along the eastern coast fifteen or twenty days before the table lands are moistened. There have been seasons in which it did not begin to rain until a month or two after the usual period. In 1802 such an event occurred; and, again in 1826, the vapors did not begin to form and descend until the end of July, in consequence of which the corn was totally lost. If the rains are withheld beyond the middle of June, all the cereal products are either destroyed

or suffer greatly from the drought. The power of the sun, by that time, becomes so great that the ground is scorched and the air filled with clouds of dust which seem to gather and concentrate the blazing rays, until the falling particles surround or fall upon the traveller over the plains as if he were passing through a shower of heated cinders. The heat, and the masses of burning dust, are almost overpowering not only to vegetable but almost to animal life.

The agricultural prosperity of Mexico, accordingly, depends either largely upon the relative duration of these two seasons, or on the power of the landed proprietors to supply the loss of water from the clouds, by IRRIGATION derived from the rivers or slender streams that meander through the interior of Mexico. Seldom, indeed, is the Mexican planter or farmer obliged to complain of too much moisture. Between the parallels of 24° and 30° the rains are of shorter duration, and the intervals between the showers greater. But, fortunately, beyond the 26th°, a copious supply of snow, during the winter, compensates for the want of rain at the regular season. Irrigation, therefore, is universally resorted to, wherever there is an adequate supply of water, and large sums are expended by the possessors of the principal estates, in the construction of *acequias*, or canals; *presas*, dams or reservoirs; and *norias*, or water wheels, by which the refreshing element is forced up and distributed over the thirsty fields.

Such is a brief review and summary of the soil and seasons of Mexico. The average annual yield of the corn lands throughout Mexico is estimated at twenty-five bushels for one. In portions of the country, during favorable years, and where the irrigation is good, from sixty to eighty bushels for one have been produced. At Cholula, near Puebla, the increase is stated at forty for one, while at Zelaya, Salamanca, and Santiago, further north, from thirty-five to forty are produced on an average of years. In the valley of Mexico, proper, the yield is from eighteen to twenty; and even in the old possessions of California, it is set down at from fifteen to seventeen. The best writers consider, however, that notwithstanding the extraordinary fertility of their soil, the Mexicans do not produce in ratio of quantity, superior crops to the best agricultural portions of the United States.

The agricultural advantages of New Spain were early pointed out by some of the colonial authorities to the Spanish Home government; but the very fact of their existence seems to have alarmed the Court and to have originated those restrictive laws which, as we have shown in our historical narrative, so long ensured the dependence of the colony. The King, the Cabinets and the Council of

the Indies united in believing that if the internal resources of the nation were developed, fostered, and placed upon a firm basis, the political as well as the industrial independence of America might naturally ensue; and accordingly, these authorities resolved at once to adopt the narrow system of restrictions which retained the essentially productive power in the hands of Spain. Zumarraga, the first bishop and second archbishop of Mexico, addressed urgent letters to the Emperor Charles V., exhibiting the agricultural value of the country, and solicited laborers, plants, seeds, cattle, and all the usual means for the development of Mexican resources. The *Bandos* published in the year 1524, by Cortéz, which are yet preserved in the Hospital of Jesus, in the capital, contain wise decrees for the encouragement of industry, and prove that the military life of the Conqueror had not made him forgetful of his early agricultural labors in the West Indies when he first emigrated from Spain. But the policy of Spain was constantly declared to be adverse to this wholesome and reasonable encouragement. When Luis de Velasco, the second of that name who was viceroy in New Spain, passed thence to the viceroyalty of Peru, he was instructed by the King and Council of the Indies to be careful not to "foster manufactures, nor to allow the cultivation of vines, inasmuch as there was already ample provision of these things and the commerce of the kingdom should not be impaired by such colonial products." At the same epoch, his successor in Mexico, the Conde de Monterey, was also required to be equally vigilant and restrictive in the region confided to his government. These orders, however, were not always faithfully complied with throughout such extended and sparse jurisdictions as those of Mexico or Peru; and accordingly in 1610, through the Marques de Montesclaros, who replaced the Conde de Monterey in those colonies, the royal prohibitions were repeated, with the addition of the following emphatic language:—"Inasmuch as you understand perfectly, how much the observance of these rules is necessary for the *dependence* of the colonies upon the parent state, we charge and command you to see to their faithful execution." Wine and oil, two of the most important products of Spain, and two of the absolute necessities of a Spaniard's life, wherever he may happen to live, were thus protected from competition, and formed the means of preserving the colonial vassalage. Nothing was left to the New World, therefore, either to manufacture extensively, or to cultivate, except some of the coarser cotton cloths, for ordinary garments, or a sufficiency of the *cerealia* for domestic consumption. It was necessary to preserve an equilibrium or a reasonable ratio between the supply of food and the production of the mines; and thus the common agricultural and horticultural home markets for the necessities of life were alone left unencumbered for the Mexicans.

We are not aware that Spain encouraged, more than was absolutely demanded for political ends, a system of internal improvement by national roads, with lateral branches thridding and binding together all parts of the country. Highways were opened and horses and mules imported. But these were only suitable for the internal transportation of the country; and, even to the present day, the whole of Mexico is traversed by miserable roads, whose channels are often cut up into deep ravines by the unceasing attrition of caravans. The stubborn but useful mules, moving about the country in large bodies, under the guidance of Arrieros, follow each other in single file over the same path for centuries, and there is scarcely a highway in Mexico that is not worn by their footsteps to the depth of several feet. Bad roads, royal restrictions, and the want of transportation except by mules, all combined to impede rural industry, waste the people's time, destroy internal intercourse, and to force the consumption of agricultural products either upon the spot where they grew or in its immediate neighborhood. The independence of Mexico since 1824, has of course relieved the nation from the foreign restrictions upon her commerce; but the agricultural habits of the people were not to be changed by a constitution or industrial laws. Improved roads and improved modes of transportation have scarcely been attempted by the modern republicans. Constant revolutions have destroyed concert of action among the people in the different states through which the new highways would pass, at the same time that they have impaired the unity of system or policy upon which the national government might have acted for the general improvement of internal communication or development of agricultural resources. Some of the best citizens have written and labored in behalf of national industry in all its usual or possible manifestations; but we fear that many years of profound peace must be ensured to Mexico before the farmer will be able to share in the blessings of commerce by means of exportation.

ARRIEROS AND MULES. ARRIEROS AND MULES.

The great CORN LANDS of Mexico are those of Puebla;—the Bajio, which comprises portions of the state of Guanajuato, Queretero, Valladolid, Zacatecas, and Guadalajara, in the vicinity of the Rio Santiago;—the valley of Mexico, in the state of Mexico;—the valley of Poañas, in Durango;—and it is calculated that the cleared ground in these districts is capable of producing *cerealia* for a population five times greater than that of Mexico at present. Corn, in the states

of Mexico and Puebla is worth two dollars the *fanega* of one hundred and fifty pounds; in Oajaca about one dollar for the same quantity. Its value is every where irregular, and no general tariff of prices can be assigned to Mexican breadstuffs until some great national market shall be established or Mexico becomes an exporting country. Neighborhoods, at present establish prices.

MAIZE or CORN, is a gift from the New World to the Old, and is unquestionably the favorite food of the great mass of the inhabitants of our continent. In Mexico, every household is furnished with it abundantly, and all classes use it habitually.

Although this plant is a native of America it is never found growing wild in the republic. Single stocks may be occasionally seen in remote or uninhabited districts, but they are rarely met, and, in all likelihood, have been sown by the flocks of robber birds who ravage the Mexican *milpas* or corn fields during the ripening season.

The best cultivated varieties in Mexico, are:

1st. *Maiz de padus*; with small ears, of eight rows, and the most unimportant of all the varieties raised in the country.

2d. *Maiz manchado*, or *chiniesco*; a productive species with white, yellow and red grains;—sometimes also entirely blue, in which case, it is called *pinto*.

3d. *Maiz blanco*; a very productive kind, yielding a fine sweet meal.

4th. *Maiz amarillo*; this is sub-divided into:—1st, *maiz amarillo grueso*, which is very generally cultivated and rarely yields less than two or three ears each, with from three to six hundred kernels or grains. 2d, *maiz amarillo pequeno*, is smaller and less stout; but in a fruitful soil its yield weighs from ten to fifteen hundred weight, more than the *grueso*.

5th. *Maiz cuarentino*; or quarentine corn; better known in Mexico under the name of *maiz tremes*, or, *olote colorado*, which ripens quickly and may be planted in the coldest parts of Mexico.

6th. *Maiz tardio*, or, *de riego*; the most productive of all varieties, and that which is cultivated around the city of Mexico, and in many moist regions. It sometimes yields five hundred per cent. on the quantity planted.

Maize succeeds best in Mexico in moist and warm climates; but it has the great advantage over the other cereal grains that it may be as successfully cultivated in this country in the *tierras calientes*, as in the *tierras frias*. Its highest limits here are from two to eight thousand feet above the level of the sea, and consequently the time required for ripening is different at different elevations. It varies from seven months to six weeks.

The *diseases* which sometimes affect or destroy this vegetable in Mexico, as well the animals that assail it, may be summed up as follows:

1. *La requitte*, a wasting blight which affects the maize where it is sown upon poor soil and is subjected to damp, cold weather soon after planting.

2. *El carbon*—a vegetable fungus growth, resembling carbon or coal, which appears in the ears and destroys them. This abortion in the fruit is believed to be produced by an insect.

3. *El hanjo*—a species of *uredo*, which forms itself in the ear and ruins it. The disease is generally known as *los Cuervos*.

The animals and birds that attack corn are:

1. A sort of mole—*talpa*—which undermines the fields and destroy the young plants.

2. The *larvæ* of *melolontha*, which not only seize the roots, but often destroy the stalks and ears.

3. Flocks of pilfering birds, with which the corn-fields are covered, if they are not carefully watched during the approach of harvest. Neither day nor night are the ears safe from the attacks of these pilferers; and, in order to protect the crop, watchmen are placed on high stages, overlooking the acres, whence the traveller constantly hears their shouts, during the day, or the crack of the warning whips, during the night.

Maize may be planted in Mexico at different periods of the year, especially in those districts in which, for nine months, there is always sufficient moisture. In the *tierra caliente*, the *rancheros*, cultivate, in this grain, the best spots lying near their dwellings. In the cooler districts they have two kinds of culture—one by irrigation, and another upon a dry soil. The latter mode is subdivided, by the Mexicans, into three kinds—the *humido*, *aventureso*, and *temporal*.

In the first mode of cultivation the *Maiz tardio*, is sown, and it is usually found to be the most productive. A seeding made in a soil capable of preserving the winter's moisture and the humidity of the first spring rains, is called *siembra de aventureso*. In the *temporal*, a quickly ripening species of corn is planted—such as the *maiz cuarentino*—which may be cultivated either before or during the rainy season, from May to November.

It is rare that the common Mexican *ranchero* is sufficiently provident to select the soil for his corn crop, with due care; and accordingly we find that maize is often planted in the midst of fields abounding in stiff ungenial clay.

The present corn production of Mexico is not accurately determined, but it is

estimated that it is the chief subsistence of at least five millions of persons, whilst it supplies the only fodder for all kinds of domestic animals. Its average product must therefore be not far from at least twenty millions of bushels.

Corn is a varied article of diet among all classes. The ancient Mexicans made a species of sugar from the juice of the stalk—while the modern Mexicans brew from it a fermented drink, called *pulque de maiz*, or *omayo*. The extremely saccharine pith of this plant is often devoured raw by the Indians, and it has been also frequently used in the manufacture of brandy. The unripe ears are boiled or baked, and sold in the towns and villages to the poorer classes, forming their sole subsistence; while the leaves and stems afford a capital food for beasts. Sometimes these portions of the plant are devoted to architectural purposes, and a neat rustic hut is built of the cornlike stalks, interwoven and thatched with their broad and graceful leaves.

A kind of beer, called *chicha*, is sometimes prepared from the kernels of ripened maize, and is found, by natives and strangers, to be an agreeable as well as wholesome beverage. When the *meal* is boiled in water, and mixed with some farinacious roots, a favorite and exceedingly grateful gruel, known as *atolé*, is formed by the process. In the *tierra caliente*, the kernels are often roasted and ground into *pinole*;—but the most ordinary consumption of this precious vegetable is in the *tortillas*, for which Mexico is so celebrated, and in the preparation of which it is estimated that more than two hundred thousand females, in the republic, spend four or five hours of every day. In order to make *tortillas*, the grains of corn are soaked in water, to which a small quantity of lime has been added, until they are relieved of their shells. The pure and softened pulp is then laid on a flat stone or *metate*, one end of which is slightly raised from the ground. A Mexican woman kneels in the rear of the *metate*, and with another round stone, rolls, macerates, and amalgamates the crushed corn until it is formed into a rich succulent paste. Hard by, a thin metallic griddle is set over ignited coals, which is constantly supplied by another female, who pats the dough into extremely thin and delicate cakes. They are eaten hot from the griddle, but, even when carefully prepared, are deemed insipid and unsavory by foreigners.

Nor are these the only purposes to which this delightful plant and its offal are devoted by the Mexicans. They have discovered, within a few years, that a capital paper, for ordinary purposes, can be made of its leaves; and they have long ago used them as wrappers for the *cigarritos*, which no loyal native fails to indulge in hourly.

Man and beast—dwellings, food, paper, architecture, and cigars—are thus, in Mexico, all indebted to Indian corn as one of the greatest elements of comfort, sustenance, utility and luxury.

The extraordinarily productive BANANA is to the inhabitants of the *tierra caliente* what *maize* is to those who dwell in the loftier and cooler regions of the table land. An acre of wheat will supply the wants of three men, but an acre of Bananas, or *plantains*, says Humboldt, will support fifty.

The MAINOC, *cassava bread*, *jatropha manihot*, the JUCA or YUCA, as it is known in the West India islands, is peculiar to the *tierra caliente*, but is more used on the western than eastern coasts of Mexico. A fine flour is made of the root, which in its raw state is poisonous. When deprived of all its juice by pressure, the residuum is a farinacious pulp, forming a pleasant food whose consumption, however, is not likely to increase in Mexico.

The cultivation of RICE is not extensive. On the east coast between Alvarado and Guasacualco, and on the western between Jamiltepec and Huatulco, it has been grown in some few spots; but it does not appear to please the popular taste sufficiently, ever to enter largely into the list of national productions either for export or home consumption.

The OLIVE was one of the banned and forbidden products of the Spanish colonies; but notwithstanding the inhibitions we have already cited in this section, the tree was planted in various portions of the country both previous to the revolution, and during intervals of repose whilst the war of liberation was waging. The archbishop of Mexico was one of the first to cultivate a plantation of it at Tacubaya near the capital. At the beginning of this century, Joaquin Gutierrez de los Rios, commenced the culture at his *hacienda* de Sarabia, within the district of Salamanca, in Guanajuato, and succeeded admirably; but his trees were destroyed entirely during the revolution. At present some large plantations have been made, in the same state, at several *haciendas*, and, especially, at that of Mendoza, where 30,000 olive trees were set out, in 1849.

The VINE, like the olive, was a forbidden fruit to Mexican agriculturists under the Spanish dominion, except in a region about Parras whose extreme northern remoteness from the capital perhaps exempted it from the general inhibition. Elsewhere, throughout the colony, vineyards were ordered to be destroyed wherever they

TORTILLERAS.

TORTILLERAS.

were attempted; and this rule seems to have been enforced very generally, except, at Tehuacan, in the state of Puebla and at some points in the Misteca in Oajaca. The value of Spanish wines imported annually before Mexican independence, reached the ample sum of \$700,000; and as the French and Germans have, since the opening of the ports, availed themselves of the benefit for their own trade, it is very questionable whether the vine will ever become an article of extreme produce as long as the present race occupies the soil of Mexico. In 1843, the vine was still chiefly cultivated at Tehuacan and at Parras. Plantations had been made in the neighborhood of Zelaya, but the actual production of the region about Parras may be estimated from the returns of the interior custom house of that district through which 616 barrels of native brandy weighing 2,693 arrobas of 25 lbs. each and 323 barrels of wine of 1,035 arrobas, together with 204 tierces of raisins, had passed during the previous year.

Chile PEPPERS or *capsicum*, are extensively cultivated on the table lands. This pungent vegetable is not only used upon the table or in the food of all classes as an occasional agreeable stimulant, but has become one of the regular necessities of life. It is either ground and mixed with the various sauces and stews that always form part of a Spanish meal, or is stuffed with pleasant condiments and eaten as other products of the garden. No Mexican will pass a day without a dish of the genuine article, and even foreigners who wince under its excoriation upon their arrival in the country, soon become as fond of it as the natives.

Mexico produces nearly all the garden stuffs which are either natural to or have been introduced into the United States, but either in consequence of the climate, or of a careless mode of cultivation, they do not generally equal our own in quality or flavor. The *tomato* is very fine, luscious and plentiful; and, next to corn, Chili and *frijoles*, is probably most extensively consumed.

The *frijol*, a rich, nutritive, brown bean, altogether different, however, from the ordinary *Garrabanzos*, is universally found on the tables of Mexican gentlefolks and in the humble platters of the Indians or Mestizos. Various kinds of this valuable esculent are raised in the republic; but the dark bean of Vera Cruz is always sought as a delicacy in the houses of the upper classes throughout the republic. It is both wholesome and nourishing. Mixed with the stimulating gravy formed of *chile*, and eaten with a *tortilla* or corn cake, it soon becomes a necessary of life to a stranger who resides for any length of time in Mexico. Some of our country men have become so fond of the food, that they have brought the bean with them upon their return to the United States, and now supply their table with it instead of *hominy*. From the *frijol*, the *tortilla*, and the

Chile pepper we pass to the great national liquor, which requires generally longer time to win the favor of foreigners.

THE MAGUEY—METL, or AGAVE AMERICANA, is a species of Ananas, or Aloe, from which is made octli or *pulque*, the favorite beverage of the lower and middle classes of Mexicans, especially in the central parts of the table land.

This plant grows wild in almost every part of Mexico, yet the people do not extract a liquid from it, except in the neighborhood of Puebla and the capital, where its consumption is enormous. The principal plantations are in the States of Puebla, Mexico, Guanajuato, and a small portion of Valladolid. The districts most celebrated for the excellence of their liquor, are in the vicinity of Cholula and the Plains of Apam. So great was the consumption of this favorite national drink, that the small municipal tax upon it, at the gates of the cities, amounted, before the revolution, to \$600,000—and, in the year 1793, to upwards of \$800,000.

Pulque is so little known in Europe, or in the United States, that some account of the process, by which it is made, may be acceptable.

MAKING PULQUE. MAKING PULQUE.

"The Maguey, or aloe, from which it is extracted, differs but little, in appearance, from those which abound in the south of Spain, and are known—though of a much smaller size—in England. Its growth is slow, but when arrived at maturity, its leaves are usually from five to eight feet in length, although some considerably exceed these dimensions.

"In the Maguey estates, the plants are arranged in lines, with an interval of three yards between each. If the soil be good, they require no attention on the part of the proprietor until the period of flowering arrives, at which time the plant first commences to be productive. This period is very uncertain; ten years, however, may be taken as a fair average, for, in a plantation of one thousand aloes, it is calculated that one hundred are in flower every year. The Indians, know, by infallible signs, almost the very hour at which the stem, or central shoot, destined to produce the flower, is about to appear, and they anticipate it, by making a deep incision and extracting the whole heart, or central portion of the stem, as a surgeon would take an arm out of the socket, leaving nothing but the thick outside rind, thus forming a natural basin or well, about two feet in depth and one and a half in diameter. Into this the sap, which nature intended for the support of the gigantic central shoot continually oozes, in such quantities that it is found necessary to remove it twice, and even three times, during the day. In order to facilitate this operation, the leaves on one side are cut off, so as to admit a free approach. An Indian then inserts a long gourd, (called *acojité*,) the thinner end of which is terminated by a horn, while at the opposite extremity a small square hole is left, to which he applies his lips, and extracts the sap by suction. This sap, before it ferments, is called *Aguamiel*, (honey water,) and merits the appellation, as it is extremely sweet, and does not possess that disagreeable smell which is afterwards so offensive.

"A small portion of this *aguamiel* is transferred from the plant to a building prepared for the purpose, where it is allowed to ferment for ten or fifteen days, when it becomes what is termed *Madre Pulque*, (the mother of Pulque,) which is distributed, in very small quantities, amongst the different skins or troughs, intended for the daily reception of the *Aguamiel*. Upon this it acts as a sort of leaven; fermentation is excited instantly, and in twenty-four hours it becomes Pulque in the very best state for drinking. The quantity drawn off each day is

replaced by a fresh supply of *Aguamiel*, so that the process may continue during the whole year without interruption, and is limited only by the extent of the plantation. A good maguey yields from eight to fifteen quartillos or pints, of *Aguamiel* in a day, the value of which may be taken at about one *real*, or twelve and a half cents;—and this supply of sap continues during two, and often three months. The plant, therefore, when about to flower, is worth ten dollars to the farmer; although, in the transfer of an estate, the *Magueyes de corte*, ready for cutting, are seldom valued, one with another, at more than five. But, in this estimate, an allowance is made for the failure of some, which is unavoidable, as the operation of cutting the heart of the plant, if performed either too soon, or too late, is equally unsuccessful and entirely destroys the plant. The cultivation of the Maguey, where a market is at hand, has many advantages, as it is a plant, which, though it succeeds best in a good soil, is not easily affected either by heat or cold, and requires little or no water. It is propagated, too, with great facility; for, although the mother plant withers away as soon as the sap is exhausted, it is replaced by a multitude of suckers from the old root. There is but one drawback on its culture, and that is the period that must elapse before a *new* plantation can be rendered productive, and the uncertainty with regard to the time of flowering, which varies from eight to eighteen years. But the Maguey grounds, when once established, are of great value, many producing a revenue of ten and twelve thousand dollars per annum.

"The natives ascribe to Pulque as many good qualities as whiskey is said to possess in Scotland. They call it stomachie,—a great promoter of digestion and sleep, and an excellent remedy in many diseases. It requires a knowledge of all these good qualities to reconcile the stranger to that smell of sour milk or slightly tainted meat, by which the young Pulque drinker is usually disgusted; but if this can be surmounted, the liquor will be found both refreshing and wholesome, for its intoxicating qualities are very slight, and as it is drunk always in a state of fermentation, it possesses, even in the hottest weather, an agreeable coolness. It is found, too, where water is not to be obtained; and even the most fastidious, when travelling under a vertical sun, are then forced to admit its merits.

"It is only to be met with *in perfection* near the places where it is grown; as it is conveyed to the great towns in hog-skins on mules or asses. During this tedious process the disagreeable odor increases and the freshness of the liquor is lost. A strong sort of brandy, called *Mexical*, *Mescal*, or *aguardiente*, is likewise prepared from the aloe, of which there is a great consumption in the country. Nor is the utility of the plant confined to this; the Aztecs prepared from its leaves the paper on which their hieroglyphics were written, pieces of which, of various

thickness, may be found at the present day. The more fibrous parts supply the country with *pita*, a strong thread or twine, which is made up into ropes and used not only in the interior, but on the western coast as cordage for vessels. It is not so pliable as hemp, and is more liable to be affected by the weather; but it is extremely tough and durable, and consequently of very general utility. The preceding plate contains an aloe in full produce, with the leaves cut, the central cup displayed, and the skin, gourd, and scraper used in extracting the sap."^[10]

Mexico is filled with varieties of Aloes and Cacti. A species known as the Organos—whose tall, erect and fluted columns shoot up to a height of ten, fifteen or twenty feet, is used in many parts of the table land for fences. Planted in close rows, its fine spines and firm limbs afford an impervious wall against intruders, whilst the tops of these evergreen and growing barriers are almost always covered with the most beautiful blossoms. In many districts of Mexico these *cacti* form one of the most picturesque as well as useful features in the landscape.

CHAPTER V.

COLONIAL PRODUCTS.

ESTATES IN THE VALLEYS OF CUERNAVACA AND CUAUTLA—MEXICAN HACIENDAS.—SUGAR REGIONS—COFFEE—ITS YIELD.—TOBACCO—ORIZABA—CHIAPAS, ETC.—INDIGO—COTTON.—MANUFACTURES ENCOURAGED IN MEXICO.—NO NEW AGRICULTURAL POPULATION—NEW MANUFACTURING POPULATION.—PRODUCTION OF COTTON—VAINILLA—JALAP—CACAO—COCHINEAL—ITS PRODUCTION AND QUANTITY.—SILK—FRUITS—AGRICULTURAL PROSPECTS.—GRAZING, AND NOT AN AGRICULTURAL COUNTRY.

AGRICULTURAL PRODUCTS CONTINUED.—COLONIAL PRODUCTS.

SUGAR.

It is generally admitted that the cultivation of SUGAR commenced in China. The cane became first known, through Marco Polo, in the middle of the thirteenth century; and it was soon after introduced into Nubia, Egypt and Ethiopia; whence, about the 15th century, it reached Europe. It was first planted in Sicily, and carried to Spain, Madeira, and the Canary Isles; and, twenty-eight years after the discovery by Columbus, it was introduced into Hayti, by Pedro Atienza, and speedily spread over the West Indies and other parts of America.

THE SUGAR CANE is one of the most valuable agricultural products of Mexico, and we are convinced from personal observation that the estates in the *tierra caliente*, where it is chiefly raised, are the richest, as well as most beautiful, in the republic. There is scarcely a lovelier prospect in Mexico than that which

spreads before the traveller as he descends from the northern mountains into the valley or Cuernavaca, which lies south of the valley of Mexico, and may be reached easily in the course of a day. On every side, as far as the eye can reach, fields of the freshest verdure are spread out, dotted with the white walls and towers of the magnificent *haciendas*, which have been founded in this valley ever since the conquest. Screened from the cold winds of the upper table land by the protecting barrier of mountains which hem in the vales of Mexico and Puebla, the valley of Cuernavaca basks, on their southern slopes and feet, in a tropical climate. Winter never destroys the foliage in this sheltered region. Pleasant streams gurgle through its midst and afford sufficient supplies for irrigation. On the plain the tender green of the young cane, waves in the sunlight like a mass of purest velvet; whilst the palm and the plantain mingle their

MEXICAN FOREST SCENE. MEXICAN FOREST SCENE.

pensile and massive foliage amid the densest groves of oranges, aloes, and forest trees. The valley of Cuernavaca is one of those picturesque regions which are so well calculated to bring back a fanciful beholder to the scenes he has conjured up in youth whilst perusing the story of Paul and Virginia, or the glowing descriptions of the Arabian Nights.

It is in this charming region that some of the opulent citizens of the republic, have succeeded the wealthy Spaniards in the princely domains and *haciendas* of the *tierra caliente*. In the neighborhood of Cuernavaca we find the estates of Temisco, San Gabriel, Trenta Pesos, El Puente, Meacatlan, San Gaspar, San Vicente Chiconcuac, and Atlajomulco. The valley of Cuautla unites with that of Cuernavaca, on the east, and contains, among others, the prominent estates of San Nicolas, Atlihuyan, San Carlos, Acotesalco, Pantitlan, Cocoyöe, Calderon, Casasana, Santa Iñez, Coahuistla, Mapastlan, and Tenestepango.

In the state of Oajaca there are the fine haciendas of Guendolein, Arragon, Chicomastlahuaca and Ayotla, besides smaller plantations; and, in the state of Vera Cruz there are many valuable estates in the neighborhood of Orizaba and Cordova. The last mentioned establishments produce annually from 40,000 to 50,000 arrobas of sugar; whilst those in the valleys of Cuernavaca and Cuautla de Amilpas, (calculated in all, at forty-eight, in number,) yield about 800,000 arrobas of sugar and syrup—besides 50,000 barrels of rum. These products, together with some indigo and coffee, raised in these two last named valleys,

swell the value of agriculture in these branches to two millions and a half annually. On the estate of Guendolein, in Oajaca, 40,000 arrobas of sugar were yielded every year, which sold in the federal capital at about \$160,000. At Atlajomulco, in Cuernavaca, 880,000 square yards of land were cultivated in cane, which produced 4,600 cwt. of refined sugar, 7,800 cwt. of molasses, and 300 cwt. of syrup. From the syrup is distilled the common *chinguerito*, or a superior species of beverage known as *aguardiente de cana*. At the estate of Santa Iñez, near Cuautla, 4,000 barrels of this spirit are annually distilled and sold in Mexico at \$32 each, which, with a deduction of eight dollars for transportation and duties, will leave a return for the planter of 24 dollars per barrel. In addition to this production of ardent spirits, the estate produces annually about 40,000 loaves, of twenty-three pounds each, or 920,000 pounds of refined sugar; and here, as elsewhere throughout the planting districts, it is calculated that the molasses, syrup, and in some places, the aguardiente, pay all the expenses of the estate. The chief difficulty encountered by the proprietors, and their *administradors*, is in the worthlessness of the Indian laborers, whose character as agriculturists we have noticed in the section of this work treating of the classes of Mexican society. Three hundred hands are employed at the *hacienda*, who are paid a *per diem* of two and a half or three *reals*, according to their qualifications or work.

The hacienda of Temisco, in the valley of Cuernavaca, is one of the oldest establishments in the republic, and, within a few years, has passed into the possession of its present owners for the sum of \$300,000. The extensive buildings, consisting of a commodious dwelling, constructed in the old Spanish style, and a large chapel, were erected soon after the conquest. The domain extends over eleven leagues of land in length, and three in width. Two hundred and fifty laborers produce yearly about fifty thousand loaves of sugar, of an average weight of 23 pounds. The annual expenses of the farming and management amount to thirty thousand dollars, which are repaid by the molasses, syrup, and spirits, as at Santa Iñez, while, in addition to the crop, about four thousand cattle are raised on the premises. On all these large estates a store is kept by the owner, at which nearly the whole amount of the Indian laborer's wages is received back in the course of the year. The planters, in many parts of the country, are no longer contented with the old system of extracting and preparing sugar; but, notwithstanding the enormous cost of transporting such large masses of heavy machinery, they have introduced all the modern improved engines used in the United States and the West Indies. The profits must be large that will warrant so extravagant an expenditure. The great haciendas disburse, in

wages and other current charges, from 800 to 1,200 dollars weekly. The establishment of a *Trapiche*, or all the works required for a sugar estate, is so costly an enterprise, that it is not likely the cultivation of the article will become greatly extended by the opening of new estates in the most productive regions. Labor, as well as engines, will be required for this purpose, and it is quite improbable that the few indolent Indians in the neighborhood will be prevailed on to abandon their life of laziness for the toils of a sugar plantation. Besides this, the present production fully supplies the home market, and although the revenues and profits are extraordinarily tempting, it is doubtful whether the Mexicans are sufficiently enterprising in agriculture to adventure such enormous sums as are necessarily expended before a single cane is planted or a pound of sugar manufactured. As long as the

HACIENDA. HACIENDA.

rate of interest is high, the roads bad, transportation costly and unchanged, and the condition of the country unsettled, these vast and valuable rural districts will, in all likelihood, remain untenanted and unwrought.

Baron Humboldt, whose analytical mind always strives to classify, systematize and *tabularize* his investigations, has endeavored to ascertain and limit the maximum *height* at which the cane may be cultivated; but it is probably true that all such attempts, are altogether visionary, in a country of great inequalities of elevation, shelter and exposure. Many local causes, altogether independent of relative elevation may produce the degree of heat requisite to bring cane to perfection, yet it is generally conceded that the produce of a plantation in the table land would not equal that of an estate near the coast. The valley of Cuautla, for instance, is bounded on the north by the lofty peak of Popocatepetl, against whose *snows* the fresh verdure of the cane, and the graceful branches of the palm are constantly relieved. In an hour or two after leaving the plantation of Santa Iñez, the traveller who passes thence towards the valley of Mexico, finds himself obliged to put on his cloak or *serape*, after having suffered from tropical heat during the preceding day. It might reasonably be supposed that the vicinity of such immense masses of ice and snow would naturally affect the temperature of the adjacent valley; but the frosty peak of Popocatepetl only serves to condense the vapors that drift inland from the sea

and to set them free over the low and warm valleys which border its southern base, whilst its broad shoulders protect the plains from the cold blasts of the north wind.

C O F F E E .

The soil of Mexico has been found adapted for the cultivation of coffee as well as sugar; but under the old Spanish dominion it never formed one of the articles of export, although it did not interfere with the productions of the mother country. In 1818 and '19 extensive plantations were commenced near Orizaba and Cordova, to which additions have since been frequently made. The plant was likewise introduced into the valleys of Cuernavaca and Cuautla by Antonio Velasco and the *administrador* of the estates of the Duke of Monteleone. The large *hacienda* of Atlajomulco, in the immediate neighborhood of Cuernavaca still pertains to the descendants of Cortéz; and here the experiment of coffee culture has been long and successfully tried. The average produce of each plant is estimated at about two and a half pounds throughout all parts of the republic where the berry is cultivated; though there are districts of Mexico in which it is said that three or four pounds are yielded. This probably depends very much on the size, age, or quality of the tree. Mr. Ward states that he knew of a single tree, in the garden of Don Pablo de la Llave, at Cordova, which produced *twenty-eight pounds!* The slope of the eastern Cordillera is supposed to be best calculated for coffee estates, and it is believed that Yucatan and Tabasco will ultimately, under favorable circumstances, become the centres of a lucrative trade in this article, if the Indian population can ever be trained to agricultural labors, or made productively industrious in a land where the wants of nature are so few and so easily supplied. The plantations in the interior must long be excluded from foreign markets for the same reason that we have assigned in regard to sugar. Roads and improved transportation are the fundamental and primary elements of commercial civilization, and until these are obtained permanently, Mexico must look chiefly to her domestic market for agricultural recompense.

T O B A C C O .

In a country in which all the men, and nearly all the women are habitual and even constant smokers, tobacco, must necessarily be an article of national importance. So valuable is its production that the government has continued to maintain the monopoly of its sale, and, previous to the revolution, managed to obtain an annual *clear* revenue of from one to two millions and a half of dollars,

with a *gross* income, occasionally, of over seven millions and a half. In the cigar factories of Oajaca five millions of packets of paper *cigarritos* of thirty in each were prepared, besides sixty thousand packets each containing seven *puros* or ordinary cigars.

Tobacco grows well in a small district near Orizaba and Cordova, but the best article produced in the republic, comes from Simojovel in the state of Chiapas and from some districts of Oajaca. In Yucatan and Tabasco, the plant is also cultivated successfully, and produces a mild and fragrant leaf which is not included in the national monopoly. A large portion of the tobacco sold in the republic is contraband; for the ridiculous and greedy restrictions and exactions with which a plant of such universal consumption is surrounded, necessarily dispose the people to violate laws which they feel were only made to impair their rights of production and trade under a constitution professing to be free.

INDIGO.

Indigo was cultivated and used by the Mexicans previous to the conquest. The plant was known by them under the name of *Xiuhquilitzahuac*, and the particles from which the dye stuff was made, as *Mohuitli* or *Tlacoahuilli*. At the close of the seventeenth century the production of this article had already greatly decreased. The chief part of it, required for dyeing the cotton cloths which are generally used for home consumption by the Indians and lower classes of *Mestizos*, has been brought from Guatemala. It is found in Yucatan, Chiapas and about Tehuantepec in the state of Oajaca, and grows wild in some very warm localities in Tabasco. In this last named region there is every reason to believe that it may be profitably cultivated, inasmuch as the indigo plantations of San Salvador, in the neighborhood of Guatemala have been known to produce one million eight hundred thousand pounds of the article, valued at two millions of dollars.

The production of *WAX*, according to the *Memoria Sobre el Estado de la Agricultura y Industria*, of Don Lucas Alaman in 1843, is gradually augmenting in the republic. Attempts have also been made to cultivate *FLAX* and *HEMP*. The first of which has been successfully raised by Mariano Aillou in the neighborhood of Tenancingo, and the latter, in the southern districts of the state of Michoacan, where it grows even spontaneously and is known under the name of *guinary*. The product is very large, the extent of territory covered by it very great,—and the thousands of pounds annually raised in that district, are made up into garments whose quality is highly approved throughout the republic.

COTTON.

In consequence of the high price of imported goods, owing to restrictive tariffs as well as to the costliness of transportation a number of intelligent persons began some years ago to establish factories for cottons and woollens. The stimulus of domestic factories it was supposed would naturally increase the culture of the raw materials, and, accordingly, the national industry was aided from the beginning by prohibitions or excessive duties, which either excluded the foreign raw material altogether, or fostered the contraband introduction of cotton twist and woollen thread.

Cotton was among the indigenous products of Mexico at the time of the conquest; and the early adventurers not only found it to constitute the common vesture of the masses of the people, but also that the most delicate and luxurious articles of dress were made of it. The Aztecs possessed the art of spinning it to an extreme degree of fineness and of imparting to it the beautiful and brilliant dyes for which they were celebrated; but both these mysteries were entirely lost in the general destruction of aboriginal arts and records by the Spaniards. Notwithstanding the natural anxiety of Spain to furnish her colonists with her manufactures, she could never prevent the people from weaving and wearing this spontaneous product of their soil. And, although the cultivation of the raw material was neglected or not pursued with the ingenious industry that would have made it a great staple product, it is nevertheless estimated that the annual value of the domestic manufacture in Mexico amounted to about \$5,000,000. After the consummation of national independence, foreign nations hastened to seize the trade of Mexico and to fill the markets with an abundant but costly supply of European and American stuffs. The drain of the precious metals which this caused from a country that possessed no other article of export to pay for the imported merchandize by exchanges, soon alarmed the financiers of Mexico, and accordingly a higher scale of duties was adopted for the encouragement of domestic manufactures. This, for a long time, served only to augment the cost of apparel to the Mexican consumer, whilst it had no other material effect upon the fabrics of the country except to seduce a number of wealthy landholders into the erection of factories, which have cost them, at least, ten if not twelve millions of dollars. Unluckily, however, this amounted merely to the creation of vast establishments which could not rely upon the resources of the country for their supply, for the factories were built *before* the farms were opened by which they were to be furnished with the staple!

It is a fact, therefore, not very generally known, that Mexico has become a manufacturing country. The water power which is abundant in many parts of a

mountainous region like that of Mexico, affords great facilities for such establishments.

In 1843 there were 53 cotton factories in the republic with a total of 131,280 spindles, and it was estimated that,—looking to Mexico alone for the supply,—there would be an annual deficiency of a large quantity of the raw material. This calculation, it must be remembered, does not include the consumption of cotton by hand looms, an immense number of which are in constant use through the republic.

In consequence of this evident deficiency, and the prospect of the firm establishment of a manufacturing system, many persons were induced to commence the cultivation of cotton. But their failure was signal. It is true that in Mexico the proportion of small farmers and rural tenants is small, and that the great majority of the owners of the soil are large landholders who might sometimes change the character of their cultivation. But these men belong to the pastoral rather than the agricultural age, and delight in the easier tending of their flocks and herds. In addition to this we must take into consideration the well known characteristics of the southern races enervated still more by the genial climate of Mexico. Those races are governed by traditions. As their fathers wrought—so *they* work. Their antipathy to change is proverbial, and it is by no means uncommon to see the spirit of an anecdote related by Basil Montague, realized every day in Mexico.

"In a particular district of Italy," says he, "the peasants loaded their panniers with vegetables on one side, and balanced the opposite pannier by filling it with stones, and when a traveller pointed out the advantages to be gained by loading both panniers with vegetables, he was answered that their forefathers, from time immemorial, had so carried their produce to market; that they were wise and good men, and that a stranger showed very little understanding or decency who interfered in the established customs of a country." Such are the difficulties to be encountered in the habits and prejudices of all old nations, and the embarrassment, in the present instance, would not be so much in creating a body of gentlemen planters, as in finding laborers to work the plantations when they had been acquired.

Brought up as most of the Indians are, on small pieces of land, or in little villages among the mountains, they find that the fruitful soil produces, almost spontaneously, enough for their frugal support. A skin or two, together with a few yards of cotton or woollen cloth, suffice, every few years, for their requisite covering. The broad leaves of a plantain, or, a palm with its matted vines, afford them shelter during the day, whilst a kennel on the ground, keeps off the rains or

night dews. And thus, a servile contentment with traditionary occupations or idleness, roots them to the soil where they were born, and makes them, in fact though not in name, the hereditary slaves of the estates on which their ancestors have worked for centuries. These men are, of course, not to be suddenly diverted from their tastes; and the worthy persons who have commenced the cultivation of cotton in suitable districts of the country where the Indians are numerous and unemployed, have been obliged to abandon their enterprises from the fact that their laborers speedily deserted under the plea that they were not used to such occupations, and, with less toil, had ample food and raiment in their goats and gardens at home. The reasoning of the Indians is quite natural and even wise under the peculiar circumstances of their actual life. *Money* is no object to them, for they have no object upon which to expend it, and their isolated existence affords them no comparative scale of society in which they might advance to a higher degree of civilization by the possession of wealth. Why then should they toil to acquire that which to them has not even the value of a *counter*? Possessing without labor all that is needed for mere existence, their toil can only be beneficial to their employers. In this, they perceive by their native sagacity, that there is no recompense and no equality of interests.

Whilst such are the reasons why a new agricultural population cannot be created in Mexico, the reverse is precisely the case with regard to a new manufacturing population. Factories are generally erected in the neighborhood of large towns, or in populous districts where the surplus of *females* is continually in the greatest indigence. These people have neither pieces of land, nor gardens, nor goats, nor means of livelihood except beggary or the prison, and consequently they flock with eagerness to every factory that affords the hope of employment and support. Thus, whilst the tendency of the agriculture of Mexico is to produce servitude, that of its manufactures is to create a feeling of honest independence.

These speculations seem to indicate clearly, first, that the fixed policy of Mexico is to establish a national system of manufactures; and, secondly, that the cultivation of the staple which is to supply these factories will not be largely increased; or if it be increased at all, its augmentation will not be proportionate to the number and demand of the factories.

The connexion between the production of cotton and its use is so close that we have been unable in the preceding passages to avoid anticipating some statements which will be more amply set forth in our section on Mexican manufactures. We shall now turn our attention to the cultivation and annual

production in the republic.

Throughout the cotton growing districts of the United States the cotton plant is of annual growth. Frost destroys it, and the planter is obliged to renew the seed for every crop. But, in the tierra caliente of Mexico, this is not requisite, as the tree propagates itself, and the laborers are only required to keep the fields clear of extraneous plants which spring up so rapidly and luxuriantly in tropical climates.

Notwithstanding the advantages offered by the erection of the factories in Mexico, the best data obtained by Don Lucas Alaman in 1843, presented only the following meagre returns of the proximate quantity of cotton raised in some of the states of the republic, excluding, of course, the small parcels raised by Mestizos and Indians for their private consumption:

	ARROBAS.	LBS.
In the state of Jalisco,	1,000 or	25,000
" " Sonora,	3,500 "	87,500
" " Durango,	3,044 "	76,100
" " Oajaca,	21,583 "	539,576
" " Puebla,	3,738 "	93,450
" " Vera Cruz,	14,496 "	362,400
	<u>47,361</u> "	<u>1,184,025</u>

In this estimate the cleaned and uncleaned, or ginned and un-ginned cotton are averaged together. It is generally considered, however, that the whole country really produces at present about seventy thousand quintals or seven millions of pounds.

The quantity, and consequently the value of the Mexican cotton crop has been very variable. At Tepic on the west coast, in whose vicinity there are many valuable factories, it has been sold as low as fifteen dollars per quintal; while at Vera Cruz on the east coast it has risen to twenty-two and twenty-four dollars, and, in Puebla and the city of Mexico it has reached even to forty and forty-eight dollars. Cotton gins have been established at Alvarado, at Cosamaloapan, and Tuxtla on the northern and eastern coasts, and at Tepic, on the west; but they are not sufficiently numerous throughout the country to supply even the present limited production.

VAINILLA.

Mexico is generally considered the native country of the delicious vainilla bean, which grows wild along the eastern coast amid the endless variety of parasitic plants with which the forests are filled. It is a native of Vera Cruz, Oajaca and Tabasco. On the wooded mountain or hill slopes of the latter it has been discovered in great quantities; but throughout Mexico this pleasant and valuable product has been left almost entirely to the care of Indians. Its cultivation is exceedingly simple. A shoot of the plant is inserted in the ground at the foot of a tree intended to support the future vine, which, if properly freed from the encumbrance of other parasites, soon embraces the trunk, and yields beans during the third year. This hardy and fruitful plant lasts from a quarter to half a century, according to the attention that is bestowed on it; and it is remarkable that its cultivation has not engaged the attention of foreigners who might safely reside in the beautiful and healthy regions of Jalapa.

JALAP.

JALAP, like vainilla, is a parasitic plant; but its root instead of its fruit is used for medicinal purposes. Its leaves resemble the ivy and its beautiful red flowers open only at night. Growing plentifully in the neighborhood of Jalapa, whence it takes its name, it is usually sent abroad through Vera Cruz, where the commercial returns show that more than three thousand quintals are rarely exported.

CACAO.

The use of chocolate is so universal in Mexico and throughout Spanish countries, that it might naturally be supposed the cultivation of cacao was largely and carefully attended to in the republic. Such, however, is not the case. The cacao of Soconusco, and of the low grounds of Caraccas, Guatemala and Guyaquil, was found to be so superior to the Mexican article, that its production has been almost abandoned except in the neighborhood of Colima, or on the Isthmus and in the states of Tabasco and Chiapas.

COCHINEAL.

The OPUNTIA, or Indian fig, a species of cactus is the food in Mexico which supports an insect from whose body the dye known as COCHINEAL is made. It is found also in Brazil where it nourishes the *grana sylvestre* which affords a dye that is greatly inferior in color as well as durability to that produced by the *grana fina* of Mexico.

The *grana fina* resembles a small bug in size and color, covered with a

whitish mealy powder, through which the rings or cross stripes on the back of the insect are distinctly visible; the female alone produces the dye; the males are smaller, and one is found sufficient to impregnate three hundred females.

The cochineal bug feeds only on the leaf of the *opuntia*. The process of rearing is complicated and attended with much difficulty. The leaves of the nopal upon which the seed is deposited, must be kept free from all foreign substances, and, in the cochineal districts the Indian women constantly tend the plants, brushing them lightly with a squirrel's tail.

In a good year one pound of seed deposited upon the plant in October, will yield in December, twelve pounds of cochineal, leaving a sufficient quantity of seed behind for a second crop in May. The plantations of the cochineal cactus are confined to the district of the Misteca, in the state of Oajaca and in the valley of Oajaca at Ocotlan.

Some of the Haciendas de Nopales contain from fifty to sixty thousand plants, arranged in lines like the aloes in the Maguey plantations already described, and cut down to a certain height, in order to enable the Nopalers to clean them more easily.

In the year 1758, a government registry-office was established in Oajaca, in consequence of the complaints of British merchants, who had received cargoes of adulterated cochineal. This bureau kept an accurate account of the production and value of the article, within its jurisdiction, and a tabular statement of the result has since been published in the Memoria Estadistica de Oajaca, &c. &c., of Don J. M. Murgnia y Galardi, who was a deputy to the Cortes from that province. By this document, and subsequent returns, it appears that from 1758 to 1832, inclusive,—or in 75 years,—44,195,750 pounds of cochineal were produced in the state of Oajaca alone, which were worth \$106,170,671 at the market price.

SILK.

After the independence of Mexico was secured the Mexicans in the neighborhood of Zelaya, and in a few other places, attempted the cultivation of the mulberry tree, for the purpose of feeding silk worms. But this agricultural speculation failed. The planters did not possess the Chinese mulberry, which is universally adopted as the best in all silk producing countries.

In 1841 an association under the style of the "Michoacan Company," was organized, in the capital of Michoacan, for the encouragement of silk culture. The members of this body labored diligently to introduce the Chinese tree, and spread it far and wide through the states of Vera Cruz, Puebla, Mexico,

Queretaro, Jalisco, Aguascalientes, San Luis Potosi, Sonora and Michoacan. These labors were performed by thirty-six *Juntas de fomento*, or committees of encouragement, and although the trees have most generally grown well, it is to be feared that the enterprise resembled the wild speculations in that species of mulberry which, about the same period, both made and lost so many fortunes in the United States. The cultivation of silk has been warmly urged by Don Lucas Alaman, as exceedingly suitable for the state of Oajaca, where, in the course of time, it may replace the cochineal whose product it is said is beginning to fail in that district.

FRUITS.

The finest fruits of Mexico are commonly found in the *tierra caliente*. The orange, lemon, lime, pine apple, banana, chirimoya, sapote, ahuate, tuna, granadita, are produced in great perfection. The apples, peaches, cherries, grapes and gooseberries do not possess the high flavor, nor are they found in the same varieties, as in the United States; but the pears, especially those known as Gamboa pears, are exceedingly delicious. Nearly all these fruits are consumed in their natural state, yet immense quantities are preserved and form the extraordinary varieties of *dulces* without which no Mexican table is considered properly set forth. It is very probable that if horticulture and agriculture were scientifically studied by Mexicans, or if North American and European gardeners were to emigrate to the country, even the fruits which are now inferior to ours, would improve in quality, size and flavor under their skilful management.

AGRICULTURAL PROSPECTS.

From all that we have already stated in regard to the Indian or laboring population of Mexico, the nature of the seasons, and the want of irrigation in many districts, except by artificial means, it will be perceived that the agricultural progress of the country is extremely doubtful. In addition to this, the land belongs to a few proprietors, many of whom own estates of twenty, thirty, forty, fifty, and even a hundred leagues square, which are chiefly devoted to *herds* instead of *agriculture*. Mexico is thus rather in the *pastoral* than the *commercial* age, and must pass through the transition state of independent subdivided labor before she can stand, naturally, upon the same platform with northern and European nations.

The early Spanish settlers were eager monopolists of mines and land. Their object was to realize fortunes speedily; and by a liberal *repartimiento* of Indians

they were enabled to found large estates upon which those Indians either toiled as husbandmen or tended uncounted herds. The prolific soil soon yielded, with little labor, the required quantity of vegetables and cereal products; domestic markets were wanted for the sale of the surplus, and the Spanish government did not open its harbors for exportation. Agriculture was thus early limited to the mere animal wants of the *glebæ adscripti* and emigrant Spaniards, and as the Indian never labors except when compelled by force or necessity, he soon preferred the idle and wandering life of a herdsman to that of a farmer. Many of these estates now number from ten to twenty thousand head of cattle. Besides this the Spanish laws presented the Indian no prospects of independent agricultural rights. The foreign landholder enjoyed the exclusive ownership of the vast freehold. There was no encouragement or hope given to small farmers who might emerge from the servile race, and the consequence is that Mexico, until she becomes an exporting country, receives an augmented population by immigration, and sub-divides her immense territorial manors, under the demands of trade, will, in all likelihood remain stationary in every thing pertaining to agriculture. It is the multiplication of freeholders under the stimulus of commerce, that promotes freedom, industry, and personal independence. Competition is continually excited by the wants of a numerous nation, or by the prospect of selling the results of our labor to others abroad who are not so well supplied or do not produce the articles we cultivate and manufacture. But Mexico, as at present constituted, is an exceedingly small white *civilized* nation, if we exclude her four and a half millions of Indians. She is not increased annually by immigration from the crowded countries of the Old World, nor does she encourage the advent of strangers. Her population therefore is substantially confined within the narrow limits of natural increase by birth alone. These singular facts exhibit the anomalous condition of all the Spanish settlements upon the virgin and inviting soil of America; and until the Chinese exclusiveness of these various western nations is abandoned as an absurdity in the nineteenth century, we do not believe that the Arab plough will be replaced by the civilized implements of North American agriculture, or that the Mexican shepherd will turn into an enlightened farmer. We have seen that even the stimulus of domestic demand for cotton, has been unable to produce a new agricultural class among those who were devoted to other traditionary toils. What hope, then, can there be of an improvement in cereal cultivation, when the country is already supplied, and owns neither a navy nor merchantmen?

CHAPTER VI.

REFLECTIONS ON EMIGRATION—ADVANTAGES OF AMERICA—LAND AND LABOR.—

MINES WROUGHT BY AZTECS—MINING DISTRICTS AND EXTENT IN MEXICO.—
ERRORS AS TO EARLY SUPPLY OF METALS FROM AMERICA—TRUE PERIOD OF
ABUNDANCE—MINES NOT EXHAUSTED—CONDITION—FAMILIES ENRICHED.—EFFECT
OF MINING ON AGRICULTURE.—RELATIVE PRODUCT OF SILVER FOR TEN YEARS—
TABLE OF PRODUCT—YIELD OF THE MINES SINCE THE CONQUEST.—COINAGE 1844—
TOTAL COINAGE 1535 to 1850.

MEXICAN MINES, MINERAL WEALTH AND COINAGE.

It is generally supposed that the mineral wealth of America was one of the most powerful stimulants of the Spanish conquest and subsequent emigration; nor is the idea erroneous if we recollect the manner in which the Castilian power was founded on this continent and the colonial policy it originated. It will be seen by the tables annexed to this section, that the results have largely fulfilled the hopes of the European adventurers, and that the wealth of the world has been immensely augmented and sustained, by the discovery of our Continent. In the order of the earth's gradual development, under the intellectual enterprise or bodily labor of man, we find the most beautiful system of accommodation to the growing wants or capacities of our race. Space is required for the crowded population of the Old World, and a new continent is suddenly opened, into which the cramped and burdened millions may find room for industry and independent existence. The political institutions of Europe decay in consequence of the encroachments of power, the social degradation of large masses by unjust or unwise systems, or the enforced operation of oppressive laws, and a virgin country is forthwith assigned to man in which the principle of self government may be tried without the necessity of casting off by violence the old fetters of feudalism. The increasing industry or invention of the largely augmented populations of the earth, exacts either a larger amount or a new standard of value for the precious metals, and regions are discovered among the frosts and forests of a far off continent, in which the fable of the golden sands of Pactolus is realized. The labor of men and the flight of time strip commercial countries of their trees, yet, in order to support the required supply of fuel, not only for the comfort and preservation but also for the industry of the race, the heart of the earth beneath the soil which is required for cultivation, is found to be veined with inexhaustible supplies of mineral coal.

The bounty and the protective forethought of God for his creatures is not only intimated but proved by these benevolent storehouses of treasure, comfort and freedom; and whilst we acknowledge them with proper gratitude, we should not forget that their acquirement and enduring possession are only to be paid for by labor, economy, and social as well as political forbearance.

We do not think these observations out of place in a chapter devoted to the

mineral wealth of Mexico. The subject of property and its representative metals, should be approached in a reflective and christian spirit, in an age in which the political and personal misery of the overcrowded masses of Europe, is forcing them to regard all who are better provided for, or more fortunate by thrift or the accident of birth, as enemies of the poor. The demagogue leaders of these wretched classes, pushing the principle of just equalization to a ridiculous and hideous extreme, have not hesitated to declare in France, since the revolution of February, 1848, that "property is robbery."^[11] We shall not pause to examine or refute the false dogma of a dangerous incendiary. The common sense as well as the common feeling of mankind revolts at it. Property, as the world is constituted by God, is the *source* of new industry, because it is, under the laws of all civilized nations, the original *result* of industry. "It makes the meat it feeds on." Without it there would be no duty of labor, no exercise of human ingenuity or talent, no responsibility, no reward. The mind and body would stagnate under such a monstrous contradiction of all our physical and intellectual laws. The race would degenerate into its former savage condition; and force, instead of its antagonists, industry and honest competition, would usurp the dominion of the world and end this vicious circle of bastard civilization.

And yet it is the duty of an American,—who, from his superior position, both in regard to space in which he can find employment and equal political laws by which that employment is protected, stands on a vantage ground above the confined and badly governed masses of Europe,—to regard the present position of the European masses not only with humane compassion, but to sympathize with that natural feeling that revolts against a state of society which it seems impossible to ameliorate, and yet whose wants or luxuries do not afford them support. It is hard to suffer hunger and to see our dependants die of starvation, when we are both able and willing to work for wages but can obtain no work upon which to exercise our ingenuity or our hands. It is frightful to reflect, says Mr. Carlyle, in one of his admirable essays, that there is hardly an English horse, in a condition to labor for his owner, that is deprived of food and lodging, whilst thousands of human beings rise daily from their obscure and comfortless dens in the British isles, who do not know how they shall obtain employment for the day by which they may purchase a meal.

To this dismal account of European suffering, the condition of the American continent affords the best reply. The answer and the remedy are both displayed in the social and political institutions, as well as in the boundless unoccupied and prolific tracts of our country. Labor cries out for work and recompense from the Old World, whilst the New displays her soil, her mines, her commerce and her

trades, as the best *alms* that one nation can bestow on another, because they come direct from God and are the reward of meritorious *industry*. Before such a tribunal the modern demagogue of continental Europe shrinks into insignificance, and the laws of labor are effectually vindicated.

The MINES OF MEXICO have been wrought from the earliest periods. Long before the advent of the Spaniards, the natives of Mexico, like those of Peru, were acquainted with the use of metals. Nor were they contented with such specimens as they found scattered at random on the surface of the earth or in the ravines of mountain torrents, but had already learned to dig shafts, pierce galleries, form needful implements, and trace the metallic veins in the hearts of mountains. We know that they possessed gold, silver, lead, tin, copper and cinnabar. Beautiful samples of jewelry were wrought by them, and gold and silver vases, constructed in Mexico, were sent to Spain by the conquerors, as testimonials of the mineral wealth of the country. The dependant tribes paid their tributes to the sovereign in a species of metallic currency, which though not stamped by royal order, was yet the representative of a standard value. The exact position of all the mines from which these treasures were derived by the Aztecs is not certainly known at the present day, but as the natives were often compelled to indicate some of the sources of their riches to the conquerors there is little doubt that the present mineral district of the republic is that from which they procured their chief supplies.

The mines of Mexico may be classed in eight groups, nearly all of which are placed on the top or on the western slope of the great *Cordillera*.

The *first* of these groups has been the most productive, and embraces the districts contiguous to Guanajuato, San Luis Potosi, Charcas, Catorce, Zacatecas, Asientos de Ybarra, Fresnillo and Sombrerete.

The *second* comprises the mines situated west of the city of Durango as well as those in Sinaloa, for the labors of engineers have brought them so close to each other by their works that they may be united in the same geological division.

The *third* group is the northernmost in Mexico, and is that which embraces the mines of Chihuahua and Cosiguiriachi. It extends from the 27th° to the 29th° of north latitude.

The *fourth* and *fifth* clusters are found north-east of Mexico, and are formed by the mines of Real del Monte or Pachuca, and Zimapan, or, El Doctor.

Bolaños, in Guadalajara, and Tasco in Oajaca, are the central points of the *sixth*, *seventh* and *eighth*.^[12]

The reader who will cast his eye over the map of Mexico, will at once perceive that the geographical space covered by this metalliferous region, is small when compared with the great extent of the whole country. The eight groups into which the mining districts are divided occupy a space of twelve thousand square leagues, or one tenth only of the whole extent of the Mexican republic as it existed previous to the treaty of 1848 and before the mineral wealth of California and probably of New Mexico was known to the world. But as that treaty confirmed and ceded to the United States more than one half of the ancient territory of Mexico, we may estimate the mining region as covering fully one fifth of the remainder.

Before the discovery and conquest of the West Indies and the American continent, Europe had looked to the east for her chief supplies of treasure. America was discovered by Columbus, not as was so long imagined, because he foresaw the existence of another continent, but because he sought a shorter route to the rich and golden Zipangou, and to the spice regions of eastern Asia. Columbus and Vespuccius both died believing that they had reached eastern Asia, and thus a geographical mistake led to the greatest discovery that has ever been made. In proof of these assertions we may state that Columbus designed delivering *at Cuba*, the missives of the Spanish king to the great Kahn of the Mongols, and that he imagined himself in Mangi the capital of the southern region of Cathay or China! "The Island of Hispaniola," (Hayti) he declares to Pope Alexander VI., in a letter found in the archives of the Duke of Varaguas,—"is Tarshish, Ophir, and Zipangou. In my second voyage, I have discovered fourteen hundred islands, and a shore of three hundred and thirty-three miles, belonging to the continent of Asia." This *West Indian* Zipangou produced golden fragments or spangles, weighing eight, ten and even twenty pounds.^[13]

Before the discovery of the *silver* mines of Tasco, on the western slope of the Mexican Cordillera, in the year 1522, America supplied only *gold* to the Old World, and consequently, Isabella of Castile was obliged, already in 1497, to modify greatly, the relative value of the two precious metals used for currency. This was doubtless the origin of the Medina edict—which changes the old legal ratio of 1:10.7. Yet Humboldt has shown that, from 1492 to 1500, the quantity of gold drawn from the parts of the New World then known, did not amount, annually, to more than about one thousand pounds avoirdupois;—and the Pope Alexander VI., who, by his famous Bull, bestowed one half the earth upon the Spanish kings, only received in return, from Ferdinand the Catholic, some small fragments of gold from Hayti, to gild a portion of the dome of the Basilica of Santa Maria Maggiore;—a gift that was suitably acknowledged in a Latin

inscription in which the offering is set forth as the first that had been received by the Catholic sovereigns from India.

Although the income of treasure must have increased somewhat, yet the working of the American mines did not yield three millions of dollars yearly until 1545. The ransom of Atahualpa amounted, according to Gomara, to about four hundred and twenty-five thousand dollars of our standard, or fifty-two thousand marks of silver, whilst, the pillage of the Temples at Cuzco, if Herrera is to be credited, did not produce more than twenty-five thousand seven hundred marks, or a little more than a quarter of a million of our currency.^[14]

It has been generally imagined that the wealth of the New World immediately and largely enriched the Spanish kings or their people; and that the sovereigns, under whose auspices the discovery was made, participated, at once, in the treasures that were found in the possession of the Indian rulers. Such, however, was not the case. The historian Ranke, in his essay on the Spanish finances, has shown, by new documents and official vouchers, the small quantity of the precious metals which the American mines, and the supposed treasures of the Incas yielded.^[15] It is probable that the conquerors did not make exact returns to the court of their acquisitions, or that the revenue officers, appointed at an early period of American history, were not remarkable for the fidelity with which they transmitted the sums that came into their possession as servants of the crown; and thus it happened that neither the king of Spain nor his kingdom, was speedily enriched by the New World. Baron Humboldt, in one of his late publications, gives an interesting extract from a letter written by a friend of Ferdinand the Catholic a few days after his death, which exhibits the finances of that king in a different light from that in which they have been hitherto viewed. In an epistle to the bishop of Tuy, Peter Martyr says, that this "Lord of many realms,—this wearer of so many laurels,—this diffuser of the Christian faith and vanquisher of its enemies,—died *poor*, in a rustic hut. Whilst he lived no one imagined that after his death it would be discovered that he possessed scarcely money enough either to defray the ceremony of his sepulture, or to furnish his few retainers with suitable mourning!"^[16] The adventurers *in America*, were doubtless enriched, and duly reported their gains to friends at home; but Spain itself was not speedily improved by their acquisitions.

The rise in the prices of grain and other products of agriculture or human industry, about the middle of the sixteenth century, and especially from 1570 to 1595, indicates the true beginning of the plentiful flow of the precious metals to the Old World, in consequence of which their value diminished and the results of

European industry increased in price. This is accounted for by the commencement of the beneficial working of the American mines about that period. The real opening of the mines of Potosi, by the Spanish conquerors, dates from the year 1545; and it was between this epoch and 1595, that the splendid masses of silver from Tasco, Zacatecas, and Pachuca, in New Spain; and from Potosi, Porco and Oruro, in the chain of Peruvian Andes, began to be distributed more uniformly over Europe, and to affect the price of its productions. From the period of the administration of Cortéz to the year 1552, when the celebrated mines of Zacatecas were just opened, the export from Mexico, rarely reached in value, annually, 100,000 pesos de oro, or nearly \$1,165,000. But from that date it rose rapidly, and in the years 1569, 1578 and 1587, it was already, respectively—

931,564	Pesos de	| —The Peso de oro, is rated by Prescott, at \$11.65 cents, and by Ramirez, at \$2.93 cents. ^[17]
	oro.	
1,111,202	" "	
1,812,051	" "	

During the last peaceful epoch of the Spanish domination, Baron Humboldt calculates the annual yield of the mines of Mexico at not more than \$23,000,000, or nearly 1,184,000 pounds, avoirdupois, of silver, and 3,500 pounds, avoirdupois, of gold. From 1690 to 1803—\$1,330,772,093 were coined in the *only* mint of Mexico; while, from the discovery of New Spain until its independence, about \$2,028,000,000, or two-fifths of all the precious metals which the whole of the New World has supplied during the same period, were furnished by Mexico alone.^[18]

It appears from these data that the exhaustion of the mines of Mexico is contradicted by the geognostic facts of the country, and as we shall hereafter show, by the recent issues of Mexican mints. The mint of Zacatecas, alone, during the revolutionary epoch, from 1811 to 1833, struck more than \$66,332,766, and, in the eleven last years of this period, from four to five millions of dollars were coined by it every year uninterruptedly.

The general metallic production of the country,—which was of course impeded by the revolutionary state of New Spain between 1809 and 1826,—has arisen refreshed from its slumber, so that, according to the best accounts it has ascended to perhaps twenty millions annually in total production, in consequence of the prolific yield of the workings at Fresnillo, Chihuahua, and Sonora, independent of the abundant production at Zacatecas.

The Mexican mines were eagerly and even madly seized by the English, and

even by the people of the United States, as objects of splendid speculation, as soon as the country became settled; but, in consequence of bad management, or the wild spirit of gambling which assumed the place of prudent commercial enterprise, the holders of stock were either disappointed or sometimes ruined. Subsequently, however, the proprietors have learned that prudence and the experience of old Mexican miners was better than the theoretical principles upon which they designed producing larger revenues than had ever been obtained by the original Spanish workmen. Their imported modern machinery and engines for voiding water from the shafts and galleries is the chief beneficial improvement introduced since the revolution; but the enormous cost of transporting the heavy materials, in a country where there are no navigable rivers extending into the heart of the land, and where the usual mode of carriage is on the backs of mules, by wretched roads over mountains and through ravines, has often absorbed large portions of the original capital before the proprietors even began to employ laborers to set up their foreign engines. Many of the first British and American adventurers or speculators have, thus, been ruined by unskilful enterprises in Mexican mines. Their successors, however, are beginning to reap the beneficial results of this expenditure, and, throughout the republic steam engines, together with the best kinds of hydraulic apparatus, have superseded the Spanish *malacates*.

"Whenever these superb countries which are so greatly favored by nature," says Humboldt, in his essay on gold and silver, in the *Journal des Economistes*, "shall enjoy perfect peace after their deep and prolonged internal agitations, new metallic deposits will necessarily be opened and developed. In what region of the globe, except America, can be cited such abundant examples of wealth, in *silver*? Let it not be forgotten that near Sombrerete, where mines were opened as far back as 1555, the family of Fagoaga,—Marquesses de Apartado,—derived, in the short space of *five months*, from a front of one hundred and two feet in the outcropping of a silver mine, a net profit of \$4,000,000; while, in the mining district of Catorce, in the space of two years and a half, between 1781 and the end of 1783, an ecclesiastic, named Juan Flores, gained \$3,500,000, on ground full of chloride of silver and of *colorados*!"

One of the most flourishing establishments in 1842, was the Zacatecano-Mejicano Mining Company of Fresnillo. Its 120 shares, which originally cost \$22,800, were still held by Spaniards and Mexicans. These mines were originally wrought by the state of Zacatecas; but, in 1836, Santa Anna took possession, by an alleged right of conquest, and rented them for twelve years, to the successful company. In the first half year of 1841, they produced \$1,025,113,

at a cost of \$761,800, or a clear profit of \$263,313.

Mexico, under the colonial system with the immense product of her mines, and notwithstanding the richness of her soil for agricultural purposes, became almost entirely a silver producing country. The policy of Spain was, as we have already often stated, to be the workshop of the New World, while Mexico and Peru were the treasures of the Old. The consequence of this was natural. Mexico, one of the finest agricultural and grazing lands in the world, but with no temptations to export her natural products, as she had no markets for them elsewhere, and no roads, canals, or rivers to convey her products to seaports for shipment even if she had possessed consumers in Europe, at once devoted herself to her mines which were to be both wealth and the representatives of wealth. Her agriculture, accordingly, assumed the standard of the mere national home consumption, while the pastoral and horticultural interests followed the same line, except perhaps, within late years in California, where a profitable trade was carried on by the missions in hides and tallow. From this restrictive law of exportation we of course except vainilla, cochineal and a few other minor articles.

The sources of the wealth of the principal families of Mexico will consequently be found in her mines, and an interesting summary of this aristocracy is given by Mr. Ward in his "Mexico in 1827," to prove the fact. The family of Regla, which possessed large estates in various parts of the country, purchased the whole of them with the proceeds of the mines of Real del Monte. The wealth of the Fagoagas was derived from the great Bonanza of the Pavellon at Sombrerete. The mines of Balaños founded the Vibancos. Valenciana, Ruhl, Perez-Galvez, and Otero, are all indebted for their possessions to the mines of Valenciana and Villalpando, at Guanajuato. The family of Sardaneta,—formerly Marqueses de Rayas,—took its rise from the mine of that name. Cata and Mellado enriched their original proprietor, Don Francisco Matias de Busto, Marquis of San Clemente. The three successive fortunes of the celebrated Laborde, of whom we shall speak hereafter when we describe Cuernavaca, were derived from the mines of Quebradilla, and San Acasio at Zacatecas, and from the Cañada which bore his name at Tlalpujahu. The beautiful estates of the Obregones, near Leon, were purchased with the revenues of the mines of La Purisima and Concepcion, at Catorce; as was also the estate of Malpasso acquired by the Gordoas from the products of La Luz. The Zambranos,—discoverers of Guarisamey,—owned many of the finest properties in Durango; while Batopilas gave the Bustamantes the opportunity to purchase a title and to

enjoy an immense unencumbered income.^[19]

Nevertheless, some of the large fortunes of Mexico were made either by trade or the possession of vast agricultural and cattle estates in sections of the country where there were either no mines, or where mining was unprofitable. The Agredas were enriched by commerce, while the descendants of Cortéz who received a royal grant of the valley of Oajaca, together with some Spanish merchants in Jalapa and Vera Cruz, derived the chief part of their fortunes from landed estates, cultivated carefully during the period when the Indians were under better agricultural subjection than at present.

Thus the mines, and the mining districts, by aggregating a large laboring population, in a country in which there were, until recently, but few manufactures, and in which the main body of the people engaged either in trades or in tending cattle, became the centre of some of the most active agricultural districts. "The most fertile portions of the table land are the Baxio, which is immediately contiguous to Guanajuato, and comprises a portion of Valladolid, Guadalajara, Queretaro, and Guanajuato. The valley of Toluca, and the southern part of the state of Valladolid, both supply the capital and the mining districts of Tlalpujahuá, El Oro, Temascaltepec and Angangeo;—the plains of Pachuca and Appam, which extend on either side to the foot of the mountains upon which the mines of Real del Monte Chico are situated;—Itzmiquilpan, which owes its existence to Zimapan;—Aguas Calientes, by which the great mining town of Zacatecas is supplied;—a considerable circle in the vicinity of Sombrerete and Fresnillo;—the valley of Jarral and the plains about San Luis Potosi, which town again derives its name from the mines of the Cerro de San Pedro, about four leagues from the gates, the supposed superiority of which to the celebrated mines of Potosi in Peru gave rise to the appellation of Potosi. A little farther north we find the district of Matehuala, now a thriving town with more than seven thousand inhabitants, created by the discovery of Catorce, while about the same time, in the latter part of the last century, Durango rose into importance from the impulse given to the surrounding country by the labors of Zambrano at San Dimas and Guarisamey. Its population increased in twelve years from eight to twenty thousand; while whole streets and squares were added to its extent by the munificence of that fortunate miner. To the extreme north, Santa Eulalia gave rise to the town of Chihuahua; Batopilas and El Parral became each the centre of a little circle of cultivation; Jesus Maria produced a similar effect; Mapimi, Cuencame, and Inde, a little more to the southward, served to develop the natural fertility of the banks of the river Nazas; while in the low hot regions of Sonora and Sinaloa, on the western coast, almost every place designated on the

map as a town, was originally and generally is still a Real, or district for mines." [20]

Such is the case with a multitude of other mines which have formed the *nucleii* of population in Mexico. They created a market. The men who were at work in the vein, required the labor of men on the surface, for their support and maintenance. Nor was it food alone, that these laborers demanded. All kinds of artizans were wanted, and consequently, towns as well as farms grew upon every side. When these mining *dependencies* are once formed, as Baron Humboldt justly says, they often survive the mines that gave them birth; and turn to agricultural labors for the supply of other districts that industry which was formerly devoted solely to their own region.

Such are some of the internal advantages to be derived from mining in Mexico, especially when the mines are well and scientifically wrought, and when the miners are kept in proper order, well paid, and consequently enabled to purchase the best supplies in the neighboring markets. The mines are, in fact, to Mexico, what the manufacturing districts are to England and the United States; and they must be considered the great support of the national agricultural interests until Mexico becomes a commercial power, and sends abroad other articles besides silver, cochineal and vainilla,—the two last of which may be regarded as her monopolies. The operation of this tempting character of *mines* or of the money they create as well as circulate, is exhibited very remarkably in the rapidity with which the shores of California have been covered with towns and filled with industrious population.

The tabular statement on the next page manifests the relative production, and improving or decreasing productiveness, of the several silver districts of Mexico, during the comparatively pacific period of ten years antecedent to the war with the United States which commenced in 1846. Whilst that contest lasted the agricultural and mineral interests and industry of the country of course suffered, and, consequently, it would be unfair to calculate the metallic yield of Mexico upon the basis of that epoch or of the years immediately succeeding.

From the table it will be seen—omitting the fractions of dollars and of marks of silver—that the whole tax collected during these ten years from 1835 to 1844, amounted to \$1,988,799, imposed on 15,911,194 marks of silver, the value of which was \$131,267,354;—the mean yield of *tax* being \$198,889, and of the *silver*, 1,591,119, in *marks*, which, estimated at the rate of eight dollars and a quarter, *per mark*, amounts to \$13,126,735 annually.

Comparing the first and second periods of five years, we find a difference in the tax in favor of the latter, of \$113,130, on 905,042 marks of silver; showing that in the latter period \$7,466,596 more were extracted from the Mexican mines than during the former.

If we adopt the decimal basis of calculation the returns show, *approximately*, the following results for relative productiveness:

In Zacatecas,	$33^{2/32}$ per ct.
Guanajuato,	$21^{12/32}$ " "
San Luis Potosi,	$7^{22/32}$ " "
Pachuca,	$6^{24/32}$ " "
Guadalajara,	$5^4/32$ " "
Mexico,	$4^{26/32}$ " "
Durango,	$4^{18/32}$ " "
Guadalupe y Calvo,	$3^{24/32}$ " "
Chihuahua y Jesus Maria,	$4^{18/32}$ " "
In Rosario, Cosala and Mazatlan,	$2^{26/32}$ per ct.
Sombrerete,	$2^{22/32}$ " "
Parral,	$1^6/32$ " "
Zimapan,	$2^8/32$ " "
Alamos,	$2^7/32$ " "
Hermosillo,	$2^6/32$ " "
Oajaca,	$2/32$ " "
Tasco,	$1/32$ " "

These statements do not include the precious metals produced in Mexico, which were either clandestinely disposed of or used in the manufacture of articles of luxury.^[21]

TABLE exhibiting the places and the amount of Tax collected at each, on every mark of silver, during the ten years from 1835 to 1844, designed to show the

relative productiveness of the various silver districts throughout the Mexican Republic.

Places where the impost or tax has been collected.	Product of the tax from 1835 to 1839, both inclusive.	Product of the tax from 1840 to 1844, both inclusive.	Increase of yield of tax during the last five years.	Decrease of yield of tax during the last four years.	Value of total silver product in dollars, 8 ¹ / ₄ per mark.
Zacatecas.....	\$350,715..7.. 9	\$306,620..5.. 1	.....	\$44,095..2.. 8	\$43,384,215..7..0
Guanajuato.....	197,423..5.. 2	228,498..1.. 2	\$31,074..4.. 0 ....	.....	28,110,838..2..0
San Luis Potosi..	75,682..7.. 7	77,373..2.. ¹¹⁵ / ₁₀	1,690..3.. ⁴⁵ / ₁₀	.....	10,101,716..7..9
Pachuca.....	58,805..1.. 4	75,654..4.. ¹⁰⁵ / ₁₀	16,849..3.. 6 ⁵ / ₁₀	.....	8,874,345..1..9
Guadalajara.....	41,520..4.. 7	60,067..3.. ⁵ / ₁₀	18,546..6.. ⁵⁵ / ₁₀	.....	6,704,804..7..3
Mexico.....	31,841..2.. 0	63,472..2.. 1	31,631..0.. 1	.....	6,290,691..5..6
Durango.....	49,416..0.. 9	40,668..6.. 6	.....	8,747..2.. 3	5,945,603..6..6
Guadalupe y Calvo	10,328..5.. ⁵⁵ / ₁₀	63,733..0.. ⁶⁵ / ₁₀	53,404..3.. 1	.....	4,888,075..4..0
Sombrerete.....	32,405..6.. 3	19,385..6.. 4	.....	13,019..7..11	3,418,243..6..6
Chihuahua.....	23,293..5.. 9	19,940..0.. 7	.....	3,353..5.. 2	2,853,430..2..0
Cosala.....	24,073..7.. 1	15,980..1.. 2	.....	8,093..5..11	2,643,566..0..6
Jesus Maria.....	8,379..2.. ¹⁵ / ₁₀	19,502..0.. ¹¹⁵ / ₁₀	11,122..6.. ¹⁰¹ / ₁₀	.....	1,840,171..4..1
Parral.....	13,258..6.. ¹¹⁵ / ₁₀	10,716..3.. 9	.....	2,542..3.. ²⁵ / ₁₀	1,582,372..2..9
Zimapan.....	8,523..6.. 4	9,279..7.. 4	756..1.. 0	.....	1,175,044..6..0
Alamos.....	.....	16,806..6.. ²⁵ / ₁₀	16,806..6.. ²⁵ / ₁₀	.....	1,109,247..1..9
Hermosillo.....	5,773..0.. 3	10,275..0.. 1	4,501..7..10	.....	1,059,170..6..0
Rosario.....	2,517..2.. 4	8,939..4.. 3	6,422..1..11	.....	756,150..2..6
Mazatlan.....	.....	4,100..5.. 4	4,100..5.. 4	.....	270,644..0..0
Oajaca.....	2,450..3.. 8	.....	.....	2,450..3.. 8	161,730..2..0
Tasco.....	1,474..0..10	.....	.....	1,474..0..10	97,290..7..0

Totals.....	\$937,884..4.. ²³ / ₁₀	\$1,051,914..6.. ³¹ / ₁₀	\$196,907..1.. ⁸¹ / ₁₀	\$83,776..7.. ⁷⁵ / ₁₀	\$131,267,354..2..10
Deduct decrease.....			83,776..7.. ⁷⁵ / ₁₀		
Difference in favor of increased yield of tax (and of course of production) during the last period of five years.....			\$113,130..2..0		See table No. 1, in the Report of the Minister of Foreign and Domestic R 1846.

MINT OF MEXICO

Comprised in four sections: 1st, coinage of gold and silver from 1690 to 1821; 2d, from 1822 to 1829; 3d, from 1830 to 1844; and 4th, coinage of copper only.

1690 to 1822,	or, in 132 years,	in silver,	\$1,574,931,650..1..10
1733 to 1822,		gold,	60,018,880..0..00
1822 to 1829,		silver,	23,179,384..3..03
" "		gold,	4,392,502..0..00
1830 to 1844,		silver,	18,829,250..4..02
" "		gold,	1,430,258..0..00
1814 to 1844,		copper,	5,323,765..0..09
	Total,		<u>\$1,688,105,960..2..00</u>

From this must be deducted on account of recoinage, &c. &c., according to statement of the mint,	12,195,941..0..00
	<u>\$1,675,909,749..1..08</u>

And to this last sum must be added for *gold* coinage from 1609 to 1732, not included in the previous statement, 24,237,766..0..00

Total coinage of mint in the city of Mexico to 1844, \$1,700,147,515..1..08

From 1535 to 1690—it is estimated that there were coined in the mint of Mexico alone:

Gold,	\$ 31,000,000
Silver,	<u>620,000,000</u>
Total,	651,000,000

Add the preceding result from 1690 to 1844, 1,700,147,515

Total coinage in mint of city of Mexico

from 1535 to 1844,

\$2,351,147,515

MINT OF CHIHUAHUA

Comprised in three sections: 1st, coinage of silver 1811 to 1814; 2d, of silver and gold from 1832 to 1844; 3d, of copper only.

1811 to 1814,	silver,	\$3,603,660.0..00
1832 to 1844,	"	3,026,215.3..08
" "	gold,	368,248.0..00
1833 to 1835,	copper,	50,428.5..00
Total,		<u>[22]\$7,048,552.0..08</u>

MINT OF DURANGO

Comprised in two sections: 1st, coinage, from 1811 to 1829; and 2d, 1830 to 1844.

1811 to 1829,	silver,	\$10,046,503.4..00
1830 to 1844,	"	11,769,410.3..09
1830 to 1844,	gold,	1,986,069.3..06
Total,		<u>\$23,801,983.3..03</u>

MINT OF GUADALAJARA

Comprised in four sections: 1st, coinage of silver and gold from 1812 to 1821; 2d, ditto from 1822 to 1829; 3d, ditto 1830 to 1844; 4th, of copper.

1812 to 1821,	silver,	\$2,058,388.2..03
" "	gold,	61,581.1..03
1822 to 1829,	silver,	5,619,384.4..00
" "	gold,	182,242.4..00
1830 to 1844,	silver,	10,162,947.4..06
" "	gold,	120,805.5..01
1831 to 1836,	copper,	61,217.4..06
Total,		<u>\$18,266,567.1..07</u>

MINT OF GUADALUPE Y CALVO

Established by a grant of congress in 1840, but only commenced

its operations in 1844.

1844,	silver,	\$338,124
"	gold,	95,004
Total,		<u>\$433,128</u>

MINT OF GUANAJUATO

Comprised in three sections: 1st, coinage from 1812 to 1821; 2d, silver and gold from 1822 to 1829; 3d, ditto from 1830 to 1844.

1812 to 1821,	silver,	\$ 602,575..0..00
1822 to 1829,	"	7,652,816..5..00
" "	gold,	142,520..0..00
1830 to 1844,	silver,	42,742,850..0..00
" "	gold,	4,228,180..0..00
Total,		<u>\$55,368,941..5..00</u>

MINT OF SOMBRERETE.

1810 to 1812 inclusive, coined in silver, \$1,561,249..2..00

MINT OF SAN LUIS POTOSI

Comprised in three sections: 1st, coinage from 1827 to 1829; 2d, from 1830 to 1844; and 3d, copper.

1827 to 1829,	silver,	\$ 2,951,418..0..00
1830 to 1844,	"	15,580,010..2..00
1827 to 1835,	copper,	23,517..3..00
Total,		<u>\$18,554,945..5..00</u>

MINT OF TLALPAM.

1828, 1829 and part of 1830, coined in silver,	\$959,116..7..00
" " " gold,	203,544..0..00
Total,	<u>\$1,162,660..7..00</u>

MINT OF ZACATECAS

Comprised in four sections: 1st, coinage from 14th of November, 1810 to 1820; 2d, from 1821 to 1829; 3d, from 1830 to 1844; and

4th, copper.		
1810 to 1820,	silver,	\$14,450,943..6..00
1821 to 1829,	"	31,838,470..4..00
1830 to 1844,	"	74,085,951..7..00
1821 to 1829,	copper,	107,949..4..00
	Total,	<u>\$120,483,315..5..00</u>

TABLE of the Gold and Silver coined in the eight Mints of the Mexican Republic from 1st January, 1844, to 1st January, 1845, according to official reports.

MINTS.	GOLD.	SILVER.	TOTAL.
Chihuahua	\$61,632..0..0	\$290,000..0..0	\$351,632..0..0
Durango	27,508..0..0	213,362..3..0	240,870..3..0
Guadalajara	5,282..5..1	950,032..6..3	955,315..3..4
Guadalupe y Calvo	95,004..0..0	338,124..0..0	433,128..0..0
Guanajuato	441,808..0..0	4,219,900..0..0	4,661,708..0..0
Mexico	36,172..0..0	1,688,156..4..8	1,724,328..4..8
San Luis Potosi		936,525..5..0	936,525..5..0
Zacatécas		4,429,353..4..0	4,429,353..4..0
Totals	\$667,406..5..1	13,065,454..6..11	\$13,732,861..4..0

COINAGE of Mexico from 1535 to 1849, inclusive, omitting the fractions of a dollar.

MINTS.	SILVER.	GOLD.	COPPER.	TOTAL.
1535 to 1690.				
City of Mexico	\$620,000,000	\$31,000,000	.....	\$651,000,000
1690 to 1844.				
City of Mexico	1,606,225,922	88,597,827	\$5,323,765	1,700,147,514
1811 to 1844.				
Chihuahua	6,629,875	368,248	50,428	7,048,551
1811 to 1844.				
Durango	21,815,913	1,986,069	.....	23,801,982
1812 to 1844.				
Guadalajara	17,840,720	364,629	61,217	18,266,566
1844.				

Guadalupe y Calvo	338,124	95,004	.....	433,128
1812 to 1844.				
Guanajuato	50,998,241	4,370,700	.....	55,368,941
1827 to 1844.				
San Luis Potosi	18,531,428	.....	23,517	18,554,945
1810, 1811, and 1812.				
Sombrerete	1,561,249	.....	.....	1,561,249
1828, 1829, and 1830.				
Tlalpam	959,116	203,544	.....	1,162,660
1810 to 1844.				
Zacatecas	120,375,366	.....	107,949	120,483,315
All the Mexican mints, from the end of 1844 to the end of 1849, at the rate of \$14,000,000 per annum, which was the approximate total coinage in 1844 [23]	.....	.....	.....	70,000,000
Totals	\$2,465,275,954	\$126,986,021	\$5,566,876	\$2,667,828,851

RESUME.

Silver	coinage from	1535 to 1844,	inclusive	\$2,465,275,954
Gold	do	1535 to 1844,	do	126,986,021
Copper	do	1811 to 1844,	do	5,566,876
General coinage, from 1845 to 1849, both inclusive				70,000,000
Total coinage of Mexico to present time, or in 314 years				<u>\$2,667,828,851</u>

Or, avoiding fractions, nearly \$8,500,000 yearly.

CHAPTER VII.

INCOME OF NEW SPAIN 1809—EXPENSES OF NEW SPAIN 1809.—MINERAL PRODUCTIONS—MILITARY FORCE—AGRICULTURE—MANUFACTURES.—COMMERCE—EXPORTS—IMPORTS.—PRESENT COMMERCE—IMPORTS—EXPORTS.—NINETEEN YEARS TRADE BETWEEN THE UNITED STATES AND MEXICO.—CHARACTER OF IMPORTS—CHARACTER OF EXPORTS—SILVER EXPORTED.—FAIRS IN MEXICO.—THE FUTURE PROSPECTS AND POSITION OF MEXICO—NOT A COMMERCIAL COUNTRY.—RAILWAY FROM VERA CRUZ TO THE CITY OF MEXICO.

FINANCIAL AND PRODUCTIVE CONDITION OF MEXICO OR NEW SPAIN BEFORE HER REVOLUTION, AND AT THE PRESENT DAY.

In order to exhibit a connected and comparative view of the financial and

commercial condition of Mexico, we have assembled in this section a number of tables which exhibit, at a glance, the state of New Spain in relation to her mines, agriculture, manufactures, commerce, and the income and expenses of the viceroyalty in 1809.

TABULAR STATISTICAL VIEW OF THE INCOME AND EXPENSES OF THE VICEROYALTY OF MEXICO IN 1809, ANTECEDENT TO THE REVOLUTION—ITS MINES, AGRICULTURE, MANUFACTURES AND COMMERCE.

1st. INCOME.

Branches of income.	Clear product in dollars.
Duties on assay,	\$72,506
" on gold and bullion,	24,908
" on silver,	2,086,565
" on vajilla,	25,716
Coining of gold and silver,	1,628,259
Tributes,	1,159,951
Taxes, (alcabalas)	2,644,618
Pulque, (a national beverage made of aloe,)	750,462
Powder,	370,829
Lotteries,	109,002
Novenos,	192,333
Saleable and remisable offices,	27,106
Stamped paper,	64,900
Medias anatas,	37,338
Chancery,	1,035
Cock fights,	33,322
Liquor shops,	22,883
Ice,	31,814
Salt works and duties on salt,	132,982
Licenses for ballast in Vera Cruz,	29
Bakeries, liquor shops in do.	11,989
Fortifications,	8,003
Donations,	1,480
do. for war purposes,	646,459

Caldos,	36,181
Dyes and vainilla,	45,740
Almojarifazgos,	275,894
Aprovechamientos,	57,967
Small incomes,	76,151
Balances of accounts,	24,989
Bulls of Santa Cruzada, (Roman Catholic,)	271,828
Ecclesiastical tithes,	30,320
do. subsidies,	4,686
Medias anatas y mesadas id,	50,540
Vacantes mayores y menores,	112,733
Spanish quicksilver,	474,722
German do.	42,583
Freight of quicksilver,	2,757
Cards,	148,861
Tobacco,	3,927,822
4 per cent. of salary of employés,	25,632
Gross income,	<u>\$15,693,895</u>
From this should be deducted for salaries and expenses of administration, \$596,260	1,244,199
For donations received this year, but which should not be counted as income, \$647,939	
Net income,	<u><u>\$14,449,696</u></u>

2d. EXPENSES IN THE YEAR 1809.

Expenses of fortification,	\$800,000
Pay of army, veteran troops, arsenal of San Blas, powder factories and other expenses,	\$3,000,000
Pay of Oidores, and other persons employed in judicial functions and measures for the conversion of the Indians,	250,000
Pensions,	200,000
Hospital expenses, repairs of factories,	400,800
Return of imposts,	1,496,000
	<u>\$6,146,800</u>

Amount of Income,	\$14,449,696
" " Expenses,	6,146,800
Balance,	<u>\$8,302,896</u>

This was then the clear income of Mexico in the year 1809. The same amount may be considered as the usual yearly revenue from the close of the eighteenth century, and if we deduct a half of this sum as being afterwards expended on this side of the Atlantic, it may be calculated that about four millions of dollars were transmitted to Spain annually.

3 d. MINERAL PRODUCTIONS.

In order to judge what regions of New Spain were most productive in mineral wealth and their relative productiveness, we will insert the value of the royal dues upon silver, amounting in all to the rate of $10\frac{1}{2}$ *per cent.* in 1795, in which year \$24,593,481 were coined in gold and silver at the Mexican mint.

San Luis Potosi,	96,000	— Marks of silver,—which may be estimated at eight dollars and a quarter per mark.
Zacatecas,	69,000	
Guanajuato,	67,000	
Rosario,	45,000	
Bolaños,	41,000	
Mexico,	36,000	
Guadalajara,	19,000	
Durango,	33,000	
Zimapan,	10,000	
Sombrerete,	7,000	
Chihuahua,	7,000	

All the mines in the Spanish possessions consumed annually 30,000 quintals of quicksilver, which, at the rate of \$50, (at which they might be calculated, on an average of years,) amounts to a million and a half.

When fifteen millions were annually coined the king received 6 per ct. upon that sum; and when the amount exceeded 18 millions, scarcely 7. This difference was owing to the rules and system of the mint, in which there were the same expenses in coining from twenty to twenty-four millions that were incurred in coining fifteen millions. In 1809 \$26,172,982 were issued, in gold and silver,

from the Mexican mint, and this, with the exception of 1804 and 1805, is the largest amount of coinage either under the Viceroyal or Republican government.

4th. MILITARY FORCE BEFORE THE REVOLUTION.

Veteran troops,	7,083
Garrison troops and viceroyal guards,	595
Garrison troops and guards. Internal provinces,	3,099
Provincial militia,	18,884
	<u>29,661</u>
The maintenance of these cost annually,	\$1,800,000
The fort of St. Carlos at Peroté absorbed,	200,000
Costs of fortifications and casual expenses,	2,000,000
	<u>\$4,000,000</u>

5th. AGRICULTURE.

This branch of industry produced a sum equal to the mines; that is to say— from twenty-two to twenty-four millions. The following calculation is founded upon the basis of the *diezmos* or tithes of the several bishoprics, which may be regarded as the best territorial measure.

Bishoprics.	Product of Agriculture in 1790.	Diezmos.
Mexico,	\$8,500,000	850,000
Puebla,	4,400,000	440,000
Valladolid,	4,000,000	400,000
Oajaca,	1,000,000	100,000
Guadalajara,	3,400,000	340,000
Durango,	1,200,000	120,000
In 6 Bishoprics,	<u>\$22,500,000</u>	<u>2,250,000</u>

6th. MANUFACTURES.

The cotton and woollen factories, of the most important and extensive character, were those of Puebla and of Queretaro. In the latter place, in twenty factories, and 300 small establishments, 46,000 arrobas of wool were consumed, out of which 6,000 pieces of cloth, or, 226,000 varas (yards);—280 pieces of *jerguetilla* or 39,000 yards (varas);—200 pieces of baize, or, 15,000 varas; 161 pieces of baizes and coarse woollens, or, 18,000 varas; the value of all which

manufactures exceeded \$600,000. In Queretaro there were moreover consumed 200,000 lbs. of cotton in the manufacture of cotton stuffs and rebosos, or shawls usually worn by the women throughout Mexico. The factories in the Intendency of Puebla, comprehended in that city, Cholula, Tlascala and Guejocingo, produced fabrics, in peaceful times, to the value of a million and a half of dollars. Besides these there were other factories in various parts of the country.

7th. COMMERCE.

The imports through Vera Cruz, before the war,	\$19,000,000
averaging one year with another, exceeded,	
The exports, inclusive of silver,	21,000,000
Difference in favor of exports,	<u>2,000,000</u>
Total of mercantile exchanges,	<u>40,000,000</u>
The above exportations may be divided into—	
Silver,	\$14,000,000
Agricultural products,	7,000,000

CLASSIFICATION OF EXPORTS.

	Weight in arrobas.	Value in dollars
Cochineal,	24,500	\$1,715,000
Sugar,	500,000	1,500,000
Vainilla,		60,000
Indigo,	60,000	2,700,000
Sarsaparilla,	20,000	90,000
Pepper from Tabasco,	24,000	40,000
Flour,		500,000
Tanned leather,		80,000
Sundries,		315,000
		<u>\$7,000,000</u>
Add export of precious metals,		14,000,000
		<u>\$21,000,000</u>

CLASSIFICATION OF IMPORTS.

Wine,	25 to 30,000 barrels	\$1,000,000
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Paper,	125,000 reams,	375,000
Cinnamon,	100,000 lbs.	400,000
Brandy,	32,000 barrels,	1,000,000
Saffron,	17,000 lbs.	350,000
Iron,	50,000 quintals,	600,000
Steel,	6,000 "	110,000
Wax,	26,000 arrobas,	500,000
Cacao,	20,000 fanegas,	1,100,000
Clothing, hardware and other manufactures,		14,000,000
		<u>\$19,335,000</u>

From a statement published by the Consulado of Vera Cruz it appears that the IMPORTATION FROM SPAIN in 1802 was as follows:—

In national vessels,	\$11,539,219	|—\$19,600,000
In foreign "	8,060,781	
EXPORTATION in the same year,		33,866,219
Difference in favor of exports,		<u>\$14,266,219</u>
Commerce of the metropolis,		<u>\$53,466,219</u>
Importation from America,		\$1,607,792
Exportation for "		<u>4,581,148</u>
General importation		\$21,207,792
General exportation,		<u>38,447,367</u>
Total trade of Vera Cruz in 1802,		<u>\$59,655,159</u> [24]

From this view of the anti-revolutionary condition of Mexican commerce and financial interests, we pass properly to the examination of the same affairs at the present day. In order to judge this subject fairly, however, we have adopted the commercial standard of the year preceding the war with the United States. During and since that period, the commercial results of the country must naturally have been so greatly disturbed as to afford altogether inadequate tests.

COMMERCE AT THE PRESENT DAY.

Imports and exports of the Mexican republic for the year ending on the 1st of January, 1845, calculated on the duties collected at the maritime and frontier custom houses.

1st. IMPORTS.

	Duties according to tariff.	Duties collected.	Capital or value of imported articles to which these duties correspond.
At	40 per ct., there were collected,	\$200..45	\$501..12
"	30 " " "	5,999,282..87	19,997,609..56
"	30 " provisions,	14,592..98	48,643..26
"	30 " timber,	3,539..49	11,774..96
"	25 "	152,916..18	611,664..72
"	12½ "	6,190..11	49,520..83
"	6 " jewelry,	1,171..22	19,520..33
	advanced to the treasury for permission to import 20,000 quintals of cotton,	120,000..00	400,000..00
		<u>\$6,297,886..30</u>	<u>\$21,139,234..83</u>

2d. EXPORTS.

	Duties according to tariff.	Export duties collected.	Value of exports to which these duties correspond.
At	6 per cent., on export of gold and silver coin,	\$524,349..631/2	\$8,739,160..58
"	3½ " on silver coin,	2..08	59..42
"	5 " on uncoined silver,	22,949..23	458,984..45
"	7 " in Vera Cruz on ditto,	12,687..60	181,251..42
"	7½ " in Mazatlan "	103,636..81	1,381,824..13
"	9 " at do. on gold,	14,479..141/2	160,879..39
"	9½ " on silver,	48..59	511..39
"	6½ " on wrought gold,	22..36	344..00
"	7 " on wrought silver,	658..11	9,401..57
"	6 " on dye wood,	6,025..14	100,419..00

RESUMÉ No. 1.

Export of money, \$524,351..71 ½ \$8,739,220..00

" of uncoined gold and silver,	153,801..37 ½	2,183,450..79
" of wrought gold and silver,	6,680..47	9,745..57
Total export of the precious metals,	<u>\$678,833..56</u>	<u>\$10,932,416..36</u>
Export of dye woods,	6,025..14	100,419..00
Total,	<u><u>\$684,858..70</u></u>	<u><u>\$11,032,835..36</u></u>

COMPARATIVE RESUMÉ No. 2.

Value of the imports into the republic,	\$21,139,234..83
" " exports from the republic,	11,032,835..36
Excess of imports above exports,	<u>\$10,106,399..47</u>

COMPARATIVE RESUMÉ No. 3.

	Duties.	Value of Articles.
Imports,	\$6,297,686..30	\$21,139,234..86
Deduct \$557,76..16 charged to the Vera Cruz custom house for income of previous years not collected in 1844, and which sum is calculated on 30 per cent. duties,	557,767..16	1,859,223..86
	<u>\$5,739,919..14</u>	<u>\$19,280,011..00</u>
Value of exports deducted,		11,032,835..36
Effective excess of imports in 1844,		<u>\$8,247,175..64</u>

COMPARATIVE RESUMÉ No. 4.

There were coined in the Mexican mints in 1844,	\$13,732,861..04
There were exported in money,	8,739,220..00
Difference in favor of the mint,	<u>\$4,993,641..04</u>

As the commercial relations of the United States with Mexico, of course concern us most intimately, and are those in which we take the deepest interest, we have formed from official data in the reports of our Secretaries of the Treasury the following table of our mercantile intercourse from 1829 to 1849:

COMMERCE BETWEEN MEXICO AND THE UNITED STATES FROM 1829 TO 1849.

	Imports from Mexico. Exports to Mexico.		
For year ending 30th Sept.,	1829	\$5,026,761	\$2,331,151
" " "	1830	5,235,241	4,837,458
" " "	1832	4,293,954	3,467,541
" " "	1833	5,452,818	5,408,091
" " "	1834	8,066,068	5,265,053
" " "	1835	9,490,446	9,029,221
" " "	1836	5,615,819	6,041,635
" " "	1837	5,654,002	3,880,323
" " "	1838	3,127,153	2,787,362
" " "	1839	3,500,707	2,164,097
" " "	1840	4,175,001	2,515,341
" " "	1841	3,484,957	2,036,620
" " "	1842	1,996,694	1,534,233
Last quarter of '42 and first two quarters of	1843	2,782,406	1,471,937
For year ending 30th June,	1844	2,387,002	1,794,833
" " "	1845	1,702,936	1,152,331
" war year, "	1846	1,836,621	1,531,180
" war year, "	1847	481,749	238,004
" " "	1848	1,581,247	4,054,452

By this table, covering the commerce between the United States and Mexico for nineteen years, we observe that from having a trade worth, *in imports and exports*, about nineteen millions and a half, in 1835, it is now reduced, in years undisturbed by war or the results of war, to not more than two millions and a half or three millions. As commerce usually regulates itself, in spite of personal or national prejudices, this fact is doubtless attributable to the lower rates at which European manufacturers and producers are enabled to afford their merchandise in the Mexican market. Nevertheless, we doubt not that the trade might be improved considerably by certain modifications of the tariff, especially upon the article of cotton, which as will be seen in our notices of the manufacturing establishments of Mexico is largely demanded from abroad in consequence of the failure from personal causes to produce an adequate supply within that republic.

The IMPORTS OF MEXICO consist chiefly of the following articles:

LINENS; five-eighths of which are received from Germany, while three-eighths are of Irish, Dutch, French and North American manufacture. The German linens are chiefly obtained from Silesia, and the finest kinds are in great demand.

COTTON goods are imported largely from England, the United States and France.

The importation of the best qualities of SILKS reaches annually about one million of dollars in value, and they are the productions of France and Germany; about three-fourths of the trade, in this article, belonging exclusively to France.

For her WOOLLEN FABRICS Mexico relies upon England and France, though Germany participates in the importation of some qualities.

ORNAMENTAL WARES, MILLINERY or articles of personal and fashionable luxury are obtained from France.

Genoa and Bordeaux furnish PAPER;—GLASSWARE, window glass and looking glasses are imported from the United States, England and France, but the finer kinds are exceedingly rare and costly, in consequence of the risk of transportation through the country by the present imperfect modes of carriage over bad roads. IRON WARE, of all kinds, and iron machinery for manufacturing or mining purposes, are imported from the United States, England, France, Germany and Spain.

QUICKSILVER, one of the most important articles for the miners, is brought in French and Italian ships from Idria and Almaden. WINE, BRANDY and GIN are consumed from France, Germany, Spain, Portugal and Holland; while fine *liqueurs* are largely imported from France and the Dutch West Indies.

CACAO is imported from several of the Southern American nations;—OIL from France, Gibraltar and Genoa;—and WAX, of which about 700,000 dollars worth is annually consumed, is received from the United States or Cuba. Salted and dried Fish or Flesh is chiefly monopolized by our traders.

The principal EXPORTS from Mexico have always been and still are, COCHINEAL, and the PRECIOUS METALS in bars and coined. Of the latter of these native products it is estimated by reliable authorities that one half is remitted to England and that the balance is divided between the United States and the continental states of Europe. The greater portion of silver is exported from Tampico, which is the nearest vent for the mineral wealth of Guanajuato, Zacatecas, San Luis Potosi, and the principal mining districts of northern Mexico. Large sums are also sent from Vera Cruz and from Mazatlan on the western coast, as will be seen by reference to our tabular statement of the value of exports. In 1845, before the war with the United States broke out, and when

Mexican trade was in its ordinary condition, ten millions nine hundred and thirty-two thousand four hundred and sixteen dollars worth of the precious metals, coined and uncoined, left these several ports through the regular channels. But as we have no means of exactly estimating the contraband exportation, which is very large, we may safely calculate that at least five millions more found their way clandestinely to Europe and the United States. Of the regular and lawful exportation, eight millions seven hundred and thirty-nine thousand two hundred and twenty dollars were coined; two millions one hundred and eighty-three thousand four hundred and fifty, in uncoined gold and silver; and nine thousand seven hundred and forty-five, in wrought silver and gold.

The exportation of COCHINEAL is estimated to range from seven hundred thousand to one million of dollars worth;—and, when we add to these articles, DYE WOOD, Vainilla, Sarsaparilla, Jalap, Hides, horns, and a small quantity of Pepper, Indigo, and Coffee, together with an occasional invoice of sugar sent from the west coast to Columbia and Peru, we may consider the list of merchantable Mexican exports as completely ended.

In all the Mexican towns and cities, and in many of the large villages there are weekly markets held at which a considerable trade for the neighborhood is carried on; and, in addition to these, there are nine great FAIRS at which immense quantities of foreign manufactures are disposed of. These are held at the following places and times:

1. The Fair at Aguas Calientes—begins on the 20th of November and lasts 10 days.
2. The Fair at Allende in Chihuahua—begins on the 4th of October, and lasts 8 days.
3. The Fair at Chilapa in Mexico—begins on the 2d of January, and lasts 8 days.
4. The Fair at Chilpanzingo—begins on the 21st of December, and lasts 8 days.
5. The Fair at Huejutla—begins on the 24th of December, and lasts 4 days.
6. The Fair at Ciudad Guerrero—begins on the 12th of December, and lasts 6 days.
7. The Fair at Saltillo—begins on the 29th of September, and lasts 8 days.
8. The Fair at San Juan de los Lagos—begins on the 5th of December, and lasts 8 days.
9. The Fair at Tenancingo—begins on the 6th of February, and lasts 10 days.

It will not be considered singular when we recollect the colonial and subsequent revolutionary history of Mexico, that she has not fostered her shipping and become a commercial country. The original emigration to New Spain was not maritime in its character. The Spanish trade was carried on by the mother country in Spanish vessels exclusively, and these ships were not owned by or permitted to become the permanent property of the colonists. The settlers who emigrated retired from the coasts to the interior where their interests either in the soil, cities, or mines, immediately absorbed their attention. It was not to be expected that the Indians, who could scarcely be converted into agriculturists, would engage in the more dangerous life of sailors. The whole industry of the foreign population was thus diverted at once from the sea board, and the consequence was, that notwithstanding the territory of New Spain is bounded on the east and west by the two great oceans of the world, those oceans never became the nurses of a hardy race of mariners whose labors would, in time, have fostered the internal productiveness of their country by creating a commerce. We are not astonished, therefore, to find that the whole marine of Mexico, on the shores of the Gulf, is confined to a petty coasting trade from port to port, and that her sea-going people are rather fishermen than sailors. On the west coast, however, the maritime character of the people has somewhat improved, and a very considerable trade has been carried on by Mexican vessels, in native productions, not only with Central America, Columbia, Peru and Chili, but even with the Sandwich Islands.

The geographical position of Mexico, when considered in connexion with its agricultural riches and metallic wealth, is perhaps the most remarkable in the world. A comparatively narrow strip of land, possessing all the climates of the world, is placed midway between the two great bodies of the northern and southern continents of America, and midway, also, between the continents of Europe and Asia. In its central region it extends only five or six hundred miles from the Atlantic to the Pacific, while, at its southern end, it is swiftly crossed by means of its rivers or by railways, which, it is alleged, may be easily constructed. In the midst of this unrivalled territory, in the lap of the great plateau or table land, and far removed from unhealthy coasts, lies the beautiful city of Mexico, a natural focus of commerce, wealth and civilization. Such a picture of natural advantages cannot but strike us with admiration and hope. If ever there was a capital destined by nature to form the centre of a great nation, if not to grasp at least a large share of the North American, European, South American and Oriental trade, it unquestionably is the city of Mexico. Raised as she is far above the level of the sea and inaccessible by rivers, the development of her destiny

may be postponed until genius shall inlay her valleys and ravines with railways, and thus connect her forever with the two coasts. But can we doubt that this mechanical miracle will be performed? It is not for us to say whether it shall be the work of the present generation, or of the present race in Mexico. It seems to be the law of nature that nations, like men, must advance or be trodden under foot. The vast army of industrious mankind is ever marching. Nor can we doubt that unless Mexico learns wisdom from the past, and, abandoning the paltry political strife which has hitherto crushed her industrial energy, follows in the footsteps of modern civilization, her fate will be sure and speedy. The attention of the world is now riveted upon this region as the natural mistress of the Atlantic and Pacific. If Mexico covers the eastern and western slopes of her Cordillera with an intelligent, progressive and peaceful population, invited from abroad to amalgamate with her own races under the operation of permanent laws and wholesome government, the change may be slow and her power may be preserved. But if she will persist in the mad career of folly which has characterized her since her independence, she will not be able to resist the gradual and inevitable encroachments from the north, from Europe, and from the new establishments which are rapidly growing up on the Isthmus of Panama. These new foundations, based on the incalculable wealth of California will be fostered by means hitherto undreamed of in the wildest commerce of the world, and unless Mexico shall avail herself of their salutary monitions they will finally absorb both her people and her nationality.

RAILWAY FROM VERA CRUZ TO THE CITY OF MEXICO.

NOTE.—In relation to the various modes of transit across the Isthmus of Panama or Tehuantepec, we do not deem it advisable to offer any speculations, at present, (April, 1850.) When *reconnoissances* of both routes have been completed and published, under the sanction of able and disinterested engineers, the world, which is so largely concerned in this subject, will be better able to decide as to their relative advantages. Both routes may ultimately be required, when the augmented commerce of the west coast of North and South America and the East Indies demands a speedy access to those regions. In the meantime, however, I subjoin the following extract from a report made by an officer of our army, during the war with Mexico, whilst our forces were still occupying the capital, in March, 1848. It apparently demonstrates at least the practicability of a railway from Vera Cruz to the valley:

"Of the different routes proposed, the one following the ridge which separates the towns or the two rivers of Tomepa and Obatejua, passing near or through the towns or villages of Acanisica, St. Bartolomé, St. Martin, Nopalpica, and Tlascalala, is not only the shortest and most level, but offers the fewest difficulties to overcome. This route does not offer the slightest obstruction, with the exception of crossing the river San Juan, till you reach the Boca del Monte, seventeen leagues from Vera Cruz; thence pursuing its course along the sides of the same almost continuous ridge, with an ascent of not more than one upon fifty, till you reach the deep Barranca of Chichiquila, twenty-three leagues from Vera Cruz; the road is thence across the Barranca, on embankments and stone walls, the materials for this purpose being plentiful and on the ground; the ten leagues from the Barranca of Chichiquila to the highest point of elevation, form the most difficult and costly section of the road. It must, however, be here taken into consideration, that at this very point of the road there are found in the immediate vicinity twelve Indian villages, capable of furnishing a large number of efficient workmen, who would be willing and even anxious to labor at the very low price of 37½ cents per day, in the most healthy climate of the country.

"From this point of highest elevation, the route followed, reduces the distance to the city of Mexico to 37 leagues—making the whole distance from Vera Cruz to the capital not more than 73 leagues.

"It must be borne in mind, that in making the following estimate, we have taken into consideration the extreme low rate of wages in the country, as compared with the wages of the journeymen laborers in the United States; and this alone must make an immense difference in cost of works of the kind executed in Mexico, whenever we base our estimates upon the costs of similar works in England or in our own country.

ESTIMATE OF COST.

<i>Section.</i>	<i>Leagues.</i>		<i>Dollars.</i>
1st.	3	Grading from Vera Cruz to the foot of the small ridge of the Molino de Ricato, over a sandy soil, easy to excavate and transport superstructure,	125,000
2d.	2	Whole cost of the two leagues, from the last point to the river San Juan, nearly level ground, including superstructure and a stone bridge across this river,	95,000
3d.	12	Twelve leagues from the river San Juan to Boca del Monte,	450,000
4th.	6½	Six and a half leagues from Boca del Monte to the Barranca of Chichiquila—superstructure,	275,000

		Six and a half leagues across the Barranca of Chichiquila.	
5th.	6½	This section is the most difficult and costly part of the road, and will cost over \$300,000 per mile—say, superstructure,	2,500,000
6th.	4	The next four leagues to the valley of St. Andres,	245,000
7th.	34½	From the foot of the Sierra Madre, through the northern part of the valley of St. Andres, crossing the road from Perote to Puebla, near the village of Poctarus to San Cristoval,	1,300,000
8th.	4	Four leagues from San Cristoval to the city of Mexico,	270,000
		Locomotives and cars,	550,000
		Whole cost of the road,	<u>5,810,000</u>

P. O. HÉBERT,
Lieut. Col. 14th Infantry"

CHAPTER VIII.

MEXICAN FINANCES.

DISORDER OF MEXICAN FINANCES—ENORMOUS USURY.—CHARACTER OF FINANCIAL OPERATIONS.—EXPENSES OF ADMINISTRATIONS.—ANALYSIS OF MEXICAN DEBT—COMPARISON OF INCOME AND OUTLAY—DEFICIT.

THE distracted political condition of Mexico since 1809, has contributed largely to the proverbial impoverishment and financial discredit of a country, which, nevertheless, has during the whole intervening period, been engaged in furnishing an important share of the world's circulating medium. The revolutionary and factious state of parties; the unrestrained ambition of leaders; the violence with which they displaced rivals; their short tenure of office when they attained power and the consequent impossibility of maturing any permanent scheme of finance; the ordinary reliance of statesmen upon a large army, and the immense cost of its support; the continual and habitual recourse to loans at ruinous rates of usury; the comparative ignorance of domestic resources and their failure of development in consequence either of intestine broils or the ignorance and slothfulness of the population, together with the plunder of the treasury by unprincipled demagogues and despots, may all be regarded as the basis of Mexican misrule and pecuniary misfortune. For nearly forty years every

minister of finance has been taxed to discover means for daily support. Let us illustrate the system commonly pursued.

On the 20th of September, fifteen days before the treaty of Estansuela, the administration of president Bustamante offered the following terms for a loan of \$1,200,000. It proposed to receive the sum of \$200,000 in *cash*, and \$1,000,000 represented in the *paper* or *credits* of the government. These credits or paper were worth, in the market, nine per cent. About one-half of the loan was taken, and the parties obtained orders on the several maritime custom houses, receivable in payment of duties.

The revenues of the custom house of Matamoros, had been always appropriated to pay the army on the northern frontier of the republic, but during the administration of General Bustamante, the commandant of Matamoros issued bonds or drafts against that custom house for \$150,000, receivable for all kinds of duties as cash. He disposed of these bonds to the merchants of that port for \$100,000—and, in addition to the *bonus* of \$50,000, allowed them interest on the \$100,000, at the rate of three per cent. per month, until they had duties to pay which they could extinguish by the drafts.

Another transaction, of a singular nature, develops the character of the government's negotiations, and can only be accounted for by the receipt of some advantages which the act itself does not disclose to the public.

The mint at Guanajuato, or the right to coin at that place, was contracted for, in 1842, by a most respectable foreign house in Mexico, for \$71,000 *cash*, for the term of *fourteen years*, at the same time that another offer was before the government, stipulating for the payment of \$400,000 for the same period, payable in annual instalments of \$25,000 each. The \$71,000 in hand, were, however, deemed of more value than the prospective four hundred thousand. This mint yielded a net annual income of \$60,000.

These are a few examples presented in illustration of the spendthrift abandonment of the real resources of the country; and the character of the transactions at once discloses the true origin and continuance of national discredit. The demand of the hour was irresistible, and if the minister or the president was unable to comply with it, his political fate was sealed, perhaps forever. The *isolated* good or evil measures adopted by financiers, have only tended to augment the confusion. Each government, of the thirty or more which have swayed Mexico since her independence, has been forced to contend not only with its own errors but with those of its predecessors; and hence the public has naturally lost faith and hope in politicians as soon as they assumed the helm of state. No matter what the personal character, or what the financial talents of

ministers might be, the people believed them to be immediately compromised or paralyzed by circumstances and political necessity.

We will present the reader a view of Mexican *national expenses*, according to ministerial estimates during a series of years between the establishment of the federal constitution in 1824 and the war with the United States. This statement, in regard to a country which has been stationary in population and industry, with an augmenting outlay of money, is somewhat remarkable:

1825	the national expenses were	\$17,100,000
1826	" " "	16,666,463
1827 to 1828	" " "	13,363,098
1828 to 1829	" " "	15,604,000
1830 to 1831	" " "	17,438,000
1832 to 1833	" " "	22,392,000
According to report of commissioners to Chamber of Deputies in 1846,		21,254,134
Period of Santa Anna's administration,		25,222,304

These dates, it will be observed comprehend epochs in which the country has been governed by the federal system as well as those in which extraordinary powers were conferred on national magistrates. In the preceding yearly amounts, it should be recollected, that a few of them comprise occasional sums paid on account of the foreign and domestic debt; but, on an average, thirteen millions of dollars may be considered as the annual outlay.

In consequence of this costly government of so small a nation, a large foreign and domestic debt has been created, in addition to the liabilities of New Spain *prior* to independence, which are calculated at nearly forty-two millions.

In considering this interesting subject we have taken pains to obtain the best authorities from Mexico, and, from the reports of the ministers of finance, we reach the following results in regard to that republic's financial condition in the year 1850. Her foreign debt amounts to \$58,889,487; her home-debt to \$48,934,610; and her debt, prior to independence, to \$41,983,096, making a total of pecuniary liabilities, with interest, to the 1st of July, 1849, of one hundred and forty-nine millions, eight hundred and seven thousand, one hundred and ninety-three dollars;—the annual interest on which, alone, amounts to nearly nine millions of dollars.

Inasmuch as the clear *income* of Mexico in 1849, was not calculated at more

than five millions five hundred and forty thousand one hundred and twelve dollars, while the *expenses* were rated at thirteen millions seven hundred and sixty-five thousand four hundred and thirty-five dollars, there would necessarily be an annual deficit, in the mere *current* finances, of eight millions two hundred and twenty-five thousand three hundred and twenty-three dollars. This sum, added to the actual *interest* on the national debt, shows the total yearly *deficit* in Mexico, of seventeen millions two hundred and thirteen thousand seven hundred and fifty-four dollars;—a sum larger than the present yield of all the mints in the republic.

This frightful picture of national finances is now absorbing the attention of the Mexican people and congress; and it is to be hoped that some wise plan may be devised to extricate the nation from ruin and that the government may be sufficiently strong and enduring to carry it into effect.

ANALYSIS OF NATIONAL DEBT AND RESOURCES, 1850.

1st. THE FOREIGN DEBT.

The foreign debt of Mexico, or the liability of the national treasury to citizens or subjects of other countries, according to the statement made and approved by the meeting of *bondholders* in \$51,208,250 London on the 24th of June, 1846, was £10,241,650, or, in Mexican currency, at \$5 the £, to

This capital, according to agreement with the bondholders, bears an annual interest of 5 per cent. from the 1st of July, 1846, which amounts yearly to \$2,560,412, and, up to the 1st July, 1849,—to the sum of

Total foreign debt to 1st July, 1849,	\$58,889,487
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2d. HOME DEBT.

The debt, the liquidation of which is founded upon an assignment of 26 per cent. of the income from mercantile duties, amounts to

Interest on this sum to 1st July, 1849,	2,745,947
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Debt created for the redemption of the old copper currency of Mexico,	2,083,205
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Interest due to 1st July, 1849,	574,992
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Due for indemnities, credits and contracts,	3,500,000
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Due to civil and military <i>employées</i> and pensioners, 25,000,000	\$48,934,610
Total home debt, 1st July, 1849,	

3d. DEBT BEFORE NATIONAL INDEPENDENCE.

National debt anterior to independence, interest to}		
1st July, 1849,	}	\$41,983,096

SUMMARY.

1. Foreign debt,		\$58,889,487
2. Home debt,		48,934,610
3. Debt prior to independence,		41,983,096
Total debt of Mexico,		<u>\$149,807,193</u>
The annual interest on which, at 6 per cent. is		\$8,988,431

Estimate of the Income of Mexico from the 1st July, 1848, to 1st July, 1849, according to the calculation of the Mexican minister of Finance.

Income from MARITIME DUTIES,		\$4,488,000
" from INTERNAL DUTIES, TAXES, &c., &c.,		2,224,000
Total,		<u>\$6,712,000</u>
Deduct from this the cost of collecting this revenue and for various prior partial assignments of it,		1,171,888
Total income for the year,		<u>\$5,540,112</u>

EXPENSES OF THE GOVERNMENT FROM 1ST JULY, 1848 TO 1ST JULY, 1849.

Expenses of Legislative department,		\$720,300
" Department of Foreign and Domestic relations,		898,029
" Department of Justice,		135,550
" " of Finance,		5,411,984
" " of War,		7,769,342
" " Supreme Court of Justice,		330,230
Total,		<u>\$15,265,435</u>

Deduct from this the sums that may be saved by economical administration of the departments and by the improved condition or reduction of the army, say,		1,500,000
Total expenses of government,		<u>\$13,765,434</u>

SUMMARY.

Total of National Expenses,	\$13,765,435
" " Income,	5,540,112
Deficit,	<u>\$8,225,323</u>
Deficit on yearly expenses,	\$8,225,323
Interest on debt,	8,988,431
Total yearly deficit,	<u>\$17,213,754</u>

CHAPTER IX.

MANUFACTURES.

TABLE OF COTTON FACTORIES IN MEXICO—CONSUMPTION—PRODUCTION.—INCREASE OF FACTORIES—DAY AND NIGHT WORK.—DEFICIT OF MATERIAL—WATER AND STEAM POWER—MEXICAN MANUFACTURES GENERALLY.

TABULAR STATEMENT OF THE COTTON FACTORIES IN MEXICO, THEIR CONSUMPTION AND PRODUCTION IN 1844.							
States.	No. of factories.	Spindles in operation.	Spindles erecting.	Total.	No. of looms.	Quintals of cotton consumed weekly.	Weekly product of pounds of cotton twist.
Durango ..	5	5,560	816	6,376	140	139	400
Guanajuato	1	500	800	800	...	10	900
Jalisco...	4	8,904	5,664	14,568	220	228	16,800
Mexico....	17	23,894	200	24,094	1,187	401	36,000
Puebla....	21	37,396	5,842	42,874	530	691	61,710
Queretaro.	2	5,400	4,200	9,600	112	137	10,000
Sonora ...	1	2,198	...	2,198	54	71	...
Vera Cruz	8	22,856	1,992	24,848	366	361	35,835
	59	106,708	18,654	125,362	2,609	2,038	161,654

Very few returns are wanting to make this table perfect in every resp

From this summary it appears that the total number of spindles in operation and in course of erection in the republic in the year 1844,—anterior to the war and during a period of comparative progress,—amounted to 125,362, together with 2609 looms in the fifty-nine factories of cotton stuffs and twist. These factories consumed, weekly, 2038 quintals of cotton, and gave, according to the table, a weekly product of 161,654 lbs. of cotton twist, a portion of which they converted into 6535 pieces of cotton cloth, the remainder being sold for the consumption of private and scattered hand looms throughout the country. An intelligent and experienced manufacturer, acquainted with Mexican factories, and at present residing in this country, calculates with apparent justice, that 2038 quintals of cotton, allowing fairly for waste, will yield, 183,420 lbs. of twist and filling, and that the weekly product of cotton cloth will be 8479 pieces of 32 varas each, from 2609 looms, each loom averaging about three and one quarter pieces per week. But allowing this correction of the above table of the *Junta de Fomento*, and adhering to its data in other respects in which it appears to be entirely faithful, we attain some important results. By comparing the number of spindles actually in Mexico at that epoch, with the number known to be there in 1842, viz: 131,280, and adding to the number now stated 8050 which are in the various factories closed in the interval but whose machinery is still in existence, we show an increase of 2132 according to the most accurate accessible information. Since the war the number has been no doubt largely augmented if we may judge by the numerous shipments of machinery to Mexico from Europe and North America.

In order to show the importance to Mexico of allowing the liberal importation of cotton from the United States, inasmuch as it is not likely she will become a cotton growing country in proportion to the increase of her manufacturing population, we have prepared the following comparative estimates. In our chapters on the agriculture of the republic we have endeavored, and we hope successfully, to demonstrate the impracticability of inducing the Indians to produce sufficient for present purposes, or to devote themselves to the labor of extensive cotton plantations for the benefit of the future.

Working *by day* alone the Mexican factories consume yearly 105,976 quintals, or 10,597,600 lbs. of raw cotton, whilst the whole cotton crop of the republic according to recent estimates, is not more than 60,000, or, 70,000 quintals, equal to 7,000,000 lbs.; but if they worked *by day and night*, they

would use 18,545,800 lbs. of the raw material, allowing three-fourths of the day consumption for night work. From these calculations we derive the following important results, as to deficiency:

1st.

Working by <i>day only</i> , the yearly consumption of cotton is	10,597,600 lbs.
Deduct the whole Mexican crop of 70,000 quintals, at 100 lbs. per quintal,	7,000,000 "
Deficit,	3,597,600 "

2d.

Working by day—yearly consumption, as above,	10,597,600 lbs.
Add three-fourths for night work,	7,948,200 "
Total consumption,	18,545,800 "
Deduct Mexican crop as above,	7,000,000 "
Deficit,	11,545,800 " [25]

Cotton varies, as we have seen in price according to demand, at Tepic, Mazatlan, Vera Cruz, Tampico, Puebla, Durango, the valley of Mexico, &c., from fifteen dollars, per quintal, to forty-eight. If we rate it, on an average, at twenty-five dollars per quintal, the value of the deficit on *day* consumption will be \$899,400, and on *day and night* consumption, \$2,886,450, all of which must necessarily, be made up by importation.

We have prepared the preceding table in order to attract the attention of cotton *producing* countries, and to demonstrate the fact that Mexico, in all likelihood, may become a *manufacturing* nation, inasmuch as the surplus population of towns, the women and children, may be successfully employed in this branch of human industry, when they have no agricultural district from which they may easily derive support with the least labor. There is reason to believe that water power, for the use of factories is abundant all over the republic. The natural drainage of a mountain country will at once prove this fact. Innumerable small streams, falling from the crests and sides of the *sierras*, pour through the ravines and barrancas; but in consequence of the scarcity of wood and the costliness of its transportation, it is not probable that steam power can be advantageously used. Factories of paper near the capital, at Puebla and in Guadalajara are working with success, but they do not produce enough for the consumption of the republic. At Puebla and Mexico there are several factories of the ordinary kinds of glass and tumblers, whilst woollen blankets, baizes, and, at

present, *fine* cloths, are yielded by several establishments erected before and since the war. The well known Mexican *serape*, or *poncho*,—an oblong garment, pierced in the centre to allow the passage of the head, and which falls in graceful folds from the shoulders of a horseman over his person—is one of the most generally demanded fabrics from native looms. These blankets are often of beautiful texture, composed of the richest materials and colors, and, according to the fineness of their wool and weaving, vary in cost from twenty-five to five hundred dollars. The *serape* is an indispensable article, both for use and luxury, for the *lepero* as well as the *caballero*, and being as much needed by men as the *reboso*, or long cotton shawl, is by the women, it may readily be conceived how great is the consumption of these two articles of domestic manufacture alone. There are between five and six thousand hand looms throughout the several states, and these are continually engaged in the fabrication of *rebosos* and *serapes*, the latter of which are most exquisitely dyed and woven in tasteful patterns in the neighborhood of Saltillo.^[26]

INDIAN HUT IN THE TIERRA CALIENTE.

INDIAN HUT IN THE TIERRA CALIENTE.

CHAPTER X.

THE ARMY AND NAVY OF MEXICO.

THE MILITARY IN MEXICO BEFORE AND AFTER THE REVOLUTION—CONFIRMATION OF ARMY—ITS POLITICAL USE.—CHARACTER OF MEXICAN SOLDIERS—RECRUITING—TACTICS—OFFICERS.—DRAMATIC CHARACTER OF ARMY—RECRIMINATIONS.—CONDITION OF THE ARMY AT THE PEACE.—ARMY ON THE NORTHERN FRONTIER—MILITARY COLONIES.—CHARACTER OF THE TRIBES.—FORTRESSES—PEROTE—ACAPULCO—SAN JUAN DE ULUA.—REORGANIZATION OF THE ARMY—TABULAR VIEW OF MEN AND MATERIEL.—NAVY—EXTENT OF COAST ON BOTH SEAS.—NAVAL ESTABLISHMENT—VESSELS AND OFFICERS.—EXPENSES OF WAR AND NAVY.

WE have already alluded, in the historical portion of this work to some of the fostering sources of the Mexican army and to the evil results its importance has produced in the country. The colonial forces designed for the maintenance of order and due subjection in New Spain, were chiefly sent from the old world until the wars in Europe required the mother country to hoard its military resources. These foreign stipendiaries for a long time sufficed to secure the loyalty of the emigrants; but as the country grew in importance and numbers, and as the Indians revolted against their task-masters, it became necessary from

time to time to call out reinforcements from the colonists; and when foreign invasion was dreaded, these levies, as we have seen, were largely augmented from all parts of the viceroyalty.

The idea of military service was, accordingly, not altogether unfamiliar to the Mexican mind when the first insurrectionary movements occurred under the lead of Hidalgo; but when the violent outbreak threatened to degenerate into a war of *castes*, and to array the Indians against all in whose veins circulated Castilian blood, it became the duty of the settlers to cultivate that spirit and discipline which would, at least, preserve them from utter destruction. The succeeding war of independence converted the whole country for eleven years into a camp, and when the strife terminated in success, it was found that a people, whose natural temperament addicted them to military spectacles, had become habituated and enured to a military career.

When the war was over and the power of Spain effectually broken, the contest was transferred from a foreign enemy to domestic foes. Men who had been accustomed for so long a period to military rule did not immediately acquire the habit of self-government. National police required a national army. Officers who had distinguished themselves in an epoch when laws were silent and the only authorities recognized wore the insignia of military life, did not forsake willingly the power they enjoyed. Indeed, they were the only authentic personages capable of enforcing obedience; and their adherents were soon armed against each other in all the contentions for political position which vexed the republic during the dawn of its national existence. Civil wars became habitual. An army was an element of strength and success which no military chieftain thought proper to crush. Rallying his disciplined partizans, as long as his friends or his fortune supplied their support, he was ready at a moment to take the field either for the maintenance of a leader's cause or to secure his own elevation. Nor was this mode of life disagreeable to the body of the army and inferior officers who were lodged and fed at the public expense during a period when it was difficult to find easy or agreeable civil employments in the distracted realm. Each petty subaltern and even every common soldier, clad in the livery of the state and carrying arms, was regarded by the unshod *leperos* and homeless vagrants as a personage of superior position; and thus, whilst the army became at that epoch popular with the people it had liberated from Spanish bondage, it ripened into a necessity of the aspiring politicians who craved a speedier access to power than by the slow and toilsome process of a republican canvass. The state, itself, perceiving these manifold causes of military favor, utility, and supposed need, preserved the army from all assaults by patriotic congressmen,

and thus the greatest curse and burthen of the nation,—the origin and means of all its woes and all its despots,—was, from the first, riveted to the body politic of Mexico.

It must not be supposed, however, that in speaking of the Mexican army we design to compare it, either in detail or as an organized body, with the troops of this country or of Europe. Neither in the mass of its *materiel*, nor in its officers, does it vie with the trained and disciplined forces of other civilized countries. Soldiers in Mexico are rather actors in a political drama,—dressed and decorated for imposing display,—than efficient warriors whose instruction and power make them irresistible in the field. In all the engagements, or attempts to engage, which occurred in Mexico since the termination of the war of independence, there has been a laudable desire, at least among the troops, to avoid the shedding of blood. Cities have been besieged and bombarded; magnificent arrays of forces have been made on adjacent fields; large camps have been formed and held in readiness; cannons, loaded with cannister and grape, have been discharged along the crowded highways of towns; marksmen have been placed in towers, steeples, and *azoteas*, to pick off unwary passengers; divisions have been reviewed and manœuvred in sight of each other, but, in all these revolts or *pronunciamientos*, no pitched battles were fought which actually terminated the contest by the gun and sword. The aspirant chief, or the hero he designed to displace, managed to secure the *majority* of the neighboring military forces, and as soon as the fact was unequivocally ascertained, the one who was in the *minority* fled from the scene without provoking a trial by battle. In 1840, 1841, and 1844, during the administrations of Bustamante and Santa Anna, there were various exhibitions of these sham contests; but, in all of them, we have reason to believe that the innocent non-combatant people were the greatest sufferers, and that the army escaped comparatively unscathed.

These observations are not designed to impugn the military nerve or spirit of the Mexicans, for the war with the United States and the war of their revolution, demonstrated that they unite both in quite an eminent degree. Our officers believe that the Mexican possesses the elements of a good soldier, but that he is neither trained, disciplined, nor led, so as to make him a dangerous foe. This is demonstrated by the result of the recent war and of every action fought during it. A brave show and a bold assault were not stubbornly followed up with pertinacious resolution, in spite of all resistance. The Mexicans were fighting on their own soil, for their own country, against a hated foe, yet they failed in every conflict, and with every conceivable disparity of numbers.

The great body of the army is of course composed either of Indians or mixed

breeds, and the idea of nationality in its high love of a loveable country, does not in all probability, animate or inspire these classes in the hour of danger. They did not fight with a common or an understood purpose. They were rather forced mercenaries than patriots. It was not a war of enthusiasm. Every effort was made by grandiloquent proclamations and false allegations to rally and nerve them; but whenever they crossed arms with our forces, if they failed in the onset, like lions foiled in their spring, they retreated to their lair. Nevertheless, throughout the contest, there were repeated instances of courage, constancy, endurance, and persistence which satisfied our officers that under a different system of education and command, the Mexicans would make excellent soldiers. Their horsemen, probably the best riders on the continent, paid more attention to the management of their animals than to the use of their horse's force in the charge; while their infantry and artillery avoided those close quarters which make the bayonet so powerful a weapon when directed by intrepid, unquailing arms in the presence and under the lead of unflinching company officers. Their lancers did more damage to dismounted victims than to erect and fighting foes.

With the majority of the rank and file, the army is, in all likelihood, not a profession of choice. Enlistment is now scarcely ever voluntary. When men are required for a new regiment or to fill companies thinned by death or desertion, a sergeant is despatched with his guard to recruit among the Indians and *peons* of the neighborhood. The subaltern probably finds these individuals laboring in the fields, and without even the formality of a request, selects the best men from the group and orders them into the ranks. If they resist or attempt to escape, they are immediately *lazo'd*, and, at nightfall the gang is marched, bound in pairs, to the nearest barrack, where the wretched victims of military oppression are pursued by a mournful procession of wives and children who henceforth follow their husbands or parents during the whole period of service. From the hands of the recruiting sergeant the conscript passes into those of the drill sergeant. The chief duty of this personage is to teach him to march, countermarch, and to handle an unserviceable weapon. From the drill sergeant he succeeds to the company officer, and here, perhaps, he encounters the worst foe of his ultimate efficiency.

Officers in Mexico have no thorough military and scientific education. There is a military school at Chapultepec, near the capital, but it has never been carefully and completely organized, nor has it furnished many men who have distinguished themselves in the field. The politicians, relying on the dramatic power of the army, made that army the means of reward and influence in civil life, by selecting its officers of all grades from every employment or occupation. Merchants, tradespeople, professional men, children of wealthy or ambitious

families, all attained rank in the army by this unwise means, and the consequence has been that the majority of company, and perhaps even of field officers, was rather fitted to display the magnificent uniforms to which their grades entitle them than to discipline the rank and file when organized in battalions, regiments and divisions.

The picturesque and scenic efficiency of such an army will be easily admitted, and the causes of its failure in the late war will be quite as easily understood. What can be more deplorable in battle, even for the victors, than to behold an undisciplined man badly led or driven into conflict? What can be more disastrous for an officer than to stand in the midst of blood and carnage, without knowing what to do in the moment of trial when knowledge and presence of mind are imperatively needed? Can it be surprising, therefore, to observe that the columns of Mexican gazettes and pages of Mexican pamphlets published during the war, are filled with the basest crimination and recrimination or the lamest attempts at exculpation from disgraceful defeat?

A writer in the *Monitor Republicano*, speaking of the Mexican army, says, you have nothing to do but to read the writings of its generals from the commencement of the campaign, through the different actions and skirmishes in chronological order, and it will be seen that they have mutually called one another traitors, cowards, and imbeciles. He gives the following list of recriminations:—"Arista accused Torrejon, Ampudia and others; Torrejon Ampudia, while Uruga charged Arista; Jarregui accused Carrasco and various chiefs; Carrasco accused Jarregui and other generals; Mejia brought charges against Ampudia; Ampudia against him and several leaders, as Carrasco, Enciso and others, principal officers of the army. Urrea and others charged Parrodi with cowardice and treason; Parrodi accused Urrea and Romero, and Romero accused the famous Miramon of Mazatlan, the speculator in the goods taken by the troops of Urrea from those of Gen. Taylor.

Requena accused Santa Anna; Santa Anna in his turn, Requena; Torrejon and Juvera recriminate Requena; Requena, in his turn, Torrejon, Juvera and Portilla. Santa Anna accused Miñon; Miñon accused Santa Anna and his confederates. Santa Anna brought charges against Valencia, in Ciudad Victoria; Valencia in his turn, accused Santa Anna. Viscayno accused Heredia and Garcia Conde; these in turn, Viscayno. Santa Anna recriminates against Canalizo, Uruga and others at Cerro Gordo; Canalizo, Uruga, Gaona and others against Santa Anna. Santa Anna again accuses Valencia in Padierna; Valencia accuses Santa Anna, Salas and others, and Salas accuses Valencia, Torrejon and others. Santa Anna, in the first actions in the valley, accuses everybody; he accuses Rincon, Anaya, and the

National Guard at Churubusco; in the other actions of September, Terrés, Bravo and others. Bravo, Terrés and others in turn, recriminate Santa Anna, Perdigon and Simeon Ramirez. Perdigon accuses Simeon Ramirez and Terrés himself. Alvarez accuses Don Manuel Andrade, and Andrade in turn accuses him. Alcorta accuses the Andrade of the hussars, while he accuses Alcorta;—and in fine, we have before us the letters and despatches of the whole of them—we have before us their actions and skirmishes, from the battle of San Jacinto up to the ignominious capture of Gaona and Torrejon by the Poblano robber, Dominguez."

We have quoted these passages, to prove, by Mexican authority, that our remarks upon the army are not made in a captious spirit or with a desire to undervalue its officers ungenerously.

Bad as had been the organization and conduct of the army, they were not, of course, improved by the results of the war. The *morale* and the *materiel* were both destroyed, so that when our troops withdrew during the summer of 1848, little more than a skeleton of the regiments remained to preserve order. This was, indeed, one of the greatest sources of dread to orderly Mexicans, for they feared that when all foreign restraint was suddenly removed, the country would be given up to anarchy. Without men and without means, the government justly apprehended the uprising of the mob, nor were there demagogues wanting to excite the evil passions of the masses by an outcry against the treaty. At the head of this disgraceful movement was General Paredes, who had returned from exile, but had not been trusted by the government during the conflict. The payment of the first instalment of the sum agreed upon in the treaty, however, enabled the authorities to maintain tranquillity, and as soon as comparative order was enforced by a new administration, the army was reorganized under a law passed on the 4th of November, 1848. By this act, the military establishment was greatly reduced, even on paper, and, in 1849, not more than five thousand two hundred, rank and file, were in actual service.

If there were, in reality, no need of an army in Mexico to oppose a foreign enemy, or, to preserve domestic peace, one would still be required to secure the Northern Frontier against the incursions of Indians. From the earliest periods, the Spaniards were vexed by their savage assaults, and, since the establishment of independence, the Mexicans have every year seen their people and property carried off by the robber tribes, whilst their villages, *ranchos* and *haciendas* were totally destroyed or partially ravaged.

Mexican engineers have calculated that the new boundary line, following the course of the Rio Grande and the Gila and including a mathematical line of

seventy leagues between these streams, is six hundred and forty-six leagues or about nineteen hundred miles in length. Three-fourths of this line pass through an uninhabited region, and, consequently, the savages have free access across it to the few and small settlements on the border. Such an extent of frontier, though considerably reduced from the former line anterior to the treaty, became at once an object of concern to the government, especially as the people of the United States immediately opened communications through the Indian country with the Pacific, and would probably soon control the important passes through the whole region north of the boundary. Accordingly on the 20th of July, 1848, it was decreed that eighteen MILITARY COLONIES should be created, and placed within easy communication, so as to protect the southern settlers in some degree, or to encounter and punish the savages in their forays. The greater portions of the most warlike tribes were transferred by the treaty to the United States, and, by one of its articles, we bound ourselves to aid, at least, in saving the Mexicans from their plunder if we could not totally destroy their inimical power. In the neighborhood of the boundary, from near the mouth of the Gila to the commencement of the mathematical line, before alluded to, we find the tribes known as Coyotes, Mimbrenos and Gileños, the former of whom wage war against Sonora, whilst the latter attack Chihuahua. The Apaches and Cumanches spread their numerous hordes from the vicinity of Chihuahua to the sources of the Nueces, twenty-five leagues beyond the Rio Grande. Besides these, there are, throughout this district many savage bands, supporting themselves entirely by the chase, and it is probable, according to the opinion of soldiers and captives, who have been among the tribes, that all these clans can unite thirty thousand warriors, whilst they still leave a sufficient number to protect their wigwams and villages.

Fortunately for the white races, these barbarians are not able to maintain peace among themselves. The Apaches and Cumanches are in continual strife, and never return from the "war path" without serious losses. It is not to be feared, therefore, that they will voluntarily join in a general rising against our pioneers; yet a common danger, or a common attack, might soon cement their hatred against the supposed usurper, and, directed by a man of capacity, produce even a more disastrous war than that with the Seminoles of Florida.

The Cumanches are numerous and active. They are divided into Caihuas, Yamparicas, and Llaneros. The Apaches are braver than the Cumanches, and are known as Meselaros and Lipanes. These barbarians arm themselves with guns, rifles, lances, bows and arrows. They manage their weapons admirably, are agile horsemen, and shoot with unerring aim. Tall and majestic in figure; muscular

and capable of enduring fatigue; accustomed to live on the simplest food of the forest and to win it when necessary by the arrow alone; uniting the sagacity of men with the instinct of animals, these knights of the southern wilderness realize perfectly our ideas of the daring aborigines who peopled this continent before it was subdued by the white man. Their hatred of the Mexicans and the savage fury with which they pursue their male captives of adult age, appear to denote even a stronger, if not a worthier motive than robbery in their attacks. At least six hundred women and children are borne off by them every year from the settlements to their mountain fastnesses, and they openly confess that they are not unwilling to improve their race by mingling it with the white.

In order to maintain the southern frontier intact from these savages, Mexico designs the establishment of these military colonies, and will, in all probability, support them by a second or rear line of troops from the regular army as well as by forts and strongholds erected in positions affording easy access from the wilderness to inhabited regions. A frontier so open, and thronged with such barbarous hordes, could not be protected by military colonies alone.

The principal FORTRESSES and strongholds of Mexico have hitherto been those of Perote, Acapulco, Ulua, and the citadels at Mexico and Monterey. The present government has ordered the citadel of Mexico, situated a short distance out of the town to be abandoned, as it only formed a nucleus for the assemblage of the military factionists who have constantly disturbed the peace of the republic. The citadel of Monterey is to be maintained and suitably supported.

The castle at Acapulco, an extremely important point on the southern or Pacific coast, is greatly impaired, and will require at least a hundred thousand dollars to adapt it for defence. The fortress of Perote was designed originally by the Spanish government as a depot for the treasure intended for shipment from Vera Cruz, in which the gold and silver would be safer than at an exposed sea port during that dangerous period of Castilian history, when all the nations of Europe were anxious to plunder her colonies. Situated far in the interior of the country and in the midst of a wide plain, it does not absolutely command any of the approaches either from the coast to the inner states, or to the coast from the capital. It is, however, well placed as a military arsenal, and demands an expenditure of about thirty thousand dollars to render it useful to the nation.

The Castle of San Juan de Ulua, built on a reef opposite the town of Vera Cruz, is in so ruinous a state that scarcely a million and a half of dollars will suffice to restore it to its ancient splendor and power. The one hundred and twenty-four guns now within its walls are all more or less injured or dismantled.

"To garrison this Castle properly," said General Arista in his report as Minister of War in 1849, "two thousand men will be required at a yearly cost of four hundred thousand dollars. If this immense treasure is squandered on the Castle, it will surely be wasted alone to preserve a vain luxury; for, as Mexico has no hope of becoming a maritime power, San Juan de Ulua must always fall into the possession of such a naval nation whenever it makes war upon us. Experienced Spanish officers have recommended the dismantling of San Juan, and they now urge it more strongly than ever, as there is far greater reason to believe that it neither defends the nation nor even the city of Vera Cruz. The French, and recently the Americans, have convinced us of this fact; the first possessed themselves early of the Castle, and the latter took the town without hindrance from the Castle." Such is the opinion of one of the most experienced Mexican generals in regard to a fortress which has hitherto been deemed impregnable, and, although we do not agree with him in regard to its entire worthlessness in the hands of abler engineers, we doubt whether its use is not greater in checking the city of Vera Cruz itself, than in commanding the approaches to it from the sea. It must be remembered that the lee of this very Castle is the only comparatively safe harbor on the gulf at present, and that until a *mole* or breakwater shall be erected elsewhere, it is only in certain seasons and under favorable circumstances that large bodies of troops may be prudently disembarked on the adjacent shores. The landing of General Scott, in 1847, was singularly fortunate in time and circumstances, for, soon after, a furious norther arose and prevented all communication between the land and the squadron. These violent gales are sudden and terrific in their rise and action at Vera Cruz, and the dreadful havoc they made among the American shipping on the coast during the war, attests the value of a military defence whose protective duties are seconded by the very spirit of the storm. The introduction of steam power into the national marine must of course greatly modify the character of coast defences; but we would deem it not only unwise but imbecile to abandon altogether a work which at least makes, if it does not perfectly protect, an important harbor. The city of Vera Cruz, itself, is a regular fortification, and with some important improvements and repairs, may not ultimately require San Juan de Ulua to defend it from assault. These two strongholds, combined, under the command of skilful generals and garrisoned with efficient soldiers, would offer a churlish welcome to any modern power either maritime or military. Their seizure, during the winter months of tempest, would be almost impossible, and their occupation, during the summer would be as fatal, as was unfortunately proved by our troops in the June, July, and August, after the brilliant siege and inglorious surrender.

The following tabular sketch prepared from Ministerial reports, exhibits the condition of the Mexican forces at this epoch.

TABULAR VIEW OF THE RE-ORGANIZATION OF THE MEXICAN ARMY IN 1849.

STAFF OF THE ARMY.

12 Generals of divisions.	13 Captains.
34 Brigadier generals.	8 Lieutenants and 2d adjudants.
4 Colonels.	3 Ensigns.
5 Lieutenant Colonels.	—
1 Commandant of battalion.	80 Total.

MEDICAL STAFF, ACCORDING TO LAW.

ENGINEER CORPS.	1 Inspector.
1 Brigadier general.	1 Director of hospital.
2 Colonels.	8 Hospital professors.
4 Lieutenant colonels.	40 Surgeons.
8 Captains.	40 1st assistant surgeons.
—	40 2d " "
15 Total.	30 Apprentices.
	18 Surgeons for military colonies.
	2 Ambulance companies.

MATERIEL OF THE ARMY.

		In actual service
1 Battalion of sappers,	399 individuals required by law,	220
8 Battalions of infantry, 6000	" " "	3526
12 Squadrons of cavalry, 1800	" " "	1911
2 Battalions of artillery, 1800	" " "	554
Required by law, <u>9999</u>	Only in service,	<u>5211</u>

THE ARMY AS REQUIRED BY LAW OF 4TH NOVEMBER, 1848.

- 17 Colonels.
- 16 Lieutenant colonels.
- 11 Commanders of squadrons, battalions and chiefs of division.
- 92 Captains.
- 108 2d adjudants, and lieutenants.
- 176 Sub-adjudants, sub-lieutenants and ensigns.

17 Chaplains.
 133 1st serjeants; tambour majors; armorers; smiths.
 384 2d serjeants.
 1124 Corporals.
 356 Musicians.
 7954 Privates.
 32 Wagon masters.
 196 Drivers.
 54 Arrieros.

 1800 Cavalry horses.
 214 Artillery horses.
 687 Mules for purposes of traction.
 422 Pack mules.

TABLE OF MILITIA REQUIRED IN ACTUAL SERVICE BY A DECREE OF
 1ST DECEMBER, 1847.

For the battalion of Tampico.	For 6 active companies in Alvarado, Tehuantepec, Tuspan, Acayucan, Acapulco. No. on the list. Of these there are in actual service.	
1 Lieutenant colonel,	....	1
1 1st adjutant—a captain,	....	1
1 Chaplain,	....	....
4 Captains,	6	7
5 Lieutenants,	6	7
9 Sub-lieutenants,	12	5
5 1st serjeants,	6	5
16 2d "	24	14
12 Musicians,	18	17
53 Corporals,	78	16
400 Privates,	600	181
<u>486 Total,</u>	<u>726</u>	<u>233</u>

GARRISONS IN THE REPUBLIC.

ARTILLERY.
Guns and mortars.

In Guadalajara,	1 San Juan de Ulua,	124
" Zacatecas,	2 Perote,	35
" Jalapa,	4 Acapulco,	22
" Perote,	1 Vera Cruz,	113
" Vera Cruz,	2 Monterey,	...
" Puebla,	3 Campeche,	...
" Mexico,	7 Mazatlan,	...
" Queretaro,	1 Mexico,	6
" Guanajuato,	2 Tabasco,	1
" S. Fernando de Rosas,	2 Guadalajara,	9
" Matamoros,	1 San Luis Potosi,	8
" Tampico,	1 Chiapas,	2
" San Luis Potosi,	2 Chihuahua,	...
" Oajaca,	1 Bustamante's division,	4
	<u>30</u>	<u>324</u>

Total number of *projectiles*, 52,019.

The field artillery consists of 16 batteries.

N A V Y .

The coast of the republic, now greatly reduced by the treaty of Guadalupe, extends on the Gulf of Mexico, from the Rio Grande or Rio Bravo del Norte, to the port of Bacalar on the east of the peninsula of Yucatan, and comprehends in this distance, about five hundred and eighty-four leagues. The Pacific coast begins one league from San Diego in Lower California, and terminates at the Barra de Ocos in the Gulf of Tehuantepec, a distance of one thousand five hundred and twenty leagues, including the coasts of the Gulf of California, or sea of Cortéz. Consequently the coasts of the republic extend, in all, two thousand one hundred and four leagues, demonstrating the admirable situation of this country for commerce with all the world. The ports which are open for foreign trade in the Mexican Gulf, are Matamoros, Tampico, Vera Cruz Campeché, Sisal, and the island of Carmen; while, on the Pacific, there are the ports of Guayamas, Mazatlan, San Blas, Manzanillo, and Acapulco, the latter of these being the best in the possession of Mexico, on the great western ocean. Its harbor is excellent; its distance from the capital is comparatively short; its population is larger than that of other towns on the coast, and in consequence of

the difficulty of landing elsewhere than in the actual port, the government is effectually secured against illicit trade. It is a site which should unquestionably be protected and fostered, not only on account of the advantages we have mentioned, but because it will become a source of riches to the new state of Guerrero, whose government will contribute to cement the peace and tend to establish the permanent dominion of good order in that quarter.

The navy of all countries originates in their commerce, but Mexico, although situated as we have shown most advantageously for trade, has hitherto possessed but few merchantmen and a small marine. The vessels of war owned by the republic, previous to the conflict with the United States, were either sold, or disarmed, dismantled and laid up, when the nation was menaced with an attack. It was evident to the Mexican cabinet, that the navy could not cope with ours, and in order to prevent its total loss, the few vessels were voluntarily withdrawn from the sea. The officers, however, were generally employed in land duties during the contest, and most of them remained in service until the summer of 1848, when the most efficient were permanently confirmed in their employments, whilst the rest were allowed to retire on unlimited leave.

In considering the actual condition of the national trade and treasury, the government did not believe, on the re-establishment of peace, that it would be justified in creating at once an extensive naval establishment, nevertheless it was convinced that the security of the coasts, the protection of its own small trade, and the interest of its maritime custom houses, rendered the creation of a *flotilla* indispensable. With this view the minister of war and marine recommended in 1849 the naval establishment which is shown in the following table.

NAVAL ESTABLISHMENT OF MEXICO, 1849.

The actual naval force consists at present of 1 schooner only; but the secretary of war recommended, in addition, the construction of:

VESSELS.

- 1 steamer mounting 1 swivel 32 paixhan and 2 short 12 pounders.
- 2 cutters suitable for coast service, capable of passing the shallow bars of rivers, of 70 or 75 tons, and carrying 1 swivel 18 pounder, and one 12 pounder each.
- 4 launches of 20 oars, each of which must be capable of carrying an 18 pounder.

OFFICERS.

Officers.	In Service.	On Leave
Captains <i>de Navio</i> ,	3	-

" <i>de Fragata</i> ,	6	3
1st Lieutenant,	1	5
2d "	7	11
1st Midshipmen,	-	4
2d "	-	1
Intendentes,	2	-
Commissaries,	7	
1º Oficiales,	4	6
2º "	5	11
3º "	4	7
Clerks,	-	11

EXPENSES OF WAR AND NAVY OF MEXICO, 1849, ESTIMATED
BY THE MINISTER.

Ministry of war and navy,	\$55,890..0..06
Supreme tribunal of war,	82,770..7..00
Staff of the army,	133,500..0..00
" of the president,	10,345..4..00
Headquarters of the army,	50,399..2..06
<i>Commandancias generales and militares</i> ,	234,378..5..00
<i>Detall de plazas</i> ,	10,320..0..00
Engineers, sappers, military college and school,	218,788..5..06
Permanent artillery, political ministry, workmen and baggage train,	670,985..0..00
8 Battalions of permanent infantry,	1,290,567..1..00
1 Battalion of active infantry and 6 companies,	253,109..7..06
12 squadrons of permanent cavalry in 6 corps,	628,886..0..00
Military colonies,	727,572..0..00
Medical staff and ambulance companies,	144,025..4..00
Expenses at San Luis,	5,038..2..00
Invalids,	84,122..7..06
Staffs of the army, divisions and brigades,	43,460..3..00
Officers who by the law of 4th November, 1849, are to receive unlimited leave,	328,644..0..06

Officers on unlimited leave,	292,762.5.10
" retired,	668,614.1.07
Disbanded troops,	101,283.3.00
Widows, orphans, and pensioners,	403,499.2.06
Rewards for bravery,	15,295.6.07
For military hospitals and extras,	100,000.0.00
For improvement and repair of military barracks,	30,241.0.00
Contract for mules for artillery trains,	34,875.6.00
Extra expenses of war,	500,000.0.00
Expenses of establishment of military colonies,	498,635.4.00
Military commission of statistics,	12,098.0.00
Naval employés, (military and political,)	55,623.7.00
Total expenses war and navy in 1849,	<u>\$7,685,733.6.06</u>

CHAPTER XI.

THE MEXICAN CHURCH.

RELATIONS BETWEEN THE MEXICAN CHURCH AND THE POPE.—CLERGY, MONKS, NUNS, MONASTERIES, CONVENTS.—WEALTH OF THE CHURCH.—RATIO OF CLERGY AND PEOPLE.—HIGH AND LOW CLERGY—THEIR HISTORY—VICES.—MONKS—RURAL CLERGY—THEIR CHARACTER.—CONDUCT OF CLERGY, PUBLIC AND PRIVATE.—MISSIONS IN CALIFORNIA—MODE OF CONVERSION.—MONKS IN MEXICO—ZAVALA'S STRICTURES.—PAZO'S STRICTURES ON SOUTH AMERICAN CLERGY.—CHURCH IN THE UNITED STATES AND IN MEXICO.—CONSTITUTIONAL PROTECTION OF CATHOLICISM.—DUTY OF THE CHURCH—BULLS—PAPER MONEY.

THE relations existing between the Mexican church and the Papal throne were interrupted by the revolution. Spain and her monarchs had ever been distinguished and faithful defenders of the Catholic church, and had maintained its power carefully throughout all their American possessions. The pope therefore regarded the revolution not only as unfavorable to the interest of his allies, but as calculated in all probability to introduce ecclesiastical as well as political liberty into regions of which his ministers possessed the entire dominion. Hence the famous encyclical letter of his Holiness of the 24th of September, 1824, directed to the Heads of the American church, in which he anathematizes the doctrines and principles upon which the revolution was founded. But, yielding in the end to circumstances, and probably reassured by the article in the first constitution of Mexico—not yet promulgated when his letter saw the light—by which the Catholic faith was permanently confirmed as the national religion, to the exclusion of all others, he received the rebellious nation once more into his flock, as soon as the Mexican government sought readmission. This reconciliation was negotiated upon the same terms that existed during the Spanish dominion.

Even from the epoch of Iturbide's rule this delicate subject had engaged the attention of the rulers, and in 1825 an envoy was sent to Rome. The ecclesiastical Junta which met in Mexico, had striven to reinvest the Metropolitan with the ancient right of instituting suffragan bishops; but the canonical right has continued in the Pope, on the presentation of the government. Nevertheless, efforts have been made to extend, substantially the metropolitan powers of the Archbishop of Mexico, of whom it was probably desired to make the true head of the national church, dependent however upon the Roman Pontiff.

There were in Mexico, according to the best accessible official dates, in 1826

1 Archbishop.

9 Bishops, in 9 Bishoprics.

1 Collegiate Chief at the Collegiate Church of Guadalupe.

185 Prebends, (79 vacancies thereof, in 1826.)

1194 Parishes, of one, two, or more churches.

9 Seminaries (*conciliares*.)

3677 Clergymen (1240 engaged in curacies) and the rest in seminaries, ecclesiastical cures, vicarages, &c.

5 Religious orders, owning

155 Monasteries; in which there were

1918 Monks; of whom

40 Served curacies and

106 Missions.

In 47 of these monasteries there were more than twelve monks, and in thirty-nine there were less than five.

6 Colleges de Propaganda Fidé, containing

307 Clergymen; of whom

61 Served in missions.

2 Congregaciones, with 60 presbyters.

58 Convents; with

1931 Nuns,

622 Girls,

1475 Servants.

SUMMARY OF ECCLESIASTICAL PERSONS.

7999 Clergymen, friars and nuns.

2097 Servants and girls in convents.

Since the epoch of independence the orders of Juaninos, Belemites, and San Lazaro, have been extinguished.

In 1844, when the last accurate summary of the Mexican church, within our reach, was made, the following was the condition:

SUMMARY OF MEXICAN CHURCH IN 1844.

In this year the *possessions* in conventual establishments of the REGULAR ORDERS, was estimated as follows:

Dominicans,	25	Conventual establishments
Franciscans,	68	" "
Agustines,	22	" "
Carmelites,	16	" "
Mercedarios,	19	" "
Total,	<u>150</u>	Conventual establishments

REGULAR ECCLESIASTICS: —Monks,	1,700
Nuns,	<u>2,000</u>
	3,700
SECULAR CLERGY,	<u>3,500</u>
Total number in religious orders	<u>7,200</u>

The actual property of this establishment has been variously estimated since the earliest period in which Mexican institutions have been described by European writers. The church in Mexico is known to be immensely rich, and that its real and personal property has been carefully managed by the large body of intelligent men who control its affairs. They prudently make no public or statistical expositions of their interests.

In 1807, Abad y Quiapo, in a communication to Don Manuel Sexto Espinosa, estimated the wealth of the church as follows:

REAL ESTATE, from \$2,500,000 to	\$ 3,000,000
PERSONAL INVESTMENTS for secular clergy in 9 bishoprics,	26,000,000
OBRAS PIAS in the church, of ecclesiastics of both sexes,	2,500,000
TOTAL FUND of the churches and communities of ecclesiastics of both sexes,	16,000,000
Total	<u>\$47,500,000</u>

In 1831, Don José Maria Mora, a Mexican writer, estimated the property of the church at a valuation of at least \$75,000,000.^[27]

In 1844,—and we may consider it nearly the same in 1850,—the church property was calculated as follows:

Real estate—urban and rural,	\$18,000,000
Churches, houses, convents, curates' dwellings, furniture, jewels, sacred vessels and other personalities,	52,000,000
Floating capital, various funds in ecclesiastical treasuries, and the capital required to produce the sum annually received by the Mexican clergy in alms, <i>diezmos</i> , dues, &c. &c.,	20,000,000
Total,	<hr/> \$90,000,000

The real estate of the church is estimated by Señor Otero,—from whose work on the social and political condition of Mexico, this calculation is taken,—to have been worth at least 25 per cent. more before the revolution; and, to this increased value must be added about \$115,000,000 of capital founded on *contribuciones*, *derechos reales*, and other imposts which were laid on the property of the country for the benefit of the clergy.^[28]

It is not to be supposed that the 2,000 *nuns* are of ecclesiastical importance except for charitable and educational purposes;—if we deduct their number, therefore, from the 1,700 monks and 3,500 secular clergy, we shall have only 3,200 men devoted to the spiritual wants of more than seven and a half millions or, 2,383 individuals assigned to the ecclesiastical charge of each priest, monk or curate. And yet, among these men, chiefly, the avails of probably more than \$90,000,000 of property are to be annually distributed or consolidated in a country from which they are constantly asking alms instead of bestowing them.

The value of their churches, the extent of their city property, the power they possess as lenders and mortgagees in Mexico, where there are no banks, and the enormous masses of church plate, golden ornaments and jewels, will swell the above statements and estimates of the church's wealth to nearer one hundred millions than ninety, or to about \$88,000,000 less than it was before the rebellion against Spain; at which period the number of ecclesiastics was about 10,000; or 13,000, if the lay brethren and subordinates are included in the ecclesiastical census.^[29]

The *higher clergy* of Mexico which was once the depository of science and general learning, is now only distinguished for its elegant manners and aristocratic tendencies. Notwithstanding some members of the church, in orders and belonging to this class, were engaged in the revolutionary struggle, and essentially aided in making it effective, the spirit of the remainder, as a body, was in reality, antagonistic to the movement. The course of the *lower clergy*, however, was different. The members of this grade threw themselves early into the rebellion, and sustained it heroically in its most dangerous epochs, until it triumphed in independence.

Although there is in Mexico great religious devotion to the church, regular observance of its feasts, fasts and ceremonies, and obedience to its commands, there prevails, nevertheless, considerable indifference towards its ministers, who, in too many cases have justly forfeited popular respect. The *curas* have united themselves effectually with the interests and affections of the people in the rural districts where they pass the ordinary, regular life of country folks remote from the dissipating influence of cities. They are amiable men, prudent counsellors of all classes, and the hospitable hosts of every stranger who visits their parishes. But, in many of the towns and cities large numbers of the clergy, both secular and regular, have forfeited the personal esteem of the high and low by their open participation in common social vices. "These vices have augmented in proportion as the bonds of discipline have been loosened by the distracted condition of the country. Gambling and dissipation are rooted in the clergy as well as in other classes of society; but we may specially declare that the convents of friars, with few exceptions, are in Mexico, sewers of corruption."^[30] This frail condition of ecclesiastical discipline was satisfactorily proved by the state in which the Catholic church of the United States found the parishes of Texas at the period of annexation; and, it is likely, that many more flagrant instances of laxity will be unveiled in New Mexico and California, to whose distant regions our enlightened and pure Catholic clergymen are already directing their attention with honest and pious zeal.

The Spanish government cherished the church, for state as well as religious reasons. The *mayorazos* or rights of primogeniture, which bestowed the great bulk of patrimonial estates upon the eldest son, necessarily forced the younger offspring of distinguished houses either into the army or into the church; and, hence the splendid eleemosynary establishments which were erected and endowed all over Mexico, as much for the comfort of these drones of the social hive, as for the worship and glory of God. Most of the lucrative benefices came in this manner into the hands of the Spaniards and their descendants; and by far

the greater portion of the higher ecclesiastics were, either influentially allied, or were persons of elevated social rank. Thus it is that even at the present day so many men of distinguished manners and monarchical tendencies, are found among the "high clergy" of Mexico; for the epoch of the revolution is not so distant that the old ecclesiastical stock has entirely departed from earth.

But since the laws of primogeniture have been abolished,—and, with them, the ecclesiastical privilege of enforcing the payment of tithes to the clergy,—the church has been no longer regarded by the best classes as a favorite resort or refuge for their children. The revolution, as we have said, disorganized the establishment and infused inferior men into the sacred ranks. The material of the several brotherhoods degenerated in quality if not in quantity. The irregularities of the friars became proverbial throughout the republic, and respectable families regarded it as a calamity, or, even sometimes, as a degradation, to hear their members pronounce a monastic vow. Thus, whilst the church became unpopular among the upper classes as a means of subsistence,—its numbers were gradually filled and maintained from the humbler ranks, whose ignorance and disorderly habits tend more and more to widen the difference between the secular and the regular clergy of the republic. It is needless to dwell on the baleful influence which such debased and pretended ministers of religion, must exercise among the common classes of a society over which their ecclesiastical authority and the sanctity of their profession gives them control in such a country as Mexico.

We deem it proper to sustain the allegations made especially against a large number of the Mexican clergy by citations from American, English and Spanish authors upon the country, in addition to the quotation already given from Rivero's "Mexico in 1842."

Mr. Norman, in his Rambles in Yucatan, whilst graphically describing certain festivals, and among them those of Christmas and the Purification of the Blessed Virgin, says:—"The people testify their respect for those festal days,—for so they are denominated,—by processions and such amusements as are suited. Notwithstanding the acknowledged debasing effects of their sports and pastimes, which consist wholly of bull baiting, cock fighting and gambling, they are not disgraced by either riotousness or drunkenness. * * * The priests give countenance to these recreations, if they may be so called, both by their presence and participation.^[31] * * * The men, women, and children, as soon as they had concluded their ceremonies, started, in a body, with revolting precipitation, to the gaming tables, which had been set forth in the ruins of an old convent adjoining the sanctuary where the procession had just been dissolved. Here we found all

classes of society, male and female. The highest ecclesiastical and civil dignitaries were there, hob and nob with the most common of the multitude."^[32]
* * * Such is the testimony of Mr. Norman as to some of the disgraceful habits of the clergy in Yucatan. Mr. Stephens in his travels in the same Mexican state, remarks that "except at Merda and Campeché, where they are more immediately under the eyes of the bishop, the *padres*, throughout Yucatan, to relieve the tedium of convent life, have *compagneras*, or, as they are sometimes called, *hermanas politicas*, or, sisters in law. * * * * *

"Some look on this arrangement as a little irregular, but, in general, it is regarded only as an amiable weakness, and I am safe in saying that it is considered a recommendation to a village *padre*, as it is supposed to give him settled habits, as marriage does with laymen; and, to give my own honest opinion, which I did not intend to do, it is less injurious to good morals than the by no means uncommon consequences of celibacy which are found in some other Catholic countries. The *padre* in Yucatan stands in the position of a married man, and performs all the duties pertaining to the head of a family. Persons of what is considered a respectable standing in a village, do not shun left hand marriages with a *padre*. Still it was to us always a matter of regret to meet with individuals of worth, and whom we could not help esteeming, standing in what could not but be considered a false position. To return to the case with which I set out;—the *padre* in question was universally spoken of as a man of good conduct, a sort of *pattern padre* for correct, steady habits; sedate, grave and middle aged, and apparently the last man to have an eye for such a pretty *compagnera*."^[33]

As the United States is now interested in the history of California, it may not be uninteresting or unprofitable, in illustrating this subject, to exhibit the mode of ecclesiastical operations in regard to proselytes in that region, at a recent period.

"At a particular time of the year," we are told by Captain Beechey and Mr. Forbes, "when the Indians can be spared from the agricultural concerns of the establishment, many of them are permitted to take the launch of the mission and make excursions to the Indian territory. On these occasions the *padres* desire them to induce as many of their unconverted brethren as possible to accompany them back to the mission, of course implying that this is to be done only by persuasion; but the boat being furnished with a cannon and musketry, and in every respect equipped for war, it too often happens that the neophytes and the *gente de razon*, who superintend the direction of the boat, avail themselves of their superiority, with the desire of ingratiating themselves with their masters and

of receiving a reward. There are, besides, repeated acts of aggression which it is necessary to punish, but all of which furnish proselytes. Women and children are generally the first objects of capture, as their husbands and parents sometimes voluntarily follow them into captivity.

"One of these proselyting expeditions into their Indian territory occurred during the period of Captain Beechey's visit in 1826, which ended in a battle, with the loss, in the first instance, of thirty-four of the converted, and eventually in the gain, by a second expedition sent to avenge the losses of the first, of forty women and children of the invaded tribes. These were immediately enrolled in the list of the mission, and were nearly as immediately converted into Christians. The process by which this was effected is so graphically described by Captain Beechey that it would be doing him injustice to use any words but his own.

"I happened, he says, to visit the mission about this time and saw these unfortunate beings under tuition. They were clothed in blankets, and arranged in a row before a blind Indian, who understood their dialect, and was assisted by an alcalde to keep order. Their tutor began by desiring them to kneel, informing them that he was going to teach them the names of the persons composing the Trinity, and that they were to repeat in Spanish what he dictated. The neophytes being thus arranged, the speaker began: "Santissima Trinidad,—Dios, Jesu Christo, Espiritu Santo"—pausing between each name, to listen if the simple Indians, who had never spoken a Spanish word before, pronounced it correctly or any thing near the mark. After they had repeated these names satisfactorily, their blind tutor, after a pause, added "Santos"—and recapitulated the names of a great many saints, which finished the morning's tuition.

"After a few days, no doubt these promising pupils were christened, and admitted to all the benefits and privileges of Christians and *gente de razon*. Indeed, I believe that the act of making the cross and kneeling at proper times, and other such like mechanical rites, constitute no small part of the religion of these poor people. The rapidity of the conversion is, however, frequently stimulated by practices much in accordance with the primary kidnapping of the subjects. If, as not unfrequently happens, any of the captured Indians show a repugnance to conversion, it is the practice to imprison them for a few days, and then allow them to breathe a little fresh air in a walk round the mission, to observe the happy mode of life of their converted countrymen; after which they are again shut up, and thus continue incarcerated until they declare their readiness to renounce the religion of their forefathers.' As might be believed, the ceremonial exercises of the Roman Catholic religion, occupy a considerable share of the time of these people. Mass is performed twice daily, besides high-

days and holydays, when the ceremonies are much grander and of longer duration; and at all the performances every Indian is obliged to attend under the penalty of a whipping; and the same method of enforcing proper discipline as in kneeling at proper times, keeping silence, &c., is not excluded from the church service itself. In the aisles and passages of the church, zealous beadles of the converted race are stationed, armed with sundry weapons of potent influence in effecting silence and attention, and which are not sparingly used on the refractory or inattentive. These consist of sticks and whips, long goads, &c., and they are not idle in the hands of the officials that sway them. * * *

"The unmarried of both sexes, as well adults as children, are carefully locked up at night in separate houses, the keys being left in the keeping of the Fathers; and when any breach of this rule is detected, the culprits of both sexes are severely punished by whipping,—the men in public, the women privately.

"It is obvious from all this, that these poor people are in fact slaves under another name; and it is no wonder that La Perouse found the resemblance painfully striking between their condition and that of the negro slaves of the West Indies. Sometimes, although rarely, they attempt to break their bonds and escape into their original haunts. But this is of rare occurrence, as, independently of the difficulty of escaping, they are so simple as to believe that they have hardly the power to do so after being baptised, regarding the ceremony of baptism as a sort of spell which could not be broken. Occasionally, however, they overcome all imaginary and real obstacles and effect their escape. In such cases, the runaway is immediately pursued, and as it is always known to which tribe he belongs, and as, owing to the enmity subsisting among the tribes, he will not be received by another, he is almost always found and surrendered to the pursuers by his pusillanimous countrymen. When brought back to the mission he is always first flogged and then has an iron clog attached to his legs, which has the effect of preventing his running away and marking him out, *in terrorem*, to others."^[34]

Additional testimony in regard to the evil practices of the Mexican padres may be found in the delightful volumes of Madame Calderon de la Barca, entitled "Life in Mexico," and published in 1842. "Alas!"—exclaims this sprightly lady,—speaking of the wholesome reforms introduced by the viceroy Revilla-Gigedo among the Mexican monks,—"alas! could his excellency have lived to these our degenerate days, and beheld certain monks, of a certain order, drinking *pulque* and otherwise disporting themselves;—nay, seen one, as we but just now did from our window, strolling along the street by lamp-light, with an Indian girl tucked under his arm!"

The author of this slight but significant passage—an American lady of the highest character and wife of the first minister sent by Spain to Mexico,—cannot be flippantly contradicted by critics who would impute to her either prejudice or ignorance.

Zavala, in his History of the Revolutions of Mexico from 1808 to 1830, sketches briefly and forcibly some of the earlier features of ecclesiastical control in his country. As he was a native and a Catholic, he will not be accused of injustice to a church which he endeavored to fasten on the nation by his adherence to the constitution which made the Catholic faith the exclusive religion of the land. "They created missionaries," says he, "who, by the aid of the soldiery, made prodigious proselytes. * * * * * They prepared catechisms and small formularies in the language of the natives, not for the perusal of the Indians, who could not read, but in order to repeat them in their pulpits and teach them by rote. There was not a single translation of the sacred volume in any idiom of the country, and there was not an elementary work containing the principles of their faith. But how could such works exist for the Indians when their conquerors were unable to read them? What I desire to prove by this is that religion was neither taught the natives nor were they persuaded of its divine origin by proof and argument; the whole foundation of their faith was the word of their missionaries, and the reason of their belief was the bayonet of their conquerors. * * * * * The dependence of the people was a sort of slavery, a necessary consequence of the ignorance in which they were brought up, of the terror with which the troops and authorities inspired them, of their despotism and pride, and more than all, of an inquisition sustained both by the military and by the religious superstitions of monks and clergymen whose fanaticism was equal to their ignorance. * * * * * The catechism of Padre Ripalda, which contains the maxims of a blind obedience to the king and pope was the ground work of their religion; and their priests, parents and masters inculcated these doctrines incessantly."^[35]

Don Vincente Pazos, in his celebrated Letters on the United Provinces of South America, does not even stop at the clergy, in charging a large share of the miseries of his countrymen upon the ecclesiastical establishment, but confounds the creed with its unworthy ministers, and strikes even at the religion itself:

"Among the evils suffered by the Indians which have been a source of unhappiness to them, as well as to all South America, is the Roman Catholic religion, which was introduced among them by the Spaniards. This religion, in countries where it predominates or is connected with the government, is widely different from the same religion as it appears in the United States of North

America. Instead of being employed as all religions ought to be, in directing the morals, purifying the hearts and restraining the vices of the people,—it is so prostituted in Spanish countries, that it has become nothing but a mass of superstitious ceremonies, and the instrument of avarice and oppression."

The error of the patriotic writer is so evident that it does not need exposure. The faith and the friar are different things. Yet how deep must be the corruption of a class whose vices force an intelligent man, born and educated in the bosom of the church, to denounce his religion for the sake of its worthless teachers.

We have dwelt upon this subject because the religion—and especially the protected state religion of a country—is always of deep interest when we estimate the resources and character of a nation. Priests of all creeds obtain a sacred character in the opinion of the multitude the moment their vow is pronounced at the altar. The world believes that they part with human nature in assuming the gown, and become in reality, the *divines* they are called in the fashionable nomenclature of the age.

The priest, whether Protestant, Catholic, Mahomedan or Chinese, is ever an important, and often an omnipotent, member of the social world. And it behoves society in the nineteenth century to cherish Christianity instead of Flamens and Soothsayers.

It has been our principle through life to cultivate a genial feeling of toleration towards all the various sects into which the great Christian church is divided. We have resisted bigotry in all its shapes, and in all its manifestations, from whatever source. Trusting in the essential faith and discarding the external form, we have regarded all men who knelt at the altar which was cemented with the blood of the Nazarine, as a great brotherhood devoted to the religious regeneration and consequent civilization of the world. In writing, therefore, of the Catholic church in Mexico we have been pained to speak disparagingly of a part of the priesthood, whose members, in our own country, we had early in life learned to reverence for their virtuous piety, and admire for their profound learning. We know that the great theoretical dogma of that powerful church is its *unity*, and that its tenets, principles and practices are universally the same throughout the world. For opinions given and examples cited, in another work, we have been severely rebuked, by one of the most learned theologians in the Roman church, who argues our wilful error, upon this assumption of theoretical identity. But we have the satisfaction to know, not only from Mexicans themselves, but from American Catholics who visited the country since that criticism was issued, that our descriptions, in no instance, surpassed the reality, and that if the *tenets*, be in fact, the same as those entertained by the church at

Rome and in the United States, the principles, and, especially, the *practices* of many of its ministers, vary extraordinarily from the principles and practices of its ministers here. In another portion of this work we may, probably, notice some of those practices more fully.^[36]

The facts we have been obliged to state in regard to some of the *materiel* of the present Mexican ecclesiastical establishment do not touch the dogmas of the Catholic church though they certainly indicate so great a degree of laxity in the administration of a powerful moral, civil and religious engine endowed with immense resources, that they should attract the reforming notice of those pure branches of the Roman fraternity whose proximity will best afford them the occasion to counsel their brethren in an age of progress and competition not only in trade but in religion. Texas has already improved under the auspices of a new ecclesiastical administration since her union with the North American states and her religious alliance with their Roman Catholic Archbishopric. Nor is the importance of these ameliorations less demanded at the hands of republican ecclesiastics when we recollect that the federal constitution adopted in 1847, now the fundamental law of the land, declares in its first title, that the "religion of the Mexican nation is, and will be perpetually, the Catholic, apostolic, Roman. The nation protects it by wise and just laws, and *prohibits the exercise of any other!*" Men, in Mexico, must not only not *pray* as they please, but, constitutionally, they must not *believe* as they please. A priesthood which is thus indissolubly and exclusively welded to the state in a republic, should be, indeed, peculiarly sacred and pure. Sole, despotic ecclesiastical power, based upon numerical strength,—intolerant of all other modes of worship or modifications of Christianity,—is an anomaly in the nineteenth century, nor is it likely that the civil liberty of a nation can ever become secure or worthy, until religious liberty is, at least, permitted if not enjoined by its paramount law. These two elements of human right and progress have ever moved hand in hand. It is a mockery to separate them and tell the people they are free. The indefeisible rights of *reason* and judgment are sapped and stifled. When conscience, even, must struggle with legal shackles in its intercourse with God, what must be the conflict of the soul in its intercourse with man!

"We speak not of mens' *creeds*—they rest between
Man and his Maker;"—

but we have confined our observations in this work, exclusively to those painful exhibitions which cannot fail to strike a stranger as disadvantageous both to intellectual progress and the pure and spiritual adoration of God. The mixture of

antique barbaric show and Indian rites, may have served to attract the native population at the first settlement of the country; but their continuance is in keeping neither with the spirit of the age nor the necessities of a republic. While the priesthood has contrived, in the course of centuries, to attract the wealth of multitudes, and to make itself, in various ways, the richest proprietor of the nation, the people have been impoverished and continued ignorant. Not content with the natural influence possessed by a church whose members are spread all over the republic, the hierarchy of Mexico, has exacted a constitutional recognition not only of its permanence, but of its right to exclude all other faiths, and all other religious reunions for worship. It appears, therefore, just that in such a republic it was the duty of the Roman church voluntarily to unfetter its wealth, to reform its priesthood, to sweep into the public coffers the useless jewels that adorn the altars and statues, yet do not glorify the Almighty; and to imitate the virtues, resolution and self-denial of its ministers in our country, who, while blending themselves in politics and public spirit most effectually with the masses, have devoted their lives to the education of people of all creeds and classes for support and independence.

"Far from the goods of the church being exempted because they are consecrated to God," says Vattel in his immortal work, "it is for that very reason that they should be the first taken for the welfare of the state. There is nothing more agreeable to the common Father of men than to preserve a nation from destruction. As God has no need of property, the consecration of goods to him, is their devotion to such purposes as are pleasant to him. Besides,—the property of the church, by the confession of the clergy themselves, is chiefly destined for the poor; and when the state is in want, it is, doubtless, the first pauper, and the worthiest of succor."^[37]

CHAPTER XII.

CONSTITUTIONS AND LAWS.

VARIOUS CHANGES OF THE MEXICAN CONSTITUTION.—PRESENT ORGANIZATION OF THE NATIONAL AND STATE GOVERNMENTS.—CONSTITUTION OF 1847.—LEGISLATIVE AND JUDICIARY—NATIONAL AND STATE.—JUDICIARY—ADMINISTRATION OF JUSTICE—CIVIL AND CRIMINAL PROCESS—MAL-ADMINISTRATION OF JUSTICE.—PRISONS—CRIME—ACCORDADA.—CONDITION OF PRISONS.—STATISTICS OF CRIME IN THE CAPITAL—GARROTTE.—MEXICAN OPINIONS.

SINCE the downfall of Iturbide the body politic of Mexico has passed through many stages of revolutionary and factious disease. Four constitutions have been formed and adopted by the people or their temporary rulers independently of the

Bases de Tacubaya, under which Santa Anna ruled despotically until the month of June, 1843. These are the Federal Constitution of 1824; the Bases y Leyes Constitucionales, or, Central Constitution of 1836; the Bases Organicas de la Republica Mejicana of 1843, and the restored Federal Constitution, with amendments by an *acta de reformas*, in 1847. Five great organic changes, in twenty-six years, have thus continually swayed the people between Federation and Centralism; and we may hope that, after all these vital alterations, besides all the minor military *pronunciamentos* or *gritos*, which, in the intervals have vexed the public tranquillity, the country has, at length settled down firmly upon the reliable basis of a great but balanced confederacy.

The Constitution of 1847 creates a Federal Republic; and, with the exception of the intolerant articles in regard to religion upon which we have commented in the preceding chapter, it is a document worthy of freemen who desire to avoid consolidation and are anxious to preserve the distinct, responsible activity of their states. This instrument, after indicating the subdivision of the whole territory into the states heretofore enumerated in Chapter 1st, deposes the national legislative power in a Congress formed of a house of representatives and a senate, the representatives being chosen every two years by the citizens of the states, in the ratio of one for every fifty thousand souls or for any fraction beyond twenty-five thousand, while the senate is composed of two members from each state, elected by the legislatures, one-third of that body being renewable every two years. There are now one hundred and forty deputies, each of whom receives a salary of three thousand dollars; and sixty-three senators, whose yearly pay is three thousand five hundred each.

The executive power resides in a president, who is eligible every four years, and cannot be re-elected except after an interval of four years. There is no vice president; and, in case of the death or perpetual incompetency of the president, congress, or in its recess the council of government, shall call upon the state legislatures to fill his place by election. The ordinary and regular election of the chief magistrate, of deputies, senators and ministers of the supreme court of justice, is to be regulated by general laws, and may be either by the people directly or by electoral colleges; but in these indirect elections no one can be named, either as a primary or secondary elector, who holds a political office or exercises civil, ecclesiastical, or military jurisdiction in the district he represents. The salary of the president is thirty-six thousand dollars a year. During the recess of the general congress a council of government is to be constantly in existence, composed of one half of the senate, one member being retained from each state. The duties of this council are confined chiefly to a salutary vigilance over the

constitution and laws, and to the convocation of extraordinary sessions of the national legislature, either in conjunction with the president or by its sole act. The cabinet consists of a minister of foreign and domestic affairs; a minister of justice; a minister of finance; a minister of war and marine, each of whom receive an annual salary of six thousand dollars.

Each state government is independent within its local jurisdiction, and, like the federal government has, executive, legislative and judicial powers. The law making power of each of these governments resides in a legislature composed of the number of members which may be determined by its separate constituency, all of whom shall be elected by the people and removable at the time and in the manner they may think proper to decree. The persons to whom the sovereign states confide their executive power, can only exercise it for a time fixed by each respective state constitution. The power and jurisdiction of the national judiciary are amply defined so as to avoid conflict. The state judicial power is to be exercised by the tribunals created or appointed by the state constitutions, and all civil or criminal causes recognized by those courts shall be conducted in them to a final hearing and to the execution of the sentence. Every male person either born in the republic or naturalized, who attains the age of twenty years, possesses the means of honest livelihood, and has not been sentenced by legal process for any infamous crime, is declared to be a citizen of Mexico, and enjoys the right to vote, to petition, to meet others in the discussion of public affairs and to belong to the national guard. The exercise of these rights of citizenship may however be suspended in consequence of confirmed intemperance, professional gambling, a vagabond life, the assumption of religious orders, by legal interdict, in virtue of crimes which cause loss of citizenship, and by inexcusable refusal to serve in public employment when appointed by the people.

ADMINISTRATION OF JUSTICE.

The federal constitution of 1824, introduced into Mexico, as we have seen, two general orders of tribunals; those of a *federal* or *national* character, and those of the *states*. The power of these judiciaries was deposited in a supreme court, and in circuit and district courts; and causes were taken from one to the other, by appeals, or in other words, passed by grades from the lowest to the highest, according to the nature of the transactions they involved. The jurisdiction of these courts was of course very extensive; yet it was not paramount or universal over all classes of Mexican society, inasmuch as large numbers of Mexicans were exempted by *fueros* or special privileged jurisdictions, from the control of the constitutional courts. The *fueros* were

chiefly those of the military and ecclesiastics. There was a common military *fuero* in civil and criminal matters, which authorized the parties to have their causes tried before the commanding generals, and, on appeals, before the supreme tribunal of War and Marine, whilst there was another right of trial, or jurisdiction for military misdemeanors, before the council of war of general officers. There were, besides these, three special *fueros* of war;—one of artillery, one of engineers, and another of the active militia. The ecclesiastical *fuero*, gave an appeal from the bishop to the metropolitan, or from the archbishop to the nearest prelate;—if the metropolitan commenced a cause, an appeal lay to the bishop who was his nearest neighbor; and, on a third trial, to another neighboring episcopate. Notwithstanding these military and ecclesiastical *fueros* were permitted to exist by special favoritism after the republic was formed, the Mexicans suppressed, after 1824, the *fueros* of the consulados and of the mineria, or the mercantile and mining tribunals, both of which were sanctioned by experience or convenience, and whose foundations had been laid in the best principles of jurisprudence. To compensate, however, for the destruction of such useful institutions, it was determined that, in the federal districts and territories, suits growing out of mercantile transactions should be decided, in the first instance, by the "Alcaldes" or judges *de letras*, with whom were associated two colleagues proposed by the parties, and from whom an appeal might be taken to the supreme court. No special tribunal was created for the mining interests. In the federal districts and territories a primary tribunal was constituted for the trial of culprits, before an *Alcalde* and two *Regidores*; from whom an appeal lay to another *Alcalde* or *Regidor* and two associates, one of whom was named by the Syndic, and the other by the criminal. This correctional police, which has since been somewhat modified, disposed summarily of the greater part of malefactors in Mexico, and was empowered to sentence to the extent of six years imprisonment. The central constitution of 1836 modified this judicial system, and constituted judges *de partido*,—*Jueces Departamentales*, and a supreme court. The federal jurisdiction was confined to admiralty cases, fiscal transactions, and causes which concerned the public functionaries, while the military and ecclesiastical tribunals were left untouched.

Santa Anna during his last administration suppressed the district and circuit judiciary, and extended the jurisdiction of the common tribunals. But he restored the mercantile and mining "*fueros*" which were loudly demanded by public opinion. One of the few really good and useful provisions of the Spanish constitution has always been preserved in all the changes of Mexican legislation. This is the *judgment of conciliation*, by which litigant parties were prohibited

from originating an action until they procured a certificate from an Alcalde,—who was not a lawyer,—that a judgment by arbitration or conciliation had failed before him on trial. This is an admirable device and terminates multitudes of law suits in Mexico when men fear to encounter the costs and procrastination of the courts. It might be successfully grafted on our own system of tribunals, where it would doubtless benefit the clients though it might impair the professional revenue of the counsellors.

By the readoption of the federal constitution of 1824, in the year 1847, the judicial system was brought back from the changes of 1836 and 1843 to its former condition. The laws of Mexico, founded upon the old Spanish colonial legislation, and improved, in some measure, by the modification of state and national legislatures under the republic, constitute a vast and chaotic mass of principles, commentaries and decisions, which require a life time of studious toil to master and expound. The mixture of constitutional tribunals and specially privileged jurisdictions, under the system of *fueros*,—created a complication of judicial functions, which greatly narrowed the chances of a pure administration of law. The Mexican advocates, among whom many are distinguished for their learning and studious habits, are not, when considered as a professional body, comparable, either in information or ability, to their British, French, German or American brethren. The cumbrous formalities of Spanish law form a prolific hot-bed of special pleading, chicanery, and delay. A Mexican law suit is a proverb of procrastination. There are cases in Mexico in which the first paper was filed more than a hundred years ago. The suitor is not only impeded by every device that cunning and exaction can throw in his way, but there is cause to believe that the path of justice is sometimes impeded by the barrier of a bribe. If a Mexican lawyer is unable to force his cause to a final verdict, he is at least always prepared to assign plausible reasons for the tedious delay with which it halts and lingers in the forums. Nor is the value of legal costs unknown in Mexico, either by judges, notaries, or clerks. In proportion as the litigants are wealthy, or as it is necessary that their cause should be speedily decided, so are the greedy officials slow in preparing it for a final hearing and decree. The maxim in Mexico is —"*mas vale una mala composicion que un buen pleito*,"—a bad compromise is better than a good law suit. "There are men,"—said a member of the Mexican cabinet to congress, in 1830,—"*who exercise the right of life and death over their equals, whom the arm of justice does not venture to reach; and, thus, as the bonds of society are effectually dissolved, individuals owe security, rather to their personal power, than to the protection they have a right to expect from the laws.*" There are many criminals throughout the republic who have long

offended with impunity while every species of chicanery has been taken advantage of to secure their life and liberty. Witnesses are sometimes intimidated, false oaths sworn, and terrible menaces whispered in the ears of the timid; nor are these base threats always left unexecuted if the victim is finally condemned and punished.

In the space of six months, during the end of 1841 and beginning of 1842, several horrible assassinations were perpetrated in Mexico. An old Spanish porter was slain and cruelly mutilated in his dwelling, in the capital. So scandalous a deed excited universal indignation. The judicial authorities of the capital ordered rigorous proceedings against the culprit, but, after the case had been tried, and the murderer condemned to lose his life, he was pardoned in consequence of a threat that he would make important or disagreeable revelations if the sentence were executed. Another Spaniard,—a planter of standing in his district,—was murdered by the servants of a neighboring *haciendado*, with whom he had a dispute in regard to water-rights. The cause was tried, and the instigator and his tools were imprisoned. Yet the arm of justice was withheld by intrigue and corruption. Another Spanish planter, in the south,—a physician by profession, and a man incapable of injuring any one,—was foully killed by a band of Indians, nine of whom were shot for the crime. These miserable wretches had been but the instruments of higher criminals who were well known to the public, nevertheless they were too powerful to be made responsible for their shameful crime. At Tacubaya, in 1842, an English gentleman and his wife, whilst indulging in an evening walk were assassinated and brutally mutilated. But justice was for a long time foiled in its retributive efforts. Nor is it likely that the culprits would ever have expiated their guilt on the scaffold had not the foreign population loudly demanded, and liberally paid for their conviction. In 1839, the Mexican judges gave a striking example of firmness in the execution of a capital sentence, decreed in a case which lasted four years against a colonel of the army and his companions. It was proved that this scoundrel whilst residing in the national palace as one of the aid-de-camps of the president, had been the chief of a band of robbers who committed their offences not only on the highway, but in the metropolis itself. The honorable result in this case was chiefly owing to the firmness of the attorney general, who resisted the threats and the bribes of the criminal's powerful friends. Yet he, probably, paid for his firmness with his life, for he died shortly after the execution, and there is reason to believe, that he perished by foul means. During the administration of Santa Anna in 1842 and 1843, the most energetic efforts

were made to free the country and the public roads, from the hordes of robbers that thronged them. The highway from Vera Cruz to Mexico was filled with thieves, whose favorite haunts were in the neighborhoods of Perote and Puebla, within the hearing of whose sentinels they almost daily exercised their vocation upon travellers in the diligence. Santa Anna placed large bodies of cavalry on the route as soon as he came to power, and numerous arrests were made which were followed by the prompt conviction and execution of the bandits. No mercy was shown. The robbers were *garroted*, in pairs, in the towns along the road and in the capital; and thousands turned out morning after morning to witness the tragic end of these merciless wretches. For a short time the road was free; but, in a few months, new bands replaced the executed robbers, and, since the war with the United States, the main highway of Mexico has become as insecure as of old.

PRISONS—CRIME.

The prisons of the city of Mexico are in a wretched condition, and, although it has often been proposed to introduce some of the modern penitentiary systems of Europe and the United States, we are not aware that any thing has been done to effect this desirable end. The *ACCORDADA* is the common prison of Mexico. In front of one of its wings, at a low window protected by stout iron bars, are laid, every morning, the dead bodies that have been found throughout the city during the night. Every day these frightful evidences of murder or violent death are exposed to the gaze of citizens as they pass onward towards the western limits of the city. Sometimes five dead bodies have been seen at one time in this Morgue of Mexico;—and, on days succeeding festivals, the number is sometimes largely augmented. These unfortunate wretches are the victims of quarrels, or sudden fights;—and the front of the deadly window is commonly crowded with women and children—the relatives of the victims who come thither to seek after or to gaze their last on friend, father or husband.

Loathsome as is this exhibition on the exterior of the *Accordada*, the interior of this edifice is scarcely less frightful. Like all large Spanish edifices it is quadrangular. A strong military guard watches the gate, and a gloomy stairway leads to the second story, whose entrance is guarded by a massive portal. Inside of this, a lofty room is filled with the prison officers and a crowd of subalterns engaged in writing, talking, smoking and walking, whilst the clank of chains, the shouts of prisoners and the constant din of a disorderly establishment, add to the disgusting sounds and demeanor within.

Passing through several iron and wood barred gates, you enter a lofty corridor, running around a quadrangular court-yard, in the centre of which,

below, is a fountain of troubled water. The whole of this area is filled with human beings,—the great congress of Mexican crime,—mixed and mingling, like a hill of busy ants swarming from their sandy caverns. Some are stripped and bathing in the fountain;—some are fighting in a corner;—some making baskets in another. In one place a crowd is gathered around a witty story-teller, relating the adventures of his rascally life. In another, a group is engaged in weaving with a handloom. Robbers, murderers, thieves, ravishers, felons of every description, and vagabonds of every grade or aspect, are crammed within this dismal court-yard; and, almost free from discipline or moral restraint, form, perhaps, the most splendid school of misdemeanor and villany on the American continent.

Below,—within the corridor of the second story,—another class of criminals is kept; and yet, even here, men under sentence of death, are pointed out who are still permitted to go about without restraint.

In one corner of the quadrangle is the chapel, where convicts for capital offences are condemned to solitude and penance, during the *three* last days of their miserable life; and, at a certain hour, it is usual for all the prisoners to gather in front of the door and chant a hymn for the victim of the laws. It is a solemn service of crime for crime.

The women are not generally seen in the *Accordada*, but their condition is but little better than that of the males. About one hundred of the men, chained in pairs like galley slaves, are driven daily, under a strong guard, into the streets as scavengers; and it seems to be the chief idea of the utility of prisons in Mexico, to support this class of coerced laborers.

There can be no apology, at this period of general enlightenment in the world, for such disgraceful exhibitions of the congregated vice of a country or capital. Punishments, or rather incarceration or labor on the streets, is in reality no sacrifice, because public exhibition deadens the felon's shame, inasmuch as such inflictions cannot become punishments, under any circumstances of a *lepero's* life. Indeed, what *object* in existence can the Mexican *lepero* propose to himself? His day is one of precarious labor and income;—he thieves;—he has no regular home, or if he has, it is some miserable hovel of earth and mud, where his wife and children crawl about with scarce the instinct of beavers. His food and clothing are scant and miserable. He is without education or prospect of social improvement. He belongs to a class that does not rise, for his class is ostracised by hereditary public opinion. He dulls his sense of present misery by intoxicating drinks. His quick temper stimulates him to quarrel. His sleep, after a debauch, is unrefreshing, and he only wakes to encounter another day of

uncertainty and wickedness. What, then, is the value of life to him, or one like him? Why toil? Why not steal? What shame has he? Is the prison, *with certainty of food*, a greater punishment than the free air with *uncertainty*? On the contrary, he regards it as a lighter punishment, whilst he is altogether insensible to its moral degradation.

Mexico will thus continue to be infested with felons, as long as its prison is a house of refuge, and a comparatively happy home to so large a portion of its outcasts.^[38]

**STATISTICS OF CRIME IN THE CAPITAL, 1826—1836—
1842.**

The following table exhibits the condition of the public prisons of Mexico in 1826.

	Inmates on the 31st Dec., 1825,	553
Entered in 1826.—	For Homicides and their accomplices,	151
	" Robbery, " " "	1,090
	" Rioting and bearing arms,	2,011
	" Incontinence (incontinencia,)	543
	" Various crimes,	955
	Total number of persons,	5,303

Of these there were

Released,	4,155	
Sentenced to death by garrotte,	7	
" to prison for terms,	67	
" to public works,	159	4,628
" to house of correction,	3	
" to service of the prison,	229	
" chained at various places,	8	
Remaining on the 31st December, 1826,		675

MILITARY TRIALS AND JUDGMENTS IN 1826.

Entered prison, to be judged by military tribunals,	462
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Sentenced to punishment,	8	
" to prison,	48	
" to military service,	5	
" to public works,	55	
" to house of correction,	6	—362
Liberated,	212	
Escaped,	12	
Died	2	
Delivered to the ordinary tribunals,	14	
Remaining at end of 1826		<u>100</u>

A Mexican statistical bulletin, presents the following picture of the criminal condition of the federal district, for the 8 first months of the year 1836. During this period there were 255 *arrests*; 53 were immediately released and 202 remained in prison. These were divided as follows:

Homicide,	5	Counterfeiting money,	15
Wounding severely,	30	Forgery of documents,	1
Robbery,	8	Drunkenness,	17
Attempt to rob,	12	Quarreling,	41
Suspected of robbery,	30	Resistance of authority.	2
Rioting,	37		
Incontinence,	4	Total,	<u>202</u>

which would give for the whole twelve months,
at the same rate, 269 for the number retained.

In this statement, fifteen individuals are reported as being imprisoned for counterfeiting coin, yet it is notorious that, at this epoch, all Mexico was converted into a manufactory of false money, for the country was deluged with copper. It is boldly alleged that deputies, generals, and merchants, participated in this scandalous and bold speculation. Santa Anna, in order to check this national evil, decreed that counterfeiting should be considered a *military crime*, and the offenders made liable to the summary and severe trials which usually take place when soldiers are both judges and jurymen.

The subjoined statistics bring these statements nearer our own period, and

afford means of comparison with antecedent dates:

IMPRISONMENTS IN THE CITY OF MEXICO FOR 1842.

In the first 6 months of 1842, there were imprisoned in the city of Mexico,	3,197 men.
In the first 6 months of 1842, " " "	1,427 women.
In the second 6 months of 1842, " " "	2,858 men.
In the second 6 months of 1842, " " "	<u>1,379 women.</u>
Imprisonment of both sexes this year,	<u>8,861</u>

We will not swell these tables by specifying each of the crimes for which these 8861 individuals were incarcerated; but will merely note the chief violations of law and the number of the respective offenders:

	Men.	Women.	Total.
Robbery,	1,500	470	1970
Prostitution, adultery, bigamy, sodomy and incest,	312	179	491
Quarreling, wounding,	2,129	1,140	3,233
Rioting and bearing arms,	612	444	1,056
Homicide and attempt at ditto, and robbery and homicide,	70	17	87
Rape and incontinence,	65	21	86
Forgery,	7	1	8
Gambling,	3	0	<u>3</u>
Total,			<u>6934</u>
High grades of crime,			6934
Misdemeanors,			<u>1927</u>
Total,			<u><u>8861</u></u>

\$4,121 were expended for salaries in the Acordada; and \$30,232 for the maintenance of the prisoners. It should be stated, moreover that a large number of the above criminals were committed and punished for throwing vitriol on the dress and faces of persons in the street;—that 113 dead bodies were found;—894 individuals sent to hospitals; and 17 executed by the *garrotte*. The culprit who is sentenced to this mode of expiating his crime is seated in a chair on the scaffold, whilst his neck is embraced by an iron collar which may be contracted by a screw. A sudden and rapid turn of the lever drives a sharp point through the

spinal marrow at the moment that the band closes around the throat and strangles the victim.

NOTE.—In confirmation of all we have said in this chapter in regard to the administration and condition of law in Mexico, and in relation to the army, we refer to an able pamphlet published in that country, in 1848, entitled "*Consideraciones sobre la Situacion Politica y Social de la Republica Mejicana el ano 1847*," written, we understand, by Don Francisco Lerdo. It presents a dark picture of the country at that epoch; but the author's purpose was to unmask the social and political diseases of his country, and his patriotic task was the more needed because that country was on the brink of ruin from war.

It is to be especially noted with commendation that the Mexicans have recently become the severest critics not only of their institutions but of themselves. The miserable, boasting spirit,—the taste for grandiloquent proclamations,—the indiscriminate laudation of Mexican virtue, talent, science, honor, valor, and justice, which filled the papers and pamphlets of the nation, but which were never sustained when the Mexicans came in contact either with highly cultivated foreigners or were opposed by foreign arms, have all been greatly qualified since the war. The combined lessons of her unsparing but truthful satirists and of her invading enemies, will not be lost on a people really sensible and sensitive, though bewildered for more than a quarter of a century during which bombast served for glory or consolation when anarchy was not altogether triumphant. In confirmation of this growing spirit of self-examination with a view to national reform, we would also refer to the discreet and able memoir of Don Luis G. Cuevas, minister of foreign and domestic relations, read by him before the Chamber of Deputies, on the 5th of January, 1849.

CHAPTER XIII.

REFLECTIONS UPON THE REPUBLIC.

WHAT MEXICO HAS DONE—REVIEW OF HER CONDUCT AND CHARACTER.—MEXICAN OPINIONS—CLASSES—INDIANS—MESTIZOS—WHITES—ARMY—CHURCH.—DIVISIONS OF WHITES—WANT OF HOMOGENEOUSNESS.—WANT OF NATIONALITY AND OF A PEOPLE—REMEDIES—EMIGRATION—RELIGIOUS LIBERTY—POLITICAL ORDER—LABOR.

EVERY reader who has accompanied us thus far in studying the history, geography, resources, and character of Mexico, will scarcely require to be told why it is that the nation has continued disorganized and become impoverished in the midst of such abundance as has been lavished upon it by the beneficence of God. At the conclusion of our chapter upon the commerce of Mexico we described the remarkable geographical position of the territory, and have shown that, by the laws of nature, it ought to enjoy a controlling influence in the affairs of the world. And yet almost three centuries and a half have rolled over since Cortéz planted the Spanish banner on the palaces of Tenochtitlan, and still the question may be asked whether the region is more progressive under republican and royal rule than under Aztec sway? The world has advanced in commerce, manufactures, science, literature and arts, but Mexico has remained comparatively fixed in the midst of a stagnant semi-civilization. She has not exhibited a true warlike character either in her domestic broils or in her opposition to a foreign invader, though her soil has been converted into a camp for nearly forty years. She has confessed her manifold errors by her indemnities

and her diplomacy, though she has contrived to invite quarrels, discussions and affronts by an aggressive demeanor towards sojourners in her territory. A religious country by the protective sanction of all her constitutions, still she denies the right of conscientious worship to all who come within her borders. With a military police, and an immense array of judicial officers, her cities and highways are thronged with felons while the disputes of her citizens linger undecided for years in her courts. Her domestic markets are dear, and she has but little to spare for foreign commerce, though her soil is extraordinarily fertile and her climate yields the fruits and grains of the temperate and tropical zones. Throned on mines, she is a borrower at exorbitant usury. Washed by the two great oceans of the globe, her mariners are fishermen and her vessels skiffs. Ready at all times to borrow from every capitalist, she sees her opulent citizens send their wealth abroad for investment in spite of the tempting interest she promises to pay. Boasting of faith, she is without credit. At peace with mankind and fortified by nature, she is forced to maintain an army either to protect her from herself or to bribe the innumerable remnants of her military politicians into peace. Endowed with a constitution and enjoying the name of a republic, she beholds that constitution violated or overthrown by her army without even demanding the consent of the people. Vaunting, in the most grandiloquent language, her intelligence, glory and resources, she exhibits not a single evidence of that patriotic unity and order which would entitle her to domestic confidence and foreign respect. Owning an extensive territory which is attractive not only for its essential qualities but for its magnificent beauty and grandeur, she has drawn to her shores, since the conquest, only a million of white men. Losing Texas, which in her hands had been, for all this time, a howling wilderness possessed by beasts and savages, she sees that state become, under the magic influence of another race, an independent nation, a maritime power, a commercial territory yielding millions annually for the trade of the world. Surrendering California as a boon for peace, she beholds in a single year, the sands that had been trodden by her own people for several centuries, turn to gold in the developing hand of the energetic emigrants to whom it was given up. Impoverished, haughty, uneducated, defiant, bigoted, disputatious, without financial credit, beaten in arms, far behind the age in mechanical progress or social civilization and loaded with debt, Mexico presents a spectacle in the nineteenth century, which moves the compassion of reflective men even if it does not provoke the cupidity of other races to wrest from her weak grasp a region whose value she neither comprehends nor develops. This compassion is the result of a genuine sympathy with the true patriots who really love their country and know its worth, but whose numbers are too few to cope with the

scandalous intriguers and ambitious soldiers by whom the nation has hitherto been converted into a gambling table and its money and offices into prizes.

In the introductory chapters upon the viceregal government and revolution of Mexico, and in our remarks upon the growth of parties at the close of the war of independence, we have endeavored to exhibit fairly the existing causes of trouble at those epochs.^[39] There was an apology for incapability of political self-rule when a bad government or a degrading despotism was suddenly removed. But, since then, twenty-six years have elapsed; and, in more than a quarter of a century, mankind is fairly entitled to demand from Mexico a denial of the sarcasm of her oppressive *oidor* Bataller "that the worst punishment to be inflicted upon the Mexicans is to allow them to govern themselves!"

Dark as is this picture of neighboring republicans, we should have been loth to paint it had not our careful studies of their statistics and the commentaries of their own citizens justified the sombre coloring. "For our own part we believe,"—says Don Francisco Lerdo, in his Considerations upon the Social and Political Condition of the Mexican Republic in 1847,—"that all this may be explained in a few words. *In Mexico there neither is nor can there be what is called national spirit, because there is no nation.*"^[40]

This, perhaps, is the key of Mexican decadence. The national spirit is centrifugal, if any thing can strictly be called national when citizen is armed against citizen, and when men in civil life and politicians in public life, are constantly seeking to aggrandize themselves either in wealth or power without a thought of loyalty to the constitution which should perpetuate and consolidate national unity of principle and action in spite of all their personal ambitions or party dominations.

If we recur to our statistics in the third chapter of this volume we shall find that, out of seven millions six hundred and twenty-six thousand eight hundred and thirty-one inhabitants of the republic, it is calculated that four millions three hundred thousand are Indians, that more than two millions are either mixed bloods or negroes, and only about one million white, while, of the whole population, not many more than seven hundred and forty thousand are to be regarded as either educated or at all instructed! The most numerous class, the large majority of Mexicans,—the Indians,—are not civilized. We make this assertion without qualification. They are *tamed* and have been comparatively submissive; they are not open idolators and have generally conformed, according to their limited understanding and instruction, to the direction of the Catholic priesthood; but neither this taming nor this conformity, considered relatively to their general demeanor, constitute civilization either under a monarchy or a

republic. The Indians, therefore, regarded as a political or social element in a democracy, are not fairly to be valued as integral constituencies of the Mexican *republic*. We have already delineated the character of this class and will not recapitulate the points of sluggish indifference which forbid the hope of its elevation. Less savage than the North American red man and hunter, the Mexican Indian is only dwarfed in energy and in the expression of passion, by the emasculating influence of the climate. In all other respects he resembles the tenant of our western forests and will neither willingly mingle with us, adopt our habits, nor labor for others upon a soil which spontaneously supplies his wants. In his passive state he is content with imitation; in his aroused anger he rushes blindly and vindictively into danger, and is willing to die rather for revenge than for right. Is it not folly then to ask this class to comprehend the representative system? Nor can we justly expect its comprehension and correspondent adherence or practice from the unenlightened Mixed Races, especially when those races do not derive their origin, exclusively, from pure white stocks, but are formed by a medly mosaic of Indian, African, Oriental and Spanish. The hope of Mexico must, therefore, repose in the whites alone; and, on this class we might confidently rely as the nucleus around which future numbers and civilization would gather, if we found them orderly, free, united and firm in adherence to their constitution modified by the indispensable addition of religious liberty and the speedy as well as inflexible administration of justice. But, in this small class, we have the most serious difficulties to contend with, for, without constitutional recognition, the officers of the army, the hierarchy, and the intriguing politicians, form three distinct powerful bodies who must blend in perfect union for mutual support, or must be content to see the country involved in civil war if they differ.

We have already noticed the origin and continuance of the army's influence, and the natural despotic tendencies of that class. It represents Force. It is, moreover, a historical fact, that the Mexican church does not confine itself to matters of faith, but, as the richest national proprietor and as the comptroller of conscience by virtue of the constitution, has constantly quitted the cloister to fight in the arena of politics. Nor was its weapon weak, for it was armed with Superstition. Wielding the bolts of spiritual thunder in a nation in which no other religion is tolerated or known; possessing the power of discovery by confession, and of control by penance, excommunication, anathemas, and ecclesiastical interdicts; ruling the soul without appeal, and grasping the purse, it will be at once seen what a powerful element of influence such an institution must become when directed by a single head. If the masses would prey upon the church, it was

the policy of the church to support the army; if the people desired to destroy the army, it was the interest of the army to support a church which could control by conscience or bribe by money the miscalled representatives of the people.^[41] With force and superstition, thus welded together by interest, the representative system can expect but little favor from these two important divisions of the white race.

Is there hopeful reliance, then, upon another power which is controlled by a portion of the educated whites? The Liberty of the Press, in Mexico has disappointed its warmest advocates. An instrument which should ever be used for the enlightenment of the multitude has been employed only to demoralize and deceive it. Instead of attacking bravely all abuses of administration and all international prejudices, or weaknesses; instead of holding the executive departments to strict accountability before the chambers and the people; instead of displaying frankly the vital interests and materials of social reorganization, and thus contributing to the common prosperity and peace of the country, the periodical press of Mexico, with few honorable exceptions, has fostered the meanest passions and hatreds of the ignorant masses and has betrayed public opinion by trafficking with or truckling to the men or the classes who live by public abuses and disorder.^[42] Instead of checking and thwarting the interference of the church in civil affairs, it has stood mute or appalled before the ecclesiastical power. If there is no reliance, therefore, on the press, what available trust may be reposed in the pure, civil patriots, men of letters, professional characters, merchants and proprietors? The slender numbers of this class, compared with the army, church, Empleados or government *employées*, and intriguing civilians connected either with the state in its various departments of *finance*, or with the press, at once deprive it of equality in influence. In all the turns of fortune in Mexico, these men have, hitherto, never been able to command the country for any length of time so as to give a permanent beneficial direction to public affairs, and we may, therefore, readily agree with Lerdo in believing that his country possesses no elements of nationality. He might have gone further in his analysis, and declared that there was no nationality because there was no PEOPLE; for who will dignify with that republican name such discordant and heterogeneous materials of races, characters, politics and purposes. A PEOPLE is not a mere aggregation of human beings. A nation, in the true sense of nationality, is only a great family, for whose strength and power it is necessary that all its individual members should be intimately united by the bonds of interest, sympathy and affection. Such a nation may form a government, but it is difficult for a government to form such a nation. And this

was the peculiarly fortunate position of our North American states at the period of Independence, for we had no political and social revolution to effect. Our people and our government grew up together. At the close of the war the United States were poor. The military men had enjoyed no revenue from their services but personal honor. They were badly fed, paid and clothed. There was no rich, ready made prize to be seized by ambitious or avaricious men in the gorged treasury of a nation. All were essentially equal because all were equally forced to work for livelihood. There was no recognized class in government or society. We were all of one blood, and did not fall into the error of amalgamation with Indians and negroes. We were controlled by reason and not governed by passions or instincts. We had nothing but liberty and space; soil and freedom. Our soldiers were rewarded with land; but that land was in the wilderness and exacted toil to make it productive; and thus, compulsory industry diverted the minds of our political founders from those ambitious enterprises, which by the aid of the military have so long degraded Mexico. Conquest and rapid Fruition,—was the maxim of Spain; Occupation and Development,—the policy of England. The eager Iberian was prompt and headlong in the adventurous life of discovery. The cautious Anglo Saxon followed in his steps, ready to glean and replant the fields that had been hardly reaped of their virgin harvests.

We have endeavored to analyze candidly the condition of the Mexican republic, and, in performing the disagreeable task we have been guided not only by our own personal observations in the country, but by the argumentative criticisms of native writers. Having ascertained the disease it is our duty to seek the remedy. The obvious policy of Mexico, under existing circumstances, is to exhibit a firm, constitutional, orderly, peaceful aspect, which, together with her manifold allurements of soil, climate, and geographical situation, will gradually attract to her shores the eager multitudes who are seeking a new home in America. Emigration is the overflowing of a bitter cup. Men do not ordinarily leave the land of their birth, the home of their infancy, their parents, friends and companions, for the untried hazards of a land in which there is no community of laws, habits, and language, unless poverty and bad government force them into the wilderness. They depart to better their lot. They must have the assurance, therefore, of their rights in property and personal liberty guaranteed by stable laws promptly administered by incorruptible judges. Such meritorious emigrants will not populate Mexico unless she demonstrates her capacity for order and security; and, without these accessions, we have shown that Mexico never will, as she does not now, possess a republican PEOPLE. She must cultivate the *civil*

idea; she must abandon her military parade; she must discard her habitual bombast and grandiloquence; she must banish the despots who have debauched and plundered her; she must reform her social life and learn to believe that there are other pleasures worthy the notice of men besides gambling, bull baiting and cock fighting; and, above all, she must establish religious liberty. It is an absurd idea that nationality can be preserved by enforcing Catholicity by virtue of the constitution. The Roman church must consent to share this earth,—the patrimony of mankind,—with other believers and spiritual laborers. It cannot monopolize the soil, even if it can control the faith. The day of monopoly is gone,—that of individuality has come, and there can be no good government that is not founded on tolerant Christianity, which is the creed of Love, the enemy of Force, the founder of true Democracy.^[43]

When an orderly and firm government shall have been established, Mexico will be refreshed continually by the energizing blood of a hardy, industrious and enterprising white race from beyond the sea. Germany will send her sons and daughters; Ireland, France, England, Italy and Spain will contribute theirs. The various nations, mingling slowly by marriage with the white Mexicans, will amalgamate and neutralize each other into homogeneous nationality. Mexico may thus gradually congregate A PEOPLE. The language of the country will, in all likelihood, be preserved; for the white natives who now speak Spanish will of course form, for many years, the bulk of the population, and when they die, their offspring and the offspring of the emigrants will know but one tongue. There will thus be no violent extirpation of races; but a slow and genial modification. Modern inventions, arts, tastes, science, emulation, new forms of thought, new modes of development, will be introduced and implanted by these emigrants. The million of white men, and the two millions of mestizos, will become more prosperous under the increased trade and industry of the nation. A good government will be ensured, for the hardy emigrants fly from the political oppression and poverty of the old world to enjoy peaceful *liberty* in this.

There is nothing in this scheme of progress to which a good man or a republican can object, and if Mexico is sincere in her professions of democracy, and not merely anxious to preserve intact the fragments of a ruined Spanish colony, *without a people and without nationality*, she will imitate the example of the United States and welcome to her vallies and mountains all who are willing to approach her in the name of order, labor, and liberty. But if she stubbornly adheres to her stupid self-seclusion, and bars the portals of her splendid empire with the revolutionary impediments that are annually scattered over the republic, she will break the beautiful promise given to humanity in the success of her

revolution;

"Something there was in her life incomplete, imperfect, unfinished,
As if a morning in June with all its music and sunshine,
Suddenly paused in the sky, and fading slowly descended
Into the east again, from whence it late had arisen!"

LONGFELLOW'S EVANGELINE.

BOOK V.

THE MEXICAN STATES AND TERRITORIES; THEIR GEOGRAPHICAL DIVISIONS, CITIES, TOWNS, PRODUCTIONS, MINES, GENERAL CHARACTERISTICS, ANTIQUITIES, ETC.

CHAPTER I.

DIVISION OF MEXICO INTO STATES—EASTERN, WESTERN, INTERIOR. YUCATAN—BOUNDARIES, DEPARTMENTS, POPULATION, DISTRICTS, TOWNS, PARISHES, PRODUCTIONS, PRINCIPAL TOWNS, ISLANDS, HARBORS.—CHIAPAS—BOUNDARIES, PRODUCTS, DEPARTMENTS, TOWNS, RIVERS, POPULATION—REMAINS IN YUCATAN AND CHIAPAS.—DISCOVERIES OF STEPHENS, CATHERWOOD, NORMAN, ETC.—PALENQUE—UXMAL—YUCATAN CALENDAR.—YUCATAN, CHIAPAN, MECOACAN, NICARAGUA AND MEXICAN MONTHS.—YUCATESE AND CHIAPAN CYCLE.—YUCATESE AND MEXICAN SOLAR YEAR—DIFFERENCES.—YUCATESE MONTHS.—TABASCO—BOUNDARIES, RIVERS, LAGUNE, INHABITANTS, PRODUCTIONS, TOWNS AND VILLAGES.

IN treating this branch of our subject we have followed the order adopted by Mühlenpfordt in his "Republik Mejico," and acknowledge the important assistance we have derived from the careful, minute and laborious personal researches made by that industrious German author relative to the geography of Mexico. Since the publication of his volumes, in which he had been greatly aided by the previous works of Humboldt, Ward, Burkhardt and other explorers during the present century, the Mexican government has organized a Statistical Commission, whose investigations have been published in a series of Bulletins, and to these we are indebted for recent authentic information about some of the most interesting portions of Mexico. The northern regions, meanwhile, have been illustrated by the explorations of Frémont, Abert, Emory, Wislizenius, Cooke, Simpson, and other officers of the American Government; but as most of the territory examined by them has become the property of the United States by the Treaty of Guadalupe, their labors are not of importance in describing the Republic of Mexico as at present bounded. In the last Book of this work, however, which we have devoted to the consideration of California and New Mexico, we shall recur to those brave and scientific explorers of a remote region, so recently a wilderness, but which their labors, and the combined fortune of war and mineral wealth have subdued for the benefit of mankind.

In accordance with the plan proposed in the separate consideration of the several States and Territories of Mexico, we shall divide them into three groups:—those on the eastern or Gulf coast; those on the western or Pacific coast, and those in the interior.

I.—EASTERN OR GULF COAST.

The State of Yucatan.	The State of Vera Cruz.
" State of Chiapas.	" State of Tamaulipas.
" State of Tabasco.	

II.—WESTERN OR PACIFIC COAST.

The State of Oajaca.	The State of Jalisco.
" State of Puebla.	" Territory of Colima.
" Territory of Tlascala.	" State of Sinaloa.
" State of Mexico and Federal District.	" State of Sonora.
	" State of Guerrero.
The State of Michoacan.	" Territory of L. California.

III.—INTERIOR.

The State of Queretaro.	The State of New Leon.
" State of Guanajuato.	" State of Coahuila.
" State of Zacatecas.	" State of Durango.
" State of San Luis Potosi.	" State of Chihuahua.

THE STATE OF YUCATAN.

The State of Yucatan, sometimes known by the name of Merida or Campeché, occupies the greater portion of the peninsula which bounds the southern edge of the Gulf of Mexico. Its eastern side is washed by the Caribbean Sea, and touched by the settlements at Balize; on the south it is bounded by Guatemala; on the west by the Gulf of Mexico and the States of Chiapas and Tabasco, from which it is separated by the river Paicutun that falls into the Laguna de Terminos. Its northern coast extends from Cape Catoché to the Punta de Piedras, about eighty-six leagues; and the whole area of the State is computed at 3,823 square leagues.

Yucatan possesses very few streams and none of importance that are known or explored. On the west of the peninsula, debouching into the Gulf of Mexico, there are the rivers or rivulets of Escatalto, Chen, Champoton;—the San Francisco falls into the Bay of Campeché; in the north there are the Silan, the

Cedros, and the Conil; while the streams of Bolina, the Rio Nuevo, the Bacalar, the Ascension, and the Honda or Rio Grande pour into the Caribbean Sea. In 1841 the population of the State is stated in a census, taken by order of the government, as follows:

Departments.	Men.	Women.	Total.
Merida,	48,606	58,663	107,269
Izamal,	32,915	37,933	70,848
Tekax,	58,127	64,697	122,824
Valladolid,	45,353	46,926	92,279
Campeché,	39,017	40,639	79,656
Total,	<u>224,018</u>	<u>248,858</u>	<u>472,876</u>

This census, although it professes to be accurate, may nevertheless be incomplete, inasmuch as the inhabitants of Yucatan, dreading new contributions and detesting military service, endeavor to reduce as much as possible the number of their families in the lists prepared for government. Besides this, it does not appear to comprehend *all* the departments according to Mühlenpfordt, who divides the State into fifteen departments.^[44] The population has been estimated by some careful writers, acquainted with the people and the country, at 525,000 souls; in our table of population on page 42 of this volume, we have on good authority stated the number to be, in 1842, 508,948, while others have increased the number to 600,000 and even to 630,000, which amount is assigned to Yucatan by a census in 1833! The last mentioned number will give about 165 individuals to each square league.^[45]

The character and quality of the productions of Yucatan may be estimated by the following statistical table, which has been translated and published by Mr. Stephens in the first volume of his Incidents of Travel in that State.

TABLE OF STATISTICS OF YUCATAN				
DISTRICTS.	PRINCIPAL PLACES.	PARISHES.	VILLAGES ANNEXED.	PRODUCTIONS.
Capital	Merida	4	5	Horned cattle, horses, mules, tallow, jerked beef, leather, salt, gypsum, hemp, raw and manufactured, straw hats, guitars, cigars, and extract of logwood.
Campeché	City of Campeché	2	"	Salt, logwood, rice, sugar, and marble of good quality.
Lerma	Village of Lerma	3	8	Logwood, timber, rice, and fish oil.

Valladolid	City of Valladolid	11	17	Cotton, sugar, starch, gum copal, tobacco, cochineal, saffron, vanilla, cotton fabrics, yarns, &c., wax, honey, castor oil, horned cattle, hogs, and skins.
Coast	City of Izamal	16	27	Horned cattle, horses, mules, tallow, jerked beef, castor oil, hides, wax, honey, timber, indigo, hemp, raw and manufactured, straw cigars, barilla, and salt.
The Upper Highlands	City of Tekax	9	7	Horned cattle, horses, mules, hogs, sheep, skins, sugar, molasses, timber, rice, tobacco in the leaf and manufactured, spirits, arrow-root, straw hats, cotton lace, ochre, flints, and grindstones.
The Lower Highlands	Village of Teabo	8	5	Horned cattle, horses, mules, hogs, sheep, skins, tallow, dried beef, hemp, raw and manufactured, and cotton lace.
The Upper Royal Road	Town of Jequelchakan	6	11	Cattle, horses, mules, skins, tallow, dried beef, logwood, tobacco, sugar, and rum.
The Lower Royal Road	Village of Maxcanú	5	7	Horned cattle, horses, mules, oil of palma Cristi, tobacco, hemp, and fine straw hats.
The Upper "Beneficios"	Village of Ichmul	7	15	Sugar, molasses, rum, tobacco of good quality, rice, laces, pepper, gum copal, sarsaparilla, hats, hammocks, ebony, barilla, gypsum, and skins.
The Lower "Beneficios"	Village of Sotuta	6	16	Horned cattle, horses, mules, hogs, skins, tallow, and dried beef.
Tizimin	Village of Tizimin.	7	18	Tortoise-shell, skins, timber, logwood, India-rubber, incense, tobacco, achiote (a substitute for saffron, and a very rich dye), starch from the yuca, cotton, wax, honey, molasses, sugar, rum, castor oil, salt, amber, vanilla, hogs, cochineal.
Island of Cármen	Town of Cármen	2	1	Logwood.
Seiba-playa	Village of Seiba-playa	3	6	Timber, rice, logwood, and salt.
Bacalar	Town of Bacalar	2	"	Logwood, valuable timber, sugar of inferior quality, tobacco of the best description, rum, a fine species of hemp, known under the name of pita, resin, India-rubber, gum copal, pimento, sarsaparilla, vanilla, and gypsum.
Total	15	91	143	

CAMPECHE.
CAMPECHE.

The principal towns of Yucatan, are, 1st: the capital, MERIDA, in the northern part of the state, about ten leagues from the coast, containing a population of near 15,000 individuals. Its port is the small haven of Sisal, which is in reality

nothing but a bleak roadstead, protected by a fort and a sand bank.

2nd: SAN FRANCISCO DE CAMPECHÉ, with a population of about 9,000;—a port which is considered by navigators one of the best in the state, yet is by no means, a secure or comfortable anchorage.

3rd: VALLODOLID, the chief town of the district of that name, with near 4,000 inhabitants.

4th: San Felipe de Bacalar, or Salamanca; a town and military post in the district of that name, containing a garrison and about one hundred and twenty houses.

Besides these, there are the villages of Xampolan, Jequetchacan, Lerma, Champoton, between the rivers Campeché and Champoton on the west coast, and Silan, Santa Clara, Vigia del rio and Chaboána, on the north coast. In the interior there are many Indian villages.

The Island of Cozumel on the east coast of Yucatan—which was the first land discovered by the Spaniards in their voyage to Mexico,—is now almost uninhabited, and contains some ancient remains, which are probably the ruins of the splendid structures that attracted the attention of the adventurers, and satisfied them they had reached a land which was sufficiently civilized to be worthy their exploration and plunder.

It has generally been supposed that Yucatan affords no safe harbors or anchorages, which would either tempt commercial enterprise to her shores, or afford vessels of war sufficient protection so as to render the peninsula valuable in a military point of view. Yet it seems from an official copy of a recent British survey of the coast of Yucatan, which is to be found in the office of our Coast Survey in Washington, that there is a fine harbor for vessels of any size under the island of Mugerés, the easternmost point of Yucatan, where they may ride at anchor in safety, protected from winds in every direction. The harbors of Ascension and Espiritu Bay, are represented as good; the latter being capable of holding a fleet of the heaviest kind of English frigates and war steamers. There is good anchorage, moreover, off the north-east point of the island of Cozumel.^[46]

THE STATE OF CHIAPAS.

This state has been very inadequately examined. It is bounded north by Tabasco; south and south-west by the Republic of Central America, or Guatemala; west by the state of Vera Cruz and by a small part of Oajaca; and on the east partly by Yucatan and partly by Guatemala. Until the year 1833 the territory comprised in this division belonged to Guatemala, when it joined the

Mexican confederacy. Comprehending the northern declivities of the Cordilleras and table lands of Central America, Chiapas is, throughout a considerable part of its territory, cut up into successions of ridges and valleys, which are rich in many of the finest tropical productions. Corn, cacao, sugar and garden vegetables are produced readily. Tobacco of good quality grows in the district of Sandoval, and in the neighborhood of Oajaca. In the district of Tonalá, a small quantity of indigo of an extraordinarily fine quality is cultivated; and here, also, pepper and the maguey plant are yielded plentifully. Ananas, sapotes, bananas, figs, apricots and various similar fruits abound in Chiapas, while in its forests, oaks, cedar, mahogany, ebony, and other valuable woods are found in considerable quantities. But the greater part of this fruitful state is still an unknown waste, which the labors of other races must fully explore and develop.

Chiapas is divided into four departments and nine districts, which, together, possess 92 parishes.

1st: The Department of the Centre, with 12 parishes, besides the capital of Ciudad-Real, or San Cristoval de los Llanos and the town of Chamúla.

2nd: The Department of the South, with 10 parishes, in the district of Llanos, 11 in Ocozingo, and 17 in Tuxtla.

3rd: The Department of the West, with the district of Ystocomitan, containing 17 parishes; Tonalá, 3 parishes; and Palenque, 4 parishes.

4th: The Department of the North, with the districts of Tila, containing 6 parishes, and Simojoval, 12 parishes.

The chief towns are, CIUDAD-REAL, or SAN CRISTOVAL DE LOS LLANOS; a fine town with about 6,000 inhabitants, possessing a cathedral church, four convents for monks, and one for nuns, two chapels, and a hospital. The first bishop of Chiapas, who erected the see of that name in 1538, was the renowned Bartolomé de las Casas, whose fame is so intimately connected with the early history of the country, by his constant and merciful interference in behalf of the Indians.

The other important towns are San Juan Chamúla, containing 4,000 inhabitants; San Bartolomé de los Llanos, whose 7,000 people are chiefly engaged in the cultivation of cotton, sugar, tobacco and corn; San Domingo Comitlan; San Jacinto Ocozingo, with 3,000 inhabitants who devote themselves to the care of cattle, and cultivate some cacao and corn; Tuxtla, with 5,000 inhabitants who trade in tobacco and cacao; San Domingo Sinacantan, on the borders of Tabasco in the territory of the Zoques, with 2,500 inhabitants who employ themselves in the culture of silk, of which they weave shawls and other

similar fabrics, which are esteemed of a good merchantable quality, and are used in the country or adjacent states; Chiapa de los Indios; Tecpatlan; Ostoacan; Teopixca; Acapala; Capanabastla; Izcuintenango; San Fernando Guadalupe; and Simojovél.

Chiapas is represented to be rich in rivers which rise chiefly in the highlands towards the state of Tabasco and debouche into the Mexican Gulf. The Tabasco river or the Rio de Grijalva; the Usumasinta, the Chicsoi or the Santa Isabella;—the Machaquita, San Pedro, Dolores, Yalchitan, Chacamas, Zeldales, Yeixhijuat, Chatlan, and some others; the Pacaitún or Paicutun; the laguna de Chiapa; some mineral waters; and a valuable salt spring in the vicinity of San Mateo, enrich various portions of this fertile state, whose climate, especially in its higher regions, is said to be delicious and uniform. The number of the population of this state is not officially known. In 1831, a census made by order of the governor Ignacio Gutierrez, which however, did not include fifteen parishes, gave 118,775 inhabitants for the rest of the state. An estimate in a Mexican calendar of 1833 represents the number to be about 96,000, while the government calculation for a basis of representation in Congress in 1842, gives it 141,206, to which about 10 per cent. should be added to give the proximate population in 1850. The Indian tribes of the Zoques, Cendales or Zeldales, Teochiapanécos and Mames are still very numerous, and, of course, form the greater part of the population.

ANCIENT REMAINS IN YUCATAN AND CHIAPAS.

The physical description of these two States, presented in the preceding pages, will have satisfied the reader that they possess a prolific soil and an agreeable climate which would probably attract a large population had they been properly explored and developed by an energetic race. We are sustained in this belief by the fact, that in these States travellers have found the most remarkable remains of an advanced ancient civilization hitherto discovered on our continent. What has existed may exist again under the benignant influence of modern progress; nor is it improbable that as human interests direct the attention of maritime or emigrating nations towards the central portions of the western continent, Yucatan and Chiapas may again become the seat of a population even larger than that which thronged it during the palmy days anterior to the Spanish conquest.

Since the year 1840 three important works have been published in this country relative to these ancient remains of towns, temples, cities, idols and monuments. Two of these are due to the pen and pencil of Mr. John L. Stephens

and Mr. Catherwood, while the other and slighter production is the result of a hasty visit paid to Yucatan by Mr. B. M. Norman. These three publications, plentifully illustrated by accurate engravings of the ruins and remains, have been so widely disseminated throughout Europe and America that readers are already familiar with them. In the "long, irregular and devious route" pursued by Stephens and Catherwood, they "discovered the crumbling remains of *fifty-four ancient cities, most of them but a short distance apart*, though, from the great change that has taken place in the country, and the breaking up of the old roads, having no direct communication with each other. With but few exceptions, all were lost, buried and unknown, never before visited by a stranger, and some of them, perhaps, never looked upon by the eyes of a white man." Leaving Guatemala, the travellers encountered, in Chiapas, remarkable remains at Ocozingo and Palenque; and passing thence into Yucatan, in their second journey to those central regions, they explored and described the architectural and monumental relics at Maxcanu, Uxmal, Sacbey, Xampon, Sanacte, Chunhuhu, Labpahk, Iturbide, Mayapan, San Francisco, Ticul, Nochacab, Xoch, Kabah, Sabatsche, Labna, Kenick, Izamal, Saccacal, Tekax, Akil, Mani, Macoba, Becanthen, Peto, Chichen, in the interior; and at Tuloom, Tancar, and in the Island of Cozumel on the eastern coast.

The simple catalogue of these names, indicating the sites of ancient civilization in the midst of what is at present almost an unexplored wilderness and covering so wide a field of observation, will satisfy the reader that it is impossible to condense a satisfactory review of these architectural remains within the space that we are enabled to appropriate to antiquarian researches. The ruins of Palenque in Chiapas, and of Uxmal and Chichen in Yucatan, are, perhaps, the most wonderful of all that have been explored hitherto in this lonely region; and, while we regret that our duty to the living present will not permit us to dwell longer on the curious past, we shall, nevertheless pause, occasionally, as we pass through the Mexican States, to notice those remains which have either been visited by us personally, or are not described in books as accessible to all classes of enquirers and students as those of Messrs. Stephens, Catherwood and Norman. Mr. Stephens believes, after full investigation, that these towns and cities were occupied by the original builders and their descendants at the period of the Spanish conquest, and our own opinion entirely coincides with his reasoning and judgment. Those who desire a complete and conclusive illustration of this branch of the subject will find an excellent argument thereon in both of his publications.^[47]

In the first volume of this work we have given an account of the Mexican or

Aztec Calendar; and the proximate identity of the Yucatese or Mayan and Aztec Calendar led Mr. Stephens to the conclusion that both nations had a common origin. This argument is also important in considering the period of the occupation of the Chiapan and Yucatese edifices, inasmuch as we know that the Aztecs of Montezuma's period used the Calendar which we have already illustrated and described.

YUCATAN CALENDAR.

"Our knowledge of the Yucatan Calendar," says Mr. Gallatin,^[48] "is derived exclusively from the communications made by Don J. P. Perez to Mr. John L. Stephens, and inserted in the appendix to the first volume of this gentleman's Travels in Yucatan. It is substantially the same with that of the Mexicans, though differing in some important particulars.

"The inhabitants of Yucatan had, like the Mexicans, the two distinct modes of computing time, by months of twenty days, and by periods of thirteen days. They also distinguished the days of the year by a combination of those two series, precisely similar to that of the Mexicans. And their year likewise consisted of 365 days, viz., of eighteen months of twenty days each, to which they added five supplementary days; and also of a corresponding series of twenty-eight periods of thirteen days each, and one day over. The following table exhibits the names of the twenty days of the Yucatan month, with their signification, as far as it has been ascertained by Don J. P. Perez; and also the days of the Chiapa month as given by Boturini; and which, from the similarity of the names of several of the days, appears to have been in its origin nearly identical with that of Yucatan.

YUCATAN.		CHIAPA.	MECHOACAN.	NICARAGUA.	MEXICAN.
1 KAN	yellow	Ghanan	Inodon	9 Cipat	Cipactli
2 Chicchan	small	Abagh	Inic Ebi	10 Acat	Ehecatl
3 Quimi	death	Tox	Inettuni	11 Cali	Calli
4 Manik	wind ceasing	Moxic	Inbeari	12 Quespalcoat	Cuetzpalin
5 Lamat		LAMBAT	Inethaati	13 Migiste	Cohuatl
6 Muluc	union?	Mulu	Inbani	14 Macat	Miquiztli
7 Oc	palm of hand?	Elab	Inxichari	15 Toste	Mazatl
8 Chuen	board	Batz	Inchini	16 At	Tochtli
9 Eb	ladder	Enob	In Rini	17 Izquindi	Atl
10 Be-en		Be-en	In Pari	18 Ocomat	Itzcuintli
11 HIX	rough	Hix	Inchon	19 Malinal	Ozomatli
12 Men	a mechanic	Tziquin	Inthahui	20 Acato	Malinalli

13 Quib	wax	Chabin	Intzini	1 Agat	Acatl
14 Caban		Chic	In Tzoniabi	2 Ocelot	Ocelotl
15 Eznab		Chinax	In Tizimbi	3 Oat	Quauhtli
16 Ca-uac		Cahogh	Inthihui	4 Cozgacoatz	Cozcaquauhtli
17 Ajau	period of years	Aghual	Inixotzini	5 Olin	Ollin
18 Imix	maize?	Mox	Inichini	6 Topecat	Tecpatl
19 Yk	wind	Ygh	Ini Abi	7 Quiauvit	Quiahuitl
20 Akbal		Votan	Intaniri	8 Sochit	Xochitl

"The Calendar of the inhabitants of the independent kingdom of Mechoacan, who spoke the Tarasca language, appears to have been similar to that of the Mexicans; and the names of the days of their month as stated by Veytia, are inserted in the table. The names of the days of an ancient Mexican, or rather Toltec tribe, found in the province of Nicaragua, have also been inserted. This, as far as we know, is the extreme southeastern limit of the Mexican Calendar on the Pacific Ocean. That limit on the Atlantic or Gulf of Mexico may be traced as far as the islands opposite Cape Honduras (Herrera); beyond which the shores are still inhabited by the uncivilized Musquito Indians.

"The cycle of fifty-two years was also adopted in Yucatan, and the arrangement of the years was precisely the same as in that of Mexico, substituting only the names Khan, Muluc, Hix and Ca-uac, for Tochtli, Acatl, Tecpatl and Calli, as appears in the following table:

YUCATAN CYCLE OF 52 YEARS.				
	1st year.	14th year.	27th year.	40th year.
1	Khan	Muluc	Hix	Ca-uac
2	Muluc	Hix	Ca-uac	Khan
3	Hix	Ca-uac	Khan	Muluc
4	Ca-uac	Khan	Muluc	Hix
5	Khan	Muluc	Hix	Ca-uac
6	Muluc	Hix	Ca-uac	Khan
7	Hix	Ca-uac	Khan	Muluc
8	Ca-uac	Khan	Muluc	Hix
9	Khan	Muluc	Hix	Ca-uac
10	Muluc	Hix	Ca-uac	Khan

The Chiapan Cycle is also similar, substituting for the names Khan, Muluc, Hix, Ca-uac, those of Votan, Lembat, Be-en, Chinax.

11	Hix	Ca-uac	Khan	Muluc
12	Ca-uac	Khan	Muluc	Hix
13	Kahn	Muluc	Hix	Ca-uac

"But there was an essential difference respecting the series of the names and numerical characters of the days, as will appear by the following table, which shows the termination of the first year of the cycle, and the beginning of the next ensuing years.

Year 1 Khan	1st day of the year	1 Khan
1st of the Cycle	1st supplementary day	10 do.
	2d do.	11 Chiccan
	3d do.	12 Kimi
	4th do.	13 Manic
	5th do.	1 Lamat
Year 2 Muluc	1st day of the year	2 Muluc
2d of the Cycle	1st supplementary day	11 Muluc
	Last do.	2 Be-en
Year 3 Hix	1st day of the year	3 Hix
3d of the Cycle	1st supplementary day	12 do.
	Last do.	3 Edznab
Year 4 Ca-uac	1st day of the year	4 Ca-uac
4th of the Cycle	1st supplementary day	13 do.
	Last do.	4 Akbal
Year 5 Khan	1st day of the year	5 Khan
5th of the Cycle	1st supplementary day	1 do.
	Last do.	5 Lamat

"Don J. P. Perez positively states, that the fundamental rule is never to interrupt either of the series of names or of days. Thus, inasmuch as the last supplementary day of the first year of the cycle (1 Khan) is 1 Lamat; and as, in

the order of the days of the month, the day called "Muluc" immediately follows the day Lamat; the ensuing year 2 Muluc commences with the day 2 Muluc, in the same manner as the year 1 Khan commences with the day 1 Khan. It is the same with the other years; so that the first day of every year has the same name and numerical character as the year itself.

"Don J. P. Perez acknowledges that amongst the few mutilated remains of Indian manuscripts or paintings, he has not been able to discover any trace of an intercalation, either of one day every four years, or of thirteen days at the end of the cycle, though he presumes that they had indubitably either the one or the other.

"The Yucatan cycle of fifty-two years, differed in no other respect from that of the Mexicans. The combination of the two series of twenty and thirteen days is used in the same manner in both calendars for the purpose of distinguishing the days of the year.

"The Yucatecs differed materially from the Mexicans with regard to the time of the solar year, when their year began. Don J. P. Perez informs us, that the first day of the Yucatan year corresponded with the sixteenth day of July; and that this was the day of the transit of the sun by the zenith of a place which he does not mention. But he adds that, for want of proper instruments, the Indians had made a mistake of forty-eight hours. In point of fact, it is in the latitude of about twenty-one degrees and a half that the transit of the sun by the zenith occurs on the 16th of July; and Yucatan lies between the latitudes of about eighteen degrees and a half and twenty-one degrees and a half. To commence the year on the day of the transit of the sun by the zenith, is attended with the great inconvenience, that this commencement must vary from place to place, according to their respective latitudes. As Don J. Pio Perez counts every year as having 365 days, and without regard to the omitted bissextile days, it is clear that the day in the Yucatan calendar, on which the transit of the sun by the zenith of any one place occurs, would vary twenty days, or a whole Indian month, in the course of eighty years. This would create such confusion that, if it be a well ascertained fact, that the Yucatan year began on the zenith day, this renders it highly probable that the calendar was, like that of the Mexicans, corrected by an intercalation of thirteen days at the end of the cycle.

"The names of the eighteen months of the Yucatecos, together with such interpretations as Don Pio Perez has given us, their order and their correspondence with our year, new style, appear in the following table:

TABLE OF YUCATESE MONTHS.

1 Pop, Poop	Mat of Reeds	begins on 16th July, N. S.
2 Uo	Frog	" 5 August
3 Zip	Tree	" 25 "
4 Zodz	Bat	" 14 September
5 Zec		" 4 October
6 Xul	End	" 24 "
7 Dzeyaxkin	Summer	" 13 November
8 Mol	To unite	" 3 December
9 Chen	A Well	" 23 "
10 Yax	First	" 12 January
11 Zac	White	" 1 February
12 Quej	Deer	" 21 "
13 Mac	Lid, cover	" 13 March
14 Kankin	Yellow Sun	" 2 April
15 Moan		" 22 "
16 Pax	Musical instrument	" 12 May
17 Kayab	Song	" 1 June
18 Cumku	Noise	" 21 "
{Uayebhaab	Bed of year }	the 5 supplementary days}
{Xma kaba kit	Days without name}	from 11th to 15th July}

"The Mexicans counted only by cycles; they designated the termination of a cycle by a hieroglyphic representing a bundle of reeds tied up; and they sometimes designated, by an equal number of small circles, the number of cycles which had elapsed, since the beginning of their era corresponding with the year 1091. But the Yucatecos, besides their cycle of 52 years, had another, containing thirteen periods of twenty or twenty-four years each. These last mentioned periods were called *Ajau* or *Ahau*."

YUCATESE IDOL.
YUCATESE IDOL.

YUCATAN EDIFICE.
YUCATAN EDIFICE.

YUCATAN ALTAR.
YUCATAN ALTAR.

THE STATE OF TABASCO.

This State, one of the smallest of the confederacy, was, previous to the revolution, a province of the Intendency of Vera Cruz. It bounds eastwardly on the State of Yucatan; south on Chiapas and Oajaca; west on Vera Cruz, and northwardly on the Gulf of Mexico. Nearly the whole of Tabasco slopes gradually towards the sea, and is so extremely flat that it is often subject to inundations, and the communication from village to village and parish to parish cut off altogether, or only practicable in canoes. The State is consequently full of streams, though they are generally short and shallow, whilst their mouths are obstructed by bars and flats. The most remarkable of these streams are—the Pacaitun, or as it is sometimes called, Rio de Banderas; the Usumasinta which also passes through Chiapas; the Tabasco; the Chiltepec; Dos Bocas; Capilco; Rio de Santa Anna; Tonalá or Toneladas; Tancochapa or San Antonio; Usapanan and the Guachapa or Rio del Paso.

On the eastern boundary of Tabasco lies the Laguna de Terminos, which is fifteen leagues long and ten broad. In this inland sea are locked the beautiful islands of Laguna, Carmen, and Puerto Real; and, in the two passes by which the sea is reached from this lagune, twelve to thirteen feet of water are found in the larger, while but five and a half feet are obtained in the smaller, or pass of Puerto Real.

The climate of this State is excessively hot along the immediate coast of the gulf; nor is it very sensibly changed as the interior is reached, in consequence of the extreme flatness of the soil. During the prevalence of the northers the harbors

are exceedingly insecure; but these violent storms somewhat temper the heat and render the towns less sickly.

Tabasco is divided into three departments with nine parishes:

1st. The Department of Villa Hermosa with the districts of Villa Hermosa, Usumasinta, and Nacayuca. 2d. The Department of the Sierra with the districts of Teapa, Tacotalpa and Jalapa. 3d. The Department of Chontalpa with the districts of Macuspana, Cunduacan and Jalpa.

These are subdivided into 49 parishes; (23 of which are in the Department of Villa Hermosa, 10 in la Sierra, and 16 in Chontalpa;) besides these there are 543 haciendas and ranchos, or estates and farms; and, throughout the whole State there are 63 churches. The mass of inhabitants in Tabasco, as elsewhere in these southern states, is formed of Indians: and of the 70,000 people who are estimated to compose the population, it is probable that the majority is formed of the Mijes, Zoques and Cendales.

Cacao, coffee, pepper, sugar, tamarinds, arrow-root, palmetto and some tobacco are cultivated; while indigo and vainilla grow wild in the forests among groves of oaks, cedars, mahogany and ironwood. The extensive wildernesses of Tabasco are filled with game and wild beasts, and the streams are full of excellent fish. Bees abound in the depths of the forests and yield abundant supplies of wild honey and wax.

The capital of Tabasco is Villa Hermosa de Tabasco, or, as it is sometimes called, Villa de San Juan Bautista, which lies on the left bank of the Tabasco river twenty-four leagues from its mouth. It contains about 7,000 inhabitants, and is reached by vessels of light draft from the sea; but its chief commercial intercourse is carried on with adjoining states and with Guatemala. There are some other towns or villages worthy of mention; the principal of which are Usumasinta, Nacayuca, Tacotalpa, Teapa, Jalapa, Chontalpa, Jalpa, Cunduacan, Macuspana, Chiltepec, Santa Anna, Tonalá, Acalpa, Chinameca, Tochla, Istapa or Ystapangahoya, San Fernando, Tapichulapa, and Obsolotan.

CHAPTER II.

BOUNDARIES OF VERA CRUZ—RIVERS, LAGUNES, MINERAL SPRINGS, POPULATION, POLITICAL DIVISIONS, PRODUCTIONS, CATTLE, CITIES, TOWNS.—VERA CRUZ—ITS DISEASES—METEOROLOGICAL OBSERVATIONS AT—WATER FALLEN AT VERA CRUZ.—ORIZABA—ASCENT OF THE MOUNTAIN—MAGNIFICENT VIEWS—DIFFICULTIES—THE CRATER EXTINGUISHED—ELEVATION OF THE MOUNTAIN—DESCENT.—ANTIQUITIES IN THE STATE OF VERA CRUZ—RUINS AT PANUCO, CHACUACO, SAN NICOLAS, LA TRINIDAD—SMALL FIGURES.—PAPANTLA—DESCRIPTION OF THE PYRAMID.—RUINS AT MAPILCA

—PYRAMID AND TEMPLE AT TUSAPAN—ISLE OF SACRIFICIOS—MISANTLA—REMAINS NEAR PUENTE NACIONAL.—TAMAULIPAS—BOUNDARIES, RIVERS, LAGUNES, CLIMATE, POPULATION, PRODUCTIONS, TOWNS.—ANTIQUITIES OF TAMAULIPAS—TOPILA—RANCHO DE LAS PIEDRAS—SCULPTURE—REMAINS, ETC., ETC.

THE STATE OF VERA CRUZ.

PLAZA OF VERA CRUZ.

PLAZA OF VERA CRUZ.

The State of Vera Cruz lies under the burning sky of the tropics between $17^{\circ} 85'$ and $22^{\circ} 17'$ of north latitude; and $96^{\circ} 46'$ and $101^{\circ} 21'$ west longitude from Paris. It is comprised within a long but somewhat narrow strip of territory along the Gulf of Mexico, running from the mouth of the Tampico river, in the north, to the Guasacualco and the boundaries of Tabasco, on the south. Its length is 166 leagues; its breadth, from 25 to 28; and it is estimated to contain an area of 5,000 square leagues. It is bounded eastwardly by the Gulf; south by Tabasco; north by Tamaulipas; and west and south-west by Oajaca, Puebla, Mexico, Queretaro and San Luis Potosi. The eastern part of the State is generally level, low and sandy; but, further inland, it gradually rises as the traveller leaves the arid and burning wastes of the coast, until the country is broken into an uninterrupted series of lofty mountains and beautiful vallies.

The coasts of this State are rich in rivers, streams, inlets, and lagunes; but, unfortunately, they are either not navigable for any considerable distance, or are obstructed by bars at their mouths. Among these streams the following are chiefly to be noticed as of importance: The Rio Tampico, the Garzes, the Tuspan, the Cazones, the Tenistepec, the Jajalapam or Tecolutla, the Nautla, the Palmar, the Misantla, the Maguilmanapa, the Yeguascalco, the Actopan, the Chuchalaca, the Antigua, the Jamapa, the Rio Blanco, the San Juan or Alvarado, the Aquivilco, and the Gúasacualco which is a boundary stream between the States of Vera Cruz, Oajaca and Tabasco.

The principal lagunes in the State of Vera Cruz are:—The Laguna de Tamiahua, the largest on this coast of Mexico, being ten leagues long and eight leagues broad. It has two mouths in the Gulf;—one at the bar of Tamiahua, and the other, further south near the mouth of the small stream of Tuspan. Between these mouths lies the island of Tuspan; while the two islands of *Juan Ramirez* and *El Toro* are found in the lake or lagune itself. The next lagune in importance is that of Tampico, four leagues long and three broad; and besides this, there are

—the *Lagunas* de Mandingo, of Alvarado, (which is subdivided into eight smaller lagunes,) of Catemaico, Alijoyúca, and Tenango.

There are several mineral springs in this State, and at Atotonilco, near Calcahualco, in the district of Cordova, there are warm baths which are celebrated for their efficacy in nervous and rheumatic diseases. There are mineral waters also near the hacienda of Almárgos, in the district of Acayucam, and other warm springs near Aloténgo in the district of Jalanzingo, whose qualities have not yet been ascertained by chemical analysis.

The population has been estimated by recent writers at near 251,000; which distributed over the 5,000 square leagues will give about 50 inhabitants to the square league. According to our estimate in the chapter on population, the number may be set down at

JALAPA.
JALAPA.

270,000. The milder regions about Jalapa and Orizaba are more thickly peopled, than the comparatively sterile and sickly shores of the gulf. The population is composed of mixed races:—Creoles, Indians, Havanese, Foreigners, and a few Negroes.

The State of Vera Cruz is divided into four Departments and twelve districts, with 103 municipalities and 1,370 village jurisdictions.

1st. The Department of Jalapa, with two districts or cantons, viz:—1st, *Jalapa*, including the capital of that name,—thirty-one villages, fourteen haciendas and sixteen ranchos;—and 2d, *Jalanzingo*, with the towns of Perote and Jalanzingo, five villages, seven haciendas and thirty-three ranchos.

2d. The Department of Orizaba, with three districts or cantons: 1st, *Orizaba*, including the city of that name,—Sougolican, twenty-seven villages, six haciendas and fifty ranchos. 2d, *Cordova*, including the city of that name, and the towns of Coscomatepec and San Antonio Huatusco,—twenty villages, twenty-eight haciendas 237 ranchos,—and 3d, *Cosamaloapan*, with eight villages, five haciendas and forty-one ranchos.

3d. The Department of Vera Cruz with four districts or cantons: 1st, *Vera Cruz*, including the capital of that name, with Alvarado and Medellin, 21 haciendas, 149 estancias, and 600 ranchos. 2d, *Misantla*, with four villages, two haciendas, and thirty-four ranchos. 3d, *Papantla*, with thirteen villages, seven

ranchos and the hacienda de Norias. 4th, *Tampico*, with Tampico and Panuco,—seven villages, thirty-nine haciendas and forty-one ranchos.

4th. The Department of Acayucam, with three districts or cantons:—1st, *Acayucam*, with the adjacent Acayucam and San Juan Olúta, nineteen villages, twelve haciendas, twenty-seven hatos and eleven ranchos. 2d, *Huimanguillo*, with twenty-one villages, one hacienda and nineteen ranchos. 3d, *San Andres Tuxtla*, with the adjacent San Andres and Santiago Tuxtla,—two villages, one hacienda, thirty-four hatos, and eight ranchos.

It is impossible in a description of this rich and varied State to sum up with accuracy what it produces either naturally or by introduction from abroad, for its genial climate, changed by the elevation of the interior portions of the State, renders it capable of yielding the fruits, the flowers, the grains, the woods, the vegetables and the animals of the temperate as well as of the torrid zone. Tobacco, coffee, sugar, cotton, corn, barley, wheat, jalap, sarsaparilla, vainilla, mameis, papayas, pine-apples, oranges, citrons, lemons, pomegranates, zapotes, bananas, chirimogas, aguacates, tunas, pears, watermelons, peaches, apricots, guayavas, grapes; mahogany, ebony, cedar, oak, dragon-blood, tamarinds, palms, dyewoods, and a thousand other plants, trees, shrubs, cereals and parasites, spring almost spontaneously from the soil, and render the necessary labor of man almost insignificant. After the strip of sandy sea-shore has been passed, and the country begins gradually to rise, health and rich vegetation follow the traveller's footsteps. He beholds on every side magnificent forests filled with majestic trees and illuminated by the splendid colors of flowers and buds. In the midst of these solitary folds among the mountains, farms and plantations are opened, which gleam with the freshest verdure of cane or corn; while over the levels, innumerable herds of cattle are fed from the mere fulness of the land, and without the necessary tending either of shepherds or vaqueros. An idea of this State's richness in cattle may be formed from the following account of the number it possessed in 1831,—the district of Jalapa being excluded from the list, inasmuch as there were no returns for that year:—

291,055	neat cattle,
49,321	horses,
9,396	mules,
3,110	asses,
17,680	goats,
35,325	sheep;

the total value of which, together with the cattle product of the canton of Jalapa, cannot be less than \$2,000,000.

The principal cities, towns and villages of the State of Vera Cruz, are 1st, La Villa rica or La Villa Heroica de la Vera Cruz—the capital of the State; 2d, Tampico or Pueblo viejo de Tampico; 3d, Panuco; 4th, Tuspan; 5th, Misantla; 6th, Papantla. [On the road from the port of Vera Cruz to the western limit of the State, lie Paso de Ovejas, Puente del Rey or Puente Nacional, Plan del Rio, and El Encero, but these are small towns or villages of no great consideration.] 7th, Alvarado; 8th, Boca del Rio; 9th, Tlacotalpan; 10th, Cotastla; 11th, Talascoyan; 12th, San Martin Acayucam; 13th, San Andres Tuxtla; 14th, Santiago Tuxtla; 15th, Soconusco; 16th, Jaltipan; 17th, Chinameca; 18th, Orizaba; 19th, Cordova; 20th, Cosamaloapam; 21st, Aculzingo; 22d, Jalapa; 23d, Jalanzingo, and 24th, Perote.

The port of Vera Cruz lies in 19° 11' 52'' north latitude, and 98° 29' 19'' west longitude, from Paris, on a sandy plain,—interspersed with marshes,—which bound the Gulf of Mexico. Its unhealthiness is proverbial. From the month of May to that of November,—comprising the usual period during which the northers cease blowing,—the *vomito prieto*, or black vomit, prevails incessantly at Vera Cruz. None but natives of the town, or acclimated foreigners, are free from its attacks, and the frightful inroads it made among our troops, in the year 1847, will long be remembered in the history of our army and country. Time does not appear to have had any effect on this dreadful disease. Increase of population and sanatory precautions do not seem to abate its malignity; and the science of the ablest physicians is entirely at fault in dealing with it. Diarrhœa, dysentery and vomito are the most fatal and prevalent maladies at Vera Cruz; and, the latter disease, is reckoned to cause one-sixth of the whole mortality of the port.

METEOROLOGICAL OBSERVATIONS IN VERA CRUZ IN 1830.										
MONTHS	BAROMETER		THERMOMETER				HYGROMETER		WATER I	
	Highest	Lowest	Greatest Heat		Least Heat		Greatest Dryness	Greatest Humidity	Feet	Inche
			Far.	Reau.	Far.	Reau.				
January,	30 62	30 2	77 8	20 7	66 8	15 6	6	25	0	5
February,	30 49	30 2	79	21 4	67	15 8	10	10	0	0

			3		0					
March,	30 44	29 94	82 2	22 7	72 1	18 2	14	19	0	0
April,	30 48	29 99	84 2	23 6	72 4	18 3	14	16	0	0
May,	30 28	29 95	85 9	24 8	78 8	21 2	11	11	2	7
June,	30 28	30 3	87 7	25 4	78 8	21 2	10	11	1	9
July,	30 29	30 12	86 5	24 7	76 2	20 1	14	6	4	11
August,	30 33	30 15	86 5	24 7	78 8	21 2	11	12	2	11
September,	30 36	30 15	85 8	24 4	77 5	20 6	16	12	3	2
October,	30 37	30 9	86 0	24 5	75 2	19 6	18	16	0	8
November,	30 37	30 5	84 0	23 6	70 8	17 6	8	15	0	4
December,	30 53	29 98	81 2	22 3	66 6	15 5	15	17	0	0

BAROMETER.

Greatest elevation	30 62
Greatest fall	29 95
Mean height	30 20

THERMOMETER.

Greatest degree of heat	87 07	Far.	25 04	Reau.
Least degree of heat	66 06	"	15 05	"
Mean temperature	77 01	"	20 04	"

In eighty-five days of rain the hycetrometer marked a fall of water of seventeen feet one inch and four-tenths of an inch.

Table showing the fall of water at Vera Cruz in the years from 1822 to 1830, both inclusive:

Years.	Feet.	Inches.	Tenths.
1822	13	1	5
1823	15	8	9
1824	10	7	1
1825	20	6	4
1826 ^[49]	5	4	4
1827 ^[50]	21	2	8
1828	12	2	0
1829	23	2	3
1830	17	1	4

The majestic mountain of Orizaba, or Citlaltepctl, the "Mountain of the Star," is found within the limits of the State of Vera Cruz, and as it is somewhat renowned in all geographical descriptions of this continent, we shall insert the first authentic account of its ascent we have ever seen, which was prepared by Lieutenant W. F. Reynolds, of the United States Topographical Engineers, who, with some friends, reached the lofty peak whilst serving with our army in Mexico.

"The Peak of Orizaba," says he, "though situated nearly a hundred miles in the interior, is the first land beheld on approaching Vera Cruz from the gulf. Being visible nearly fifty miles at sea, it is the most important land mark to the sailor in these regions. While the command under General Bankhead, which was the first to march from Vera Cruz to the city of Orizaba, was 'en route,' in February, 1848, the mountain being constantly in view, a trip to its summit was frequently discussed; and after our arrival at that place, the marvellous stories told by the inhabitants only increased our desire to make the attempt. All agreed that the summit had never been reached, though several knew or heard of its being attempted. The difficulties to be encountered were represented as being perfectly insurmountable; craggy precipices were to be climbed; gullies, two thousand feet deep, it was said, were to be crossed; inclined planes of smooth ice were to be ascended; to say nothing of avalanches, under which, we were assured, all the rash party who made the daring attempt would surely find a grave. These extraordinary stories produced quite a different effect from the one anticipated, and the question was not who would go, but who would stay home. It was not, however, till the latter part of April that the weather was thought

favorable, and securing, for the proposed expedition, the sanction of the commanding officer, we made our preparations for overcoming all obstacles. Accordingly, long poles were prepared, shod with iron sockets at one end and hooks at the other, to assist in scaling precipices; ropes with iron grapnels were to be thrown over a projecting crag or icy point; rope ladders were made to be used if required; shoes and sandals with sharp projecting points to assist in climbing the icy slopes, were also bespoke;—in short, everything that was thought might be needed or would increase the chances of success, was taken along. The selection of a route presented some difficulty, different ones being recommended—those by San Andres and San Juan de Coscomatepec particularly. In order to decide between them, we endeavored to persuade some of the intelligent citizens who were acquainted with the country, to go with us. At first they consented, but as the time approached one after another declined, till finally, when the party assembled for starting, it was found we were to go alone. Then, as some inclined to one route and others to another, we concluded to reject all their recommendations, and go direct to the mountain, following the path taken by the Indians engaged in bringing down snow to the city, as far as the limits of vegetation, and from that point to go round the peak to the side that would present the best prospect for success.

"We left the city of Orizaba on the morning of the 7th of May, the party consisting of ten officers, including one of the navy, thirty-four soldiers, and two sailors serving with the naval battery, three or four Mexicans and Indians as guides, and enough pack mules to carry our provisions and equipments. Our expedition setting out during the armistice, it was thought advisable to procure a passport from the prefect of Orizaba to provide against exigencies. About six miles from the city of Orizaba we passed through the small Indian village of La Perla; the inhabitants were much frightened at our approach, but our passport soon quieted them, and when they came to know the object of our visit, they seemed to regard us as the greatest set of donkeys they ever saw, telling us very plainly that we could never reach the summit. Nothing daunted, however, we continued on, and immediately after leaving the village commenced a rapid ascent, and began to enjoy views which in themselves would have amply repaid us for our trouble. We encamped for the night at an elevation of 7,000 feet above the level of the sea; the night was clear and bracing, but not cold enough to be uncomfortable. The next morning was beautiful and clear, and after an early breakfast, we were again in motion. The scenery was truly sublime, and ascending one mountain after another, valley after valley appeared in view; hills which at first seemed mountains, seemed gradually sinking before our feet, and

the range of vision constantly extending, we could not help making frequent halts to admire scenes which cannot be surpassed, and which at every successive turn broke upon our sight with redoubled magnificence and grandeur. We were now in the region of pines and northern plants; the old familiar oak, the birch, and trees unknown to the lower countries, were around us; the heavy undergrowth had disappeared, and we could *almost* imagine ourselves in our 'dear native land.' Cultivation does not extend up as high as we expected to see it; we passed the upper limit about 8,000 feet elevation. About 12 o'clock, and at an elevation of rather more than 10,000 feet, the guides reported that the mules could go no farther, and not knowing anything of our route beyond, we were compelled to encamp for the night. A brother officer and myself, however, being on horse-back and feeling comparatively fresh, determined to go forward and explore. We concluded that it would not do to stop where we were, but the mules with light loads could go still higher. Accordingly, next morning we again started, four or five of us going in advance to select a good place for encampment, and also to explore the best route for the final ascent. We selected our camp on the verge of vegetation, and went forward by routes far above the line of eternal snow. Under shelter of a rock, and far above that line, some of the party found a rude cross, decorated with paper ornaments and surrounded by tallow candles. Its history we were unable to learn, but it gave rise to many reflections. Who placed it there? when was it erected? and what event did it record? were questions asked, but not answered. During the trip several parties of Indians passed us, who make a regular business of bringing down snow on their backs to the citizens of Orizaba. The cross was probably erected by some of them. On our return, we found all our baggage brought up to the new encampment, notwithstanding it had been pronounced impossible, and on comparing notes, selected the route which seemed most practicable, and prepared for the ascent in the morning. The night was clear and cold, the thermometer falling below the freezing point; a heavy frost and frozen water reminding us forcibly of 'auld lang syne.' While sitting round our camp-fires this evening, it was discovered that there were two flags in the party; the sailors not knowing that one had been brought along, had carried materials and manufactured one in the camp. It was proposed to get up a rivalry as to which flag should be planted first, but we came to the conclusion at last, that should the summit be reached, the honor should be equally shared. As night came on, we enjoyed a most magnificent sight; the clouds gathered round the foot of the mountain so as to entirely obstruct our view, while the distant lightning flash, darting from cloud to cloud, was visible far beneath our feet; the sky overhead being bright and beautiful. We were encamped at an elevation, according to the

barometer, of 12,000 feet, about double that of the highest peak of the White Mountains—while the summit still raised its snow-white head above us to a height nearly equal to that of Mount Washington above the sea, and seemed to frown upon the pigmies who dared to attempt to scale its giddy, and, as yet, unascended height. At daylight on the morning of the 10th of May, we were again in motion; many of the party had already given out, so that there were but twenty-four persons to start on the final journey. In a few minutes we were at the foot of the snow, and taking the route over which there seemed to be the least of it, passed for half or three-fourths of a mile over loose volcanic sand. On measuring the slope of this, I found it to be 33°. It was by far the most difficult portion of our ascent;—sinking up to our knees in sand, we seemed to go back about as far as we stepped forward, while the rarefied condition of the atmosphere made exertion painful in the extreme; indeed, during the whole of this day's ascent, it was impossible to advance fifty paces without stopping to take breath. When not exerting ourselves, we could breathe with comparative ease; but the moment we moved, we were reminded of our great elevation. I can only compare the sensation to that felt by a person who, after running at the top of his speed, is ready to sink down from sheer exhaustion.

"At length, however, we reached firm rock, and it was quite a relief to be able once more to climb with our hands and feet. But we were yet far from the point at which we were aiming, and before reaching it were to be many times sorely disappointed. A projecting crag, far above, would be hailed as the summit; step after step the weary body was dragged along, until at length it was reached; but, once there, it was found to be but the base of another still higher;—this, too, being overcome, another was discovered above. Thus, time after time, were our expectations crushed, till hope seemed almost to have forsaken us, and one after another dropped behind in despair. But—'advance'—was our motto, and onward we pushed, until at length the efforts of some of the party were crowned with success, and they dropped exhausted on the brink of the crater.

"The crater is nearly circular and variously estimated by different members of our troop at from 400 to 650 yards in diameter. We all estimated the depth at 300 feet. The sides are nearly vertical, and show strong and unmistakeable signs of fire, looking like the mouth of a gigantic furnace.

"At the foot of this perpendicular wall was quite a bank of sand or *débris*, which had fallen from the inner surface of the rock, indicating the great length of time since the volcano had been extinct. Indeed its fires were perfectly dead, for the bottom of the crater was covered with snow. Humboldt says its most violent eruptions were in 1545 and 1566,—nor have I seen a record of an eruption since.

"As I desired to test Humboldt's altitude, I had taken the precaution to be as well prepared as circumstances would admit, and accordingly had carried with me the best barometer I could get, which, from previous calculations, I deemed capable of indicating a height of from 300 to 400 feet higher than that given by him. I had, also, provided myself with a spirit-lamp and thermometer, for the purpose of taking the temperature of boiling water; but, on the march, the bottle containing the alcohol was broken and the spirit entirely lost. I therefore determined to test the combustible qualities of whiskey. One of my first objects after reaching the summit was to make observations; but, on preparing the barometer, the mercury sank at once *below* the graduation.

"I estimated the distance between the lowest line of graduation and the top of the mercury at two-tenths of an inch, which gives,—with corresponding observations in the city of Orizaba at the same hour,—an elevation of 17,907 feet, and makes it the highest point on the North American Continent. I do not think I could have been far wrong in my estimate, as the means of comparison were before me; but, even supposing I was mistaken one-twentieth of an inch, we still have an elevation of 17,819 feet, 98 feet higher than Popocatepetl, which is usually considered the highest point,—5,400 metres, or, 17,721 feet, as given by Humboldt.^[51] The temperature was just below freezing point. My attempt to burn whiskey failed. Since my return to the United States, I have observed that Humboldt states that Mr. Ferrar measured Orizaba, eight years before his arrival in Mexico, and gave the mountain an elevation of 5,460 metres or 17,885 feet. Humboldt's measurement, made from a plain near Jalapa, is 155 metres less, or 17,377 feet in all. It will be seen that my determination agrees very nearly with that of Mr. Ferrar.

"We remained on the summit about an hour,—planted our national banner and saluted it with three hearty cheers. The day was clear, but the atmosphere thick and smoky, so that we did not enjoy the views we had hoped for; but as we believed ourselves to have been the first who ever looked into the crater, we were amply repaid for our trouble.

"The descent was by no means so difficult as the ascent; a slide on the snow or sand carried us hundreds of feet down a space which had required many weary steps to ascend. About dark we arrived at our encampment, highly delighted with our trip, though much exhausted. All who made the final attempt were more or less affected either with violent headaches, nausea, and vomiting, or bleeding at the nose. The veils which we provided for our journey did good service, but the face, and particularly the lips, of all who reached the summit,

became so extremely swollen and cracked as to confine them to their rooms for several days.

"The difficulty of the undertaking had been greatly magnified;—none of our preparations, excepting veils, were necessary. The sand is the most serious obstacle to be overcome, and by taking a more circuitous route from our last encampment, this might have been avoided. All that is required is patience, perseverance and a physical constitution capable of sustaining fatigue."

ANCIENT REMAINS IN THE STATE OF VERA CRUZ.

During the sojourn of Mr. Norman in Mexico, in 1844, as described in his "Rambles by Land and Water," he made an excursion to visit the ancient town of Panuco, where he was received with the greatest kindness and hospitality by the white and half-breed inhabitants. His route lay along the banks of the river, and across the prairies: the common road being only a bridle path through the forest which is never travelled but with the greatest caution and watchfulness. Here, as in the State of Tamaulipas, he visited the Indian huts that lay in his way; but it was quite impossible to convince the credulous children of the wilderness that the acquisition of gold was not the real object of his visit;—and this circumstance may account for the fact that he obtained from them so little information respecting the neighborhood.

Panuco, an old town of the Huestecos, which is subject to occasional inundation during the rainy season, is the only important settlement above Tampico, on the Panuco river, and contains about four thousand inhabitants. It is beautifully seated on the banks of the stream, in the State of Vera Cruz, about thirty leagues from Tampico by water and fifteen by land. In its vicinity, scattered over an area of many miles, are ancient ruins, whose history is not only entirely unknown to the inhabitants, but seems not to excite their interest or curiosity. Mr. Norman could not discover the slightest trace of a tradition on the subject amongst the neighboring people, though he diligently sought it from every reliable source. Several days were employed by him in explorations, and his toil was occasionally rewarded by the discovery of strange and novel objects. Among these was a handsome block or slab, seven feet in length, one foot in thickness, and two and a half in average width. Upon its surface was beautifully wrought, in bold relief, the full length figure of a man in a loose robe, with a girdle about his loins, his arms crossed on his breast, his head encased in a close cap or casque somewhat resembling a helmet without the crest, while his feet and ankles were bound with the thongs of sandals. The edges of this block were ornamented with a plain raised border, about an inch and a half square. The

figure is that of a tall athletic man of fine proportions, whose features are of the noblest class of the European or Caucasian race, and the execution of the sculpture was equal to the very best that the traveller found among the wonderful relics of the country. It was found lying on the side of a ravine, resting upon the dilapidated walls of an ancient sepulchre, of which nothing now remains but a loose pile of hewn stones. It was more than four feet beneath the present surface of the ground, and was brought to light in the course of excavating which revealed a corner of the slab, and the loose adjacent stones that had been bared by the rush of waters in the rainy season, while breaking a new and deep channel to the river. The earth that covered the slab and sepulchre had not been heaped by the hand of man; but was the natural accumulation of time, and many years must have been requisite to bury it so deeply.

Three leagues south of Panuco, there are other ancient Indian remains which are known as the ruins of Chacuaco, and are represented as covering an area of three square leagues, all of which were comprised within the bounds of a large city; we should mention also the ruins of San Nicolas, five leagues south-west; and

AZTEC FIGURES IN CLAY.

those of La Trinidad, about six leagues in nearly the same direction. Besides these, there are other ruins of which the traveller was informed, situated at a still greater distance, all of which present the same general features as those already described, and probably belonged to the same period, or were built by the same race. The whole region is alleged to be full of these memorials of the number, power and wealth of the ill-fated nations that once dwelt and worshipped on the eastern slopes of the Mexican Cordilleras.

Domestic utensils made of the ordinary pottery of the country, but skilfully and even artistically formed, have been exhumed from among these ruins of ancient cities; and in the course of Mr. Norman's explorations he unearthed two singular and grotesque images which probably figured in the idolatrous worship of the Indians. Our traveller found that similar images were used by the Indian women of the present day, who suspended them about their necks as talismans, and especially relied on them in seasons of sickness and danger. The images referred to are hollow, with a small aperture near one of the shoulders, and are

filled with balls as large as a pea, which are supposed to have been made of the ashes of victims sacrificed in former days to the gods. We have ourselves seen numbers of these earthen figures in the valley of Mexico, where they are vulgarly known as "Mexican's Idols." Travellers have usually classed them among the *Dii Penates* or household gods of the Aztecs or Toltecs, but we have regarded them either as the ornaments of a primitive people or as the dolls and playthings of their children. In our plates of antiquities discovered in the valley, several figures are to be found which we think belong unquestionably to this class.

PYRAMID OF PAPANTLA.

Sixteen leagues from the sea and fifty-two north of Vera Cruz, on the eastern slope of the Cordilleras, lies the village of Papantla, in the midst of plains which are constantly fertilized by streams that descend from the mountains. It is the centre of a remarkably rich agricultural district, capable of producing the most luxuriant crops of pepper, coffee, tobacco, cotton, vainilla, sugar and sarsaparilla, and abounding in all varieties of valuable woods; but the heat and maladies of the burning climate prevent the whites from venturing to till so dangerous a district. Accordingly we find that this Indian village has hardly a single Spanish inhabitant or visitor except the priest and the traders who come from the coast to traffic their foreign goods for the products of the aborigines. Two leagues

PYRAMID OF PAPANTLA.

from this secluded hamlet, lie spread over the plain, the massive ruins of an ancient city, which in its palmy days was more than a mile and a half in circuit. It is a matter of great regret that these relics have never been sufficiently explored, drawn and described. The most satisfactory account that we possess of them is that given in the "Voyage Pittoresque et Archeologique" of Monsieur Nebel, who visited them several years ago, and has sketched the beautiful pyramid represented in the plate, which is unquestionably one of the most perfect and symmetrical relics of antiquity within the present limits of the republic. Time has done its work upon this remarkable remain; and trees, plants and vines, which grow so rapidly in this teeming climate, have sprung among its joints and stories.

The Indians of the neighborhood call this pyramid "El Tajin;" it consists of seven bodies, stages or stories, each of which rises at the same angle of inclination, and is terminated by a frieze and cornice. It is constructed of sandstone beautifully squared, joined and covered with hard stucco, which appears to have been painted. The pyramid measures one hundred and twenty feet on every side at its base, and is ascended by a stair composed of fifty seven steps, each measuring one foot in height, and terminating at the top of the sixth story. This stairway is divided in three places, by square recesses two feet in depth, resembling those which perforate the friezes on each of the stories. The stair ends at the top of the sixth story, and the seventh, which seems to be in ruins, is hollow, and was probably the shrine wherein sacrifices were offered before the image of the god to whom the pyramid was dedicated. Monsieur Nebel does not state the height of this edifice; but as he gives the elevation of each of the fifty-seven steps, we may calculate that the summit of the shrine is at least sixty-six feet above the base.

ANCIENT HEADS MADE OF CLAY.
ANCIENT HEADS MADE OF CLAY.

MAPILCA.
MAPILCA.

A few leagues from Papantla, near an Indian rancho called Mapilca, Mr. Nebel found pyramids, sculptured stones, and the ruins of an extensive city, which it was impossible for him to examine in consequence of the thick vegetation with which they are covered in the dim recesses of the forest. The artist was alone in the wilderness, and unaided except by a few indolent Indians who were indisposed to further his researches. The stone, which is presented in the annexed drawing, is twenty-one feet long, and of a close grained granite; the figures, carved on its surface, differ from the ancient sculptures found on this side of the Cordilleras, and resemble those found in Oajaca, more than any others in Mexico. Mr. Nebel caused an excavation to be made in front of this relic, which he supposed had once formed part of an edifice, and at some distance below the surface he struck upon a road formed of irregular blocks, not unlike the old Roman pavements.

TUSAPAN.
TUSAPAN.

About fifteen leagues west from Papantla, in a small plain at the feet of the eastern Cordillera of Mexico, are the remains of Tusapan, which is supposed to have been a city of the Totonacs. The vestiges of this little Indian city are almost obliterated, and the only very significant relics are the pyramidal edifice exhibited in the annexed plate, and a singular fountain, a drawing of which is given in the work of M. Nebel.

The pyramid, built of stones of unequal size, extends thirty feet on each of its sides at the base, and the summit of its single story is reached by a flight of stairs. Upon the platform of this base a square tower is erected, which is entered by a door whose posts and lintel, as well as the friezes of the edifice, have been

elaborately carved. In front of the door, within the tower, stands the pedestal of the ancient divinity, but the idol itself has been destroyed. The interior of this apartment is twelve feet square, and its ceiling, like the external roof, terminates in a point.

Around the pyramid are scattered masses of stones, sculptured into the images of men and various animals; and from the inferior manner in which the carving on these objects is executed, we may judge that this religious temple was not the most celebrated architectural or artistic work of the ancient inhabitants.

The fountain which we have already mentioned is a single female figure in an indecent squatting attitude, *nineteen feet high*, and cut from the solid rock. The remains of a pipe which conveyed the water to it, are still visible behind the head, and the liquid passed through the body of the gigantic image until it was discharged beneath into the basin or canal, by which it was carried to the neighboring town. The Indian tradition, as recounted by Nebel, states, that the ancient inhabitants of this spot, abandoned it, in consequence of the unfertility of the soil and the failure of the streams, and that they took refuge in, or united themselves with the occupants of Papantla.

ISLAND OF SACRIFICIOS.

At the period of the Conquest of Mexico, this small island, which lies a few miles from the present city and port of Vera Cruz, and under whose lee is found the best anchorage on the Eastern Coast for vessels of war, was unquestionably a spot sacred to sacrifice and burial.

But no one seems to have examined this island, with a truly antiquarian spirit, until it was visited in 1841, by M. Dumanoir, who commanded a French vessel of war which was then anchored at the island. Previous to this time it had been trodden by thousands of idle sailors and landsmen who raked its surface for the Indian relics of pottery and obsidian which lay scattered in every direction; and, consequently there was little of value to be discovered above ground. Accordingly, Monsieur Dumanoir undertook to make suitable excavations, and, in the centre of the islet he discovered various sepulchres, in which the skeletons were found in a state of excellent preservation. Besides this, his trouble was rewarded by the exhumation of large numbers of clay vases, covered with paintings and etchings, together with idols, images, collars, bracelets, arms, teeth of dogs and tigers, and a beautiful urn carved either in white marble or in the alabaster which abounds in the neighborhood of Puebla.

MISANTLA.

About thirty miles from the town of Jalapa, on a ridge of mountains in the canton of Misantla, rises the Cerro or hill of Estillero, near which there is a precipitous mountain on whose narrow strip of table land at the summit, were discovered in 1835, the remains of an extensive ancient city. The site of this town is perfectly isolated. Steep rocks and deep ravines surround the mountain upon which it was built, and beyond these dells and precipices there is a

ANCIENT VASES AND VESSELS. ANCIENT VASES AND VESSELS.

lofty wall of hills from whose summit the sea in the neighborhood of Nautla is distinctly visible. The table lands upon which the ruins are found is only approachable by the gentler declivities in the direction of the hill of Estillero; and, at all other points, the lonely eminence appears to have been sundered from the surrounding regions by some volcanic convulsion.

MISANTLA. MISANTLA.

As the mountain plain on the summit is approached, the traveller first discovers a broken wall of massive stones, feebly united by cement, which seems to have served for the boundary of a circular *plaza* or area in whose centre rises a pyramid eighty feet high, forty-nine feet broad, and forty-two deep. It is divided into three stories or stages, and along the sloping sides of the lower and broadest terrace, a stairway leads to the first offset. The second stage is ascended by a stair at the side, and the top of the third is reached by steps niched into the corner of the pyramid. In front of the edifice, on the second story, are two pilastral columns, which it is supposed may have been portions of the stairway; but this part of the *teocalli*, and its upper story are so wildly overgrown with trees and tropical vegetation that the outline of the structure is greatly obliterated. On the summit, a gigantic tree, has sent its roots deep into the spot which was doubtless once the shrine of the Indian temple.

Beyond the wall of the circular area in which this edifice is placed, are found the remains of the city or town, extending nearly three miles north in a straight line. The foundations of all the houses are still distinctly traceable. They were built of large square stones, and are separated by streets at the distance of about

three hundred yards from each other. In some of the blocks of buildings the walls are yet standing, at a height of between three and four feet above the level of the ground. South of the city are seen the relics of a low narrow wall, by which it was defended in that direction;—and north of it there is a tongue of land, jutting out towards the precipitous edges of the mountain, whose centre is occupied by a mound which the explorers have supposed to be the ancient cemetery of the inhabitants. On the left acclivity of the slope by which the town is approached are twelve sepulchres, seven feet in diameter, and as many high, in which several bodies were found, parts of which were in good preservation. The walls of these tombs are constructed of cut stone; but the mortar that probably once joined them, has entirely disappeared. Several erect and sitting figures, carved in stone, were discovered on the site of this city, and two blocks were found, filled with hieroglyphic characters. Numbers of vases and utensils, were also unearthed; but they were carried to Vera Cruz, and all trace of them has been subsequently lost.

[52]

REMAINS NEAR PUENTE NACIONAL.

About a league and a half from the Puente Nacional, or National Bridge, to the left of the high road in the midst of a dense forest, and near the banks of the stream known as the Rio del Puente, Don José Maria Esteva found some interesting remains of antiquity in November of 1843. They had been visited in 1819 or '20, by a priest, named Cabeza de Vaca, who was then curate at Puente Nacional, but from that period until 1843, they had been entirely lost sight of. The temple or teocalli, is situated on the top of a small mount, elevated about one hundred and fifty feet above the level of the stream, which runs at its feet. In consequence of the inequality of the surface of the soil, the edifice is thirty-three Spanish feet high, on some of its sides, and forty-two on others. It fronts towards the east, and its platform, or upper level, is reached by a stairway of thirty-four steps, so steep as to be almost perpendicular to its base. The platform is forty-eight Spanish feet broad, and seventy long. The semi-circumference of the base is stated to be one hundred and six feet. The edifice is surrounded by six stairways, one foot broad, and the distance between each step or stage of the body of the teocalli, is about seven feet high nearest the base, their height diminishing, however, as you ascend to those nearest the platform. The whole structure is built of lime, sand and large stones taken from the bed of the river, and although shrubs have grown both on the platform and on the stairways, this interesting relic of antiquity has been so completely protected, that its form is still perfectly preserved. At first sight the edifice would seem to be perfectly solid, yet upon examination it has been found to be hollow, and that its ancient

entrance was from the west. This entrance, however, is so small that notwithstanding the efforts of laborers who were employed by the explorer to clear the fallen rubbish and open a path, they were unable to penetrate the whole of the interior chambers. The short time they were enabled to devote to this work, and the fear of the Indians to encounter wild beasts and serpents in the interior of the temple, deterred Señor Esteva from further efforts, and thus, perhaps, one of the most perfect remains of antiquity on the east coast of Mexico is still very inadequately described.^[53]

PUENTE NACIONAL.
PUENTE NACIONAL.

THE STATE OF TAMAULIPAS.

This State was known, previous to the revolution, as the Itendencia de San Luis Potosi, and included the colony of Nuevo Santander. It is now bounded on the north by the North American State of Texas; on the north-west by the Mexican State of Coahuila; on the west by the States of New Leon and San Luis Potosi; on the south by San Luis Potosi and Vera Cruz; and, on the east, by the Gulf of Mexico. The breadth of the State varies from twelve to fifty-five leagues.

The coast of Tamaulipas is more than three hundred and fifty miles in length, and is fringed with lagunes, varying from four to eighteen miles in width, which are divided from the gulf by barriers and banks of sand. The shallowness of the shores along the whole of this coast, and the dangerous bars which choke the mouths of the rivers, render the navigation difficult and dangerous for vessels of almost all classes. In the northern part of the State, in the neighborhood of the Rio Grande, the country is comparatively level. South of these high plains, however, and some distance in the interior, the land is varied by a succession of mountains, hills and vallies, which gradually slope eastwardly until they are lost in the flats and sands of the sea coast. The Cerro de Martinez, the Cerro de Xeres, the Cerro del Coronel, and the mountain ridges, or sierras, de la Palma and del Carico, are the most remarkable elevations. The land is well watered. Fine vallies extend along the Rio del Norte or Rio Grande, the Tigre, Borbon, Panuco and Dolores. On the coast are found the lagunes of La Madre, Morales and Tampico.

The climate of the interior of Tamaulipas is mild and healthy; but on the coast an intense heat prevails during the greater part of the year, and, combined with

the rank vegetation and moisture, produces diseases similar to those which scourge the adjacent shores of Vera Cruz. As soon as the northers begin to blow, all nature—animal and vegetable—is refreshed by the grateful change; but the hot season generally recommences in March, and soon spreads miasma and death throughout the whole of the low lands.

The population of Tamaulipas,—consisting chiefly of Meztizos and Indians,—was estimated by the Mexican Calendar of 1833, at 166,824, who were divided among three departments and eleven districts or cantons. In 1842 the population, as stated in the estimate for a congress, was 100,068; and if to this we add ten per cent. for the estimated increase in seven years, we shall have 110,074 in 1850.

The chief productions and the indigenous plants are similar to those found in the State of Vera Cruz; and considerable trade is carried on with the interior—especially with the States of San Luis Potosi, Zacatecas, and Queretaro,—in mules, oxen, horses, honey and wax. The coasting and foreign commerce is conducted principally in the ports of Tampico de Tamaulipas and Matamoros. From these places, large quantities of European and North American manufactures, enter the middle and northern States of the republic. Queretaro, San Luis, Nuevo Leon, Coahuila, Zacatecas, Jalisco, Durango, Chihuahua and Sonora are all benefitted by this trade in a greater or less degree; and the Panuco, Rio Grande and other streams are all availed of partially for this interior trade as far as they are navigable. At Soto la Marina an important smuggling business was long and vigorously carried on.

The capital of this State is VICTORIA, formerly SANTANDER, a town of 12,000 inhabitants. TAMPICO DE TAMAULIPAS, on the northern bank of the Panuco, which enters the Mexican Gulf five miles below the town, is the principal commercial port of the State. Its bar is dangerous and its harbor considered unsafe. Large vessels cannot approach the town, which is situated among extensive marshes. It is visited almost every year by the yellow fever; yet its foreign commerce is extensive and appears to be increasing.

SOTO LA MARINA is a small village and haven at the mouth of the river Santander, on its left bank. It is composed chiefly of Indian huts, and contains about 3,000 inhabitants.

MATAMOROS lies on the right bank of the Rio Grande or Rio Bravo del Norte, at the distance of ten leagues from its mouth. It contains about 10,000 inhabitants, who have become well acquainted with the people of the United States during the recent war. The climate of Matamoros is hot and sickly, like that of Tampico or Vera Cruz; but as the river upon which it lies is perhaps the

most important in Mexico, and has proved navigable by steamers for a considerable distance in the interior, it is probable that this place will become the depot of a large and valuable commerce destined for the supply of the northern States of the Mexican confederacy. By the treaty of 1848, the Rio Grande became the boundary between large portions of the two republics; and as the intervening country between the Nueces and the Rio Grande is not considered at present attractive for agricultural purposes, it is likely that it will long continue unoccupied and unsettled, thus leaving the whole of our commerce to be conveyed to Matamoros, or to our own neighboring settlements on the opposite shore, for distribution throughout the valley of the Rio Grande.

TAMPICO. TAMPICO.

The other towns and villages in Tamaulipas worthy of note, are Altamira, Horcasitas, Coco, Escandon, Llera, Santillana, Padilla, Hoyos, Guadalupe, Reinos, Camargo, Mier, Revilla, the most important of which lie on the margin of, or near, the Rio Grande.

ANCIENT REMAINS IN TAMAULIPAS.

The only remains of Indian architecture and civilization of whose existence we are aware, are those described in the small work published by Mr. B. M. Norman in 1845, to which we have already alluded, entitled "Rambles by Land and Water or Notes of Travel in Cuba and Mexico." This gentleman's notices of the antiquities in this region are exceedingly brief, sketchy and indefinite, nor are the illustrations with which his text is accompanied, calculated to convey more vivid pictures of the relics he visited or discovered in the course of his investigations along the margins of the Panuco.

Departing from Tampico, in March, 1844, he ascended that river in a canoe, paddled by an Indian, and before nightfall, on the second day of his primitive voyage, reached Topila creek, three miles from the mouth of which he landed at a *rancho* or cattle farm, belonging to Señor Coss, of Tampico. Five miles from this spot, lying to the eastward of another *rancho*, he found several considerable mounds, one of which was more than twenty-five feet high and of a circular form. At its sides, a number of layers of small flat well hewn stones were still to be seen; while scattered about were many others of larger size and various shapes. All were perfectly plain or unadorned, and had apparently been used for

the door posts and lintels of edifices.

On the following day, the traveller visited the *rancho de las Piedras*, distant about two leagues and a half in a southerly direction from the bank of the Topila. Passing through a dense wilderness, he reached after much toil, an elevated table land or plateau, near a chain of hills running through this section of country and known as the Cerro de Topila. Here he found more scattered stones which had once formed parts of buildings; while, further on, he discovered several mounds, whose sides were constructed of loose layers of smooth and uniform blocks of concrete sandstone. Most of these layers, had, however, fallen from their places in the *tumuli*, and were heaped in masses near their base. About twenty of these mounds, lay contiguous to each other, varying in height from six to twenty-five feet, some being circular and others square. The principal elevation in this group of pyramids covers an area of about two acres, and at its base, Mr. Norman discovered a cylindrical stone slab seven inches thick, four feet nine inches in diameter, and pierced through the centre, lying upon the top of a circular wall whose top was level with the ground. On removing this stone he found a well filled up with broken stones and fragments of pottery. The upper portion of the slab bore evidence of having been originally sculptured, but the tracings of the chisel were so much worn by time and seasons that they could not be drawn with accuracy. On the top of the tumulus, in front of which this well was discovered, grew a wild fig tree, whose gigantic height of more than an hundred feet, indicates the great age of the work and the long period of its abandonment.

The walls of the adjacent minor mounds had all fallen inward, from which the traveller concluded that they had been used for sepulture; but he does not seem to have taken the time or trouble to verify this conjecture by personal explorations. The ground, for several miles around, was strewn with loose hewn stones of various shapes, and broken fragments of pottery, which had unquestionably formed parts of domestic utensils. Fragments of *obsidian*, which had no doubt been the knives and weapons of the former inhabitants of this spot, were also plentifully scattered about, and every indication existed of a dense population in the by gone days. These ruins are placed by Mr. Norman in $98^{\circ} 31'$ west longitude and $22^{\circ} 9'$ north latitude.

But the remains of edifices, pyramids and tombs were not the only relics found by the traveller in these dense forests bordering the Atlantic coast. The Indians who once dwelt in this district, like the Aztecs, Zapotecs and Yucatese had evidently devoted themselves to sculpture; but whether for the purpose of simple adornment or for idolatry, there are no facts to apprise us with certainty. The most remarkable relic found by Norman, was a large head, beautifully cut in

fine sandstone, of a dark reddish hue, which abounds in the neighborhood. The face stands out in bold relief from the rough block, as if it had been left unfinished, or as if it was originally designed to occupy a place among the ornamental portions of an edifice. The industrious traveller caused this object to be borne, with others, to Tampico, and has deposited it in the collection of the New York Historical Society. Other stones, of a somewhat similar character, attracted his attention, but the most extraordinary sculpture he has described in his work is that to which he assigns the name of the American Sphynx. It is the image of a gigantic turtle, with the head of a man protruding boldly from beneath its carved and curving case. The back was correctly and artistically wrought, and all the lines of the scales were neatly cut in exact proportions. There were also in many parts fainter lines, shewing that the peculiar and graceful arabesques which are wrought by nature on the shell of this amphibious animal, had not been overlooked by the artist. This huge figure, raised on its four legs, was placed upon a large block of concrete sandstone. All its parts were equally true to nature. It was much mutilated, and the human head had been especially injured, but not sufficiently to obliterate the artistic workmanship with which it had been originally chiselled.

The place where Mr. Norman found these remains had evidently been the site of a large city; and, proceeding with his excavations among huge masses of earth or stones of every size and shape, he was, at length, rewarded by the discovery of another ancient figure. It was merely a human face, in full relief from the block, which was entirely cut away from the top and bottom, but left in two nearly circular projections at the sides. The ornaments on the head are peculiar, and are formed of three balls, with slight indentations, connected together by a band running across the top of the cerebrum and terminating at the sides just above the gigantic ears, which are nearly half the size of the face. The features and contour of the head are described as not resembling those of the American or Mexican Indian in any of their lines. This head is seventeen inches in length, twenty-one in width, including the ears, and ten in thickness. It was found on the side of a large pile of ruins, the remains of dilapidated walls, of which it had unquestionably formed one of the ornaments. It is to be regretted that Mr. Norman was unable to devote more time to the exploration of this region. His antiquarian researches however formed only an episode in his travels through portions of Mexico, and besides this, his labor was exceedingly great in cutting his way through the dense shrubbery which covers the ground amid a wilderness of trees, matted and woven together with thousands of creepers or plants whose thorns pierced or obstructed him at every moment. He had, moreover, to contend

with myriads of annoying insects, and he feared the bite of the poisonous alacranes or the spring of the tiger that sometimes started from the thickets. He received no assistance from the stupid Indians dwelling in the neighborhood. They could not conceive that curiosity alone would prompt any one to encounter the toil and danger which must be endured in explorations in the TIERRA CALIENTE of Mexico, and imagined that the search for gold and buried treasure, rather than antiquities, was his real motive for attempting to penetrate the recesses of their lonely wilderness.

CHAPTER III.

WEST COAST OR PACIFIC STATES.

OAJACA—EXTENT—BOUNDARIES—GEOLOGY—VALLEY—INDIANS—DEPARTMENTS—POPULATION—MINES—PORTS—PRODUCTIONS—CATTLE—TOWNS—ANCIENT REMAINS—MITLA—THE PALACE—TOMBS—ANTIQUARIAN SPECULATIONS—CONNECTION OF MEXICAN REMAINS—QUIOTEPEC, OR CERRO DE LAS JUNTAS.

THE STATE OF OAJACA.

This rich and beautiful State lies, for 118 leagues, along the Pacific Ocean. On the north-west, it is bounded by the State of Puebla, on the north by Vera Cruz, and east by the State of Chiapas and the republic of Central America or Guatemala. It extends from east to west about 115 leagues, and from north to south 322 leagues, containing an area of 5,046 square leagues.

We pass now from the hot and sickly sands and marshes of the eastern coast to a region which has been considered by many writers and travellers as the most delightful in Mexico. Beauty of natural scenery and salubrity of climate, fertility of soil and richness of productions, combine to render Oajaca valuable, not only in a commercial aspect, but as a residence in which it would be agreeable to pass a life time. Nor is this the opinion only of the present inhabitants, for the remains of antiquity still found within the limits of the State, prove it to have been the seat of Indian civilization long before the arrival of the Spaniards. The geological structure of this State is different from that of Puebla and Mexico; and the vegetation is quite as vigorous as that of other prolific regions, without the rankness which produces rapid decomposition and miasma. The rains are generally abundant from May to October.

In our general description of the geological and geographical characteristics of Mexico, we have already shown that the great Cordillera, forming the spine of this continent, divides into two arms after leaving the Isthmus, which connects North and South America. One of these mountain ranges with its high vallies

and table lands forms the barrier along the Pacific, while the other spreads out its massive veins throughout the middle and eastern portions of Mexico. Between these formations, the Valley of Oajaca lies embosomed; and from this beautiful and fruitful region, which was bestowed by the Spanish crown upon Cortéz, he obtained his Marquisate del Valle de Oajaca, in which his family still possessed, previous to the revolution, 49 villages, with a population of 17,700 persons.

In these two mountain regions, thus sundered by the valley, have dwelt, from the earliest periods, two Indian races known as the Mixtecas and the Zapotecas; the former of which is characterised by activity, intelligence and industry. Besides these tribes, seventeen others are reckoned still to inhabit Oajaca.

The State is divided into eight departments, which are subdivided into districts or cantons.

1st. The Department of the Centre, with the cantons of Oajaca, Partido del Torané, Etna, Tlacolula, and Zimatlan.

2d. Department of Ejutla, with the cantons of Octolan, Miahuatlan, and Pochutla.

3d. Department of Jamiltepec, with the cantons of Jamiltepec and Juquila.

4th. Department of Tehuantepec, with the cantons of Tehuantepec, Quechapa and Lachixila.

5th. Department of Teposcolula, with the cantons of Teposcolula, Tlaxiaco and Nocnistan.

6th. Department of Huajuapam, with the cantons of Huajuapam and Justlahuaca.

7th. Department of Toochila and Villalta, with the cantons of Ixtlan, Yalalag and Chuapam.

8th. The Department of Teutilan del Camino, with the cantons of Teutilan and Teutila.

These eight departments and twenty-three cantons,—with nearly 700,000 inhabitants,—contain one city,—the capital, Oajaca;—eight towns; nine hundred and thirteen villages; one hundred and thirty-seven large *haciendas*; two hundred and thirty-five *ranchos*; sixty-eight sugar mills or *trapiches*, and six *estancias* or cattle estates and grazing farms. Besides these elements of agricultural wealth, Oajaca possesses ten mills, driven by water power, nearly all of which lie in the neighborhood of the capital, and are used chiefly for wheat. Corn is ground or rubbed, for *tortillas*, on the *metate* by the Indian women throughout Mexico; and consequently but little of this kind of grain is ever brought to the mills. There are

five mines or mineral workings in the State, at Ystepéxi, Taléa, Teojomulco, Peñoles, and Las Péras, with ten smelting and amalgamating establishments.

There are nine sea ports, roadsteads and anchorages in Oajaca, the best of which are Tehuantepec, Huatulco, Escondido, Chacáhua, and Jamiltepec.

Corn, chile, agave, cotton, coffee, sugar, cacao, vainilla, tobacco, cochineal, wax, honey, and a small quantity of indigo, are the staple productions of this State. Nearly all the fruits which we have already described as growing in the State of Vera Cruz, are produced here abundantly, and of excellent quality.

The State is estimated as containing, on an average of years—

	44,106	Horses.
	18,438	Mules.
	10,420	Asses.
	171,518	Neat cattle.
Total,	213,156	Sheep.
	158,009	Goats.
	47,947	Hogs.
	<u>663,600</u>	head of cattle.

The worth of which is calculated, in the home market, at \$3,332,757.

Gold, silver, copper, quicksilver, iron, rock salt, limestone, gypsum, &c., are found in Oajaca. In the thirty-nine years between January, 1787, and March, 1826, the official registers show a product in the State of 4,820 marks of gold, and 544,257 marks of silver; and in the five years from March, 1826, to the end of 1830, 95 marks of gold, and 21,701 of silver. But these sums must not be regarded as perfect indications of the absolute product of Oajaca, inasmuch as its proximity to the sea, and the facilities for smuggling in the lonely districts of the west coast have no doubt enabled the trading community to export a large portion of the real avails of the mines, which, of course, never appear in the authentic registers and returns of the State.

The chief towns and villages of this State are: Oajaca, the capital; Guayápa or Huazapa, Talistaca, Santa Maria del Tule, Tlacoahuáya, Teutilan del Valle, Tlacolula, Mitla, the ancient Leoba; San Dionisio, Totolapa, San Carlos, Villa de Nejapa, Quijechápa, Quiegolani, Tequisistlan, Villa de Jalapa, Tlapalcatepec, Tehautepec, San Francisco de la Mar, Petapa, Juchuitan, Niltepec Yshuatan, Zanatepec, Tepanatepec, Xoro or Xojocatlan, Cuylapa, Zachila, the ancient

Teozapotlan; San Bartolomeo de Zapéche, Zimatlan, Villa de Santa Anna, Chilateca, Santa Cruz Mistepéc, San Juan Elotepec, Etlá, San Juan del Estado, San Pablo Huizo or Guajolotitlan, Ejutla, Ocotlan, Chichicapa, Ayoquesco, Miahuatlan, Pochutla, Santa Cruz de Huatulco, Juchatengo Tonamaca, Jamiltepec, Acatepec, Juquila, Sacatepéc, Santa Maria Istapa, Teojomulco, Huajuapan, Justláhuaca, Chicahuástla, Achintla, Teita, Villa de Teposcolula, Talaxiaco, Santa Maria Chimalapa, Yanguitlan, Los Pueblos de Almoloyas, San Miguel Chimalapa Nochistlan, Tilantongo, Xaltepec, Teutilan del Camino, San Antonio de los Cues, Tecomavaca, Quiotepec, Cuicatlan, San Pedro Chiezapotl, Donomingullo, Coyula, Teutila, Villalta, Zochila, Zolaga, Quetzaltepec, Totontepec, Chuapan, Chinantla, Istlan.

ANCIENT REMAINS IN OAJACA.

MITLA.

About ten leagues from the capital, on the road leading to Tehuantepec, are the remains of what antiquarians have styled the sepulchral palaces of Mitla, lying in the midst of a rocky granitic region, and surrounded by sad and sombre scenery. According to tradition, these edifices were erected by the Zapotecs, as palaces and sepulchres for their princes. It is asserted that at the death of members of the royal family, their bodies were laid in the vaults beneath, while the sovereign and his relatives retired to mourn the loss of the departed scion in the chambers above these solemn sepulchres, which were screened from the public eye by dark and silent groves.

Another tradition declares that these edifices were the abodes of a sect of priests, whose duty it was to dwell in seclusion and offer expiatory sacrifices for the royal dead who reposed in the vaults beneath.

The village of Mitla was called Miguitlan, signifying, in the Mexican tongue, a place of sadness; while by the Zapotecs it was named Leoba, or "the tomb."

The palaces or tombs of Mitla, form three edifices, symmetrically arranged in an extremely romantic site; the principal and best preserved edifice has a front of nearly one hundred and fifty feet. A

[Scale of Varas. RUINS AT MITLA.](#) Scale of Varas. RUINS AT MITLA.

stair-way through a dark shaft leads to a subterranean apartment of one hundred

feet in length, by thirty in width, whose walls are covered with Grecian ornaments similar to those on the exterior of the edifice, as shown in the plate. These external walls are said to be decorated with labyrinthine figures, formed by a mosaic of small porphyritic stones, and we recognize in them the same designs which are admired in the ancient vases, falsely called Etruscan, and on the frieze of the old temple usually assigned to the god Redicolus, which lies near the grotto of Egeria at Rome.

But the objects which chiefly distinguish the architectural remains of Mitla from all other Mexican antiquities are six porphyritic columns, which support the ceiling of a vast saloon. These singular columns,—almost the only ones found in the New World,—evinced the extreme infancy of art;—they have neither bases nor capitals, and are cut in a gradually tapering shape from a solid stone, more than fifteen feet in length.

The distribution of the apartments in this extraordinary edifice presents some striking analogies with the monuments of Upper Egypt, described by Denon and the *savants* who composed the institute at Cairo. Don Pedro de Laguna, who examined them carefully many years ago, discovered on their walls some curious paintings of sacrifices and martial trophies. In order to form an idea of the almost Cyclopean style of architecture, we may remark the extraordinary dimensions of the stones above the entrances to the principal halls. Mr. Glennie states that one of these masses is eighteen feet eight inches long, four feet ten inches broad, and three feet six inches thick. A second is nineteen feet four inches long, four feet ten and a half inches broad, and three feet nine inches thick, whilst a third is nineteen feet six inches long, four feet ten inches broad, and three feet four inches thick. The antiquarian will not fail to observe, that there is some similarity between the exterior of *these* Oajacan remains and those which have been uncovered and described in Yucatan, by Stephens, during his second expedition. It is not improbable that an intercourse existed between the inhabitants of these districts, prior to the Spanish Conquest. We believe that these architectural remains and nearly all of those in Yucatan, Chiapas and Guatemala, were the abodes and temples of the Indians who dwelt in Mexico and the adjacent countries when Grijalva and Cortéz first landed on our continent. The distance from Oajaca, through Chiapas and Tabasco, to Yucatan is not too great to have prevented even a rapid communication from Mitla to Uxmal, or Palenque. The reader will recollect that the realm of Montezuma is alleged to have extended to near the present limits of the Republic of Central America; nor will he forget with what rapidity the well trained Indian couriers of the Emperor passed over the three hundred intervening miles of mountain, plain

and valley, between Vera Cruz and the Valley of Mexico, in order to inform their sovereign of the Spaniards' arrival and their leader's determination to visit the Aztec Court. At Cozumel, and elsewhere in Yucatan, the earliest Spanish adventurers were struck by the architecture of the edifices which were inhabited by the Indians. In their letters and narratives they always speak of these "buildings of stone and lime" as indicating civilization. The Indian deities were, at that time, unquestionably, worshipped in them. At Cholula, Tlascala, and Tenochtitlan or Mexico, as well as at Tezcoco,—pyramids, dwellings, palaces, walls, streets, causeways, were all built of stone cemented by mortar, and many of these objects were profusely ornamented. There can be no doubt of these facts, for they were attested at the time by numerous witnesses, while many of the material relics of that age have descended even to the present time, and may still be inspected in the capital of the Republic. Why, then, should we hesitate to believe that a vast chain of civilized, intelligent and affiliated nations, *co-existed* on the central part of this continent in the sixteenth century, and that the ruined cities, temples and pyramids which are spread from the waters of the Gila as far south as Peru and Chili, and whose wonderful remains are now gradually unearthed by the industry of antiquarians, are the architectural fragments of their national grandeur?

We do not conceive it necessary to throw back the Indian architects into the gloom of antiquity, long anterior to the arrival of the Spaniards. There is a natural yearning in the human mind for the mystery with which a vague, indefinite epoch, surrounds ruins that are accidentally discovered. But this is a poetical sentiment, rather than a fair starting point in archaiological researches; and, in spite of the national vanity which might be gratified by proving that the aboriginal civilization of our continent was as old as that of Egypt, we shall adhere to the belief that Mitla, Palenque, Uxmal and Quemada were inhabited by the builders or their descendants, whilst the thrones of Mexico and Peru were occupied by Montezuma and Atahualpa.

QUIOTEPEC, OR CERRO DE LAS JUNTAS.

In 1844, an examination was made by order of the Governor of Oajaca of the ancient remains situated near the village of Quiotepec, about thirty-two leagues north from the capital of Oajaca. These ruins are found on the Cerro de las Juntas, or Hill of the Union, so called from its vicinity to the junction of the rivers Quiotepec and Salado.

The eminence is covered in almost every direction with remains of military works of a defensive character, calculated to protect the dwellings erected on the

hill, and the extensive temple and palace, whose massive ruins still crown the summit. These remains are said to resemble those of Chicocomoc or Quemada, in the State of Zacatécas, which will be fully described in our notice of that portion of Mexico. The similarity consists in the style of the architecture, and the evident mingling of defence and worship. There is no resemblance, however, to the remains found in Yucatan as described by Stephens, Catherwood and Norman, where the designs are all highly ornamental, denoting a higher state of luxury, taste and progress in civilization. The teocalli or temple of Quiotepec and that of Chicocomoc or Quemada are both pyramidal, like most of the Aztec religious structures; but the architectural style, generally, at the former place, is rather more sumptuous than at Quemada.^[54]

Besides these remains, there are many others in the State of Oajaca, which are still inadequately known or described, such for instance, as the turmuli and pyramids at Montealban, two leagues south-west from Oajaca;—the relics of many strong-holds;—the turmuli at Zachila;—the ruins at Coyúla and at San Juan de los Cués.

In the museum of the University of Mexico, and in the private collection of the late Ex-Conde del Peñasco, we found some remarkable figures chiselled from a finely grained sand stone, two of which are represented in the succeeding pages. They were found in the State of Oajaca. Their use or their symbolical character have never been accurately detected; but in the last of the two we may observe quite a remarkable resemblance to some of the idols still to be seen in the temples of India.

FIGURE FROM OAJACA.
FIGURE FROM OAJACA.

FIGURES FROM OAJACA.
FIGURES FROM OAJACA.

CHAPTER IV.

PUEBLA—DIVISIONS—PRODUCTIONS—FACTORIES.—RIVER—STREAMS—PUEBLA DE
LOS ANGELES—CATHEDRAL—TOWNS—MINES, QUARRIES—MOUNTAINS—
POPOCATEPETL—ATLIXCO—OLIVARES—ASCENT OF THE MOUNTAIN—THE CRATER—
ELEVATION.—PYRAMID OF CHOLULA—VISIT TO THE PYRAMID CORRECT
DIMENSIONS.—TERRITORY OF TLASCALA—HISTORY—POSITION—SIZE—

THE STATE OF PUEBLA.

Nearly all of this State lies in the torrid zone, occupying a portion of the table land, and stretching westwardly down the slopes of the Sierra Madre to the Pacific Ocean, between the parallels of 16° 17' and 20° 40' north latitude. From the mouth of the river Tecoyáme to Mextitlan, it is 126 leagues long, and from Tehuacan to Mecameca, 53 leagues broad. It contains an area of 2,700 square leagues. On the north it is bounded by the State of Queretaro, north-easterly by the State of Vera Cruz, easterly by Oajaca, westwardly by Mexico and south-westwardly, for 28 leagues, by the Pacific Ocean. The last enumeration of inhabitants to which we have access, assigned 954,000 individuals to the State of Puebla, in the year 1832; but the estimate made for the basis of a call of congress in 1842, gave it only 661,902.

This State is divided into 25 *partidos*, or districts, the chief of which are Atlixco, Guauchinango, Ométepéc, Puebla, Tepéaca, Tehuacan de las Granádas, Tlapan, and Zacatlan. It possesses 5 cities and towns, 126 parishes, 590 villages, 412 *haciendas* or plantations, and 857 large and small *ranchos* or farms. The surface of this State is divided between mountains, vallies, plains or low lands; and produces corn, wheat, barley, chile, maguey, beans and all the hardier, together with some of the southern fruits and plants. The wheat flour of Puebla is celebrated for its excellence, and has sometimes been exported to Havana and South America.

In the neighborhood of Oajaca cochineal is sometimes produced; and on the low lands towards the western coast, cotton, rice, and small quantities of coffee and sugar are cultivated. The Llanos de Apam, in the neighborhood of the State of Mexico are celebrated for their fertility, and especially renowned for the excellence of the *pulque*, produced from the maguey or Agave Americana.

Nearly four-fifths of the real property of Puebla either belongs or is hypothecated to the church and to hospitals, and consequently the agriculture of the State is not as well managed as if the land belonged to independent farmers, who derived their wealth directly from the soil. Great poverty prevails among the lower classes, and their sad condition is generally attributed in Mexico to the mismanagement of real estate by the clergy.

The water power in the neighborhood of the city of Puebla has given a stimulus to manufactories, and the reader will find in our chapter upon that branch of Mexican industry some interesting statistical facts showing the progress made by the inhabitants of this portion of the Republic.

The only river of any importance in Puebla is the Rio de Tlascala or Papagallo, which rises in the table lands, and runs southerly from the village of Ayútla to the Pacific. The Pascaqualca, Tacunapa, Tecoyama, and the San José are insignificant streamlets along the coast.

CITY OF PUEBLA.
CITY OF PUEBLA.

The chief cities of this State are Puebla or Puebla de los Angeles—the "City of the Angels,"—which is the capital and the seat of the State government. It is a beautiful town, lying in the midst of a fruitful plain bounded by the mountains, and shut in at the west by the gigantic peaks of Popocatepetl and Iztaccihuatl. Broad, clean and well paved streets cross it at suitable distances. The houses are large, convenient and neat, and numerous churches forever send forth the music of their bells. A beautiful public walk, planted with rows of trees, runs along a small stream on the outskirts of the city; and an Alameda, of exceeding beauty, lies opposite the extensive pile of San Francisco on the west. In the centre of the town is a large well paved public square, surrounded by *portales* or arches, similar to those of Bologna, in Italy, while in its centre is the massive cathedral whose wealth is renowned among the Roman Catholic churches of America. A splendid and weighty chandelier, composed of gold and silver, weighing altogether several tons, depends from the dome, whilst the figures of saints, the tops of altars, and the recesses of chapels, gleam, on State occasions with a display of precious metals and jewels which is perhaps unequalled even by the cathedral of Mexico or the sanctuary of Guadalupe. There are other establishments in Puebla belonging to the Franciscan and Augustin monks, and several churches, which are celebrated for their elegance, comfort and wealth. The Palace of the Bishop, in the vicinity of the cathedral, is a massive edifice, containing a library of many thousand volumes in a saloon 200 feet long by 40 broad.

The other towns of this State are:—CHOLULA, adjacent to the remains of the *Pyramid of Cholula*, which will be subsequently noticed;—ATLIXCO; GUAUCHINANGO, in the northern valley of the State, where the Indians still indulge in their ancient sport of the Juégo del Volador or flying game;—TEHUACAN DE LAS GRANADAS, containing near 6,000 inhabitants; TEPEACA or TEPÉYACAC, where Cortéz laid the foundations of a city which he called "*Segura de la Frontéra*;"—HUAJOCINGO or HUEXOTZINGO; Chiautla, Tlapan, Tlacotepec, Amozoqué, San Martin, Nopaluca, Acajete, Ojo de Agua.

In the eighteenth century various mines of gold and silver were wrought in the old Intendencia de Puebla, at Yxtacmaztillan, Temistla, and Alatlanquitepec in the district of San Juan de los Llanos, as well as at Tetéla de Xonotla and at

Zacatlan; but none of these are at present productive. Quarries of fine marble exist at Totaméhuacan and Tecali, two and seven leagues distant from the capital. Limestone is found in quantities, and a beautiful transparent alabaster is also procured, which is used for windows in the library, museum and churches. If the transportation of these weighty

FLYING INDIANS.
FLYING INDIANS.

POPOCATEPETL.
POPOCATEPETL.

articles were not so expensive in Mexico, this alabaster might be profitably exported to Europe, where its extreme purity and clearness would probably ensure its preference to all indigenous qualities. Extensive salt works are carried on at Chila, Xicotlan, Ocotlan and Zapotlan.

Some of the most remarkable geological characteristics of the Mexican Republic are found in the three celebrated mountains of Popocatepetl, Iztaccihuatl, and Malinche or Matlacueye, which lie in the State of Puebla. The latter of these, sometimes called La doña Maria, lies between the volcanoes of Puebla and those of Orizaba and Perote, but does not require special mention except as forming a striking and picturesque feature in the landscape. But the other two deserve our special notice.

ASCENT OF THE VOLCANO OF POPOCATEPETL.

The mountains of Popocatepetl and Iztaccihuatl border the State of Puebla on the west. The following account of the ascent of the former of these gigantic volcanoes is founded on the journal published in Spanish in May, 1827, by Messieurs Frederick and William Glennie, who were in the service of the British United Mining Company, and Mr. John Taylour, a merchant of the city of Mexico.

On the 16th of April, 1827, the party left the capital early in the day, accompanied by their servant José Quintana, and, provided with barometer, sextant, chronometer, telescope, and other instruments, reached the village of Ameca, on the western slope of the mountain, where they halted for the night.

On the 17th they continued their route, following the road to Puebla which leads through the gap of the two mountains, intending to go to Atlixco. In the highest part of the gap they took the road to the right which is called "*de los neveros*," (those who procure ice for the capital,) and having reached the limit of vegetation, which according to their barometrical measurements is 12,693 English feet above the level of the sea, they met with some men who informed them, that in this direction they could not reach the summit, nor prosecute their way to Atlixco on account of the great quantity of sand. With this information they returned to the road they had left, and reached the village of St. Nicolas de los Ranchos.

On the following day they continued towards Atlixco. The road here edges along the eastern side of the mountain, skirting an extensive district covered with large rocks and loose stones. Having understood that the village of Tochimilco is nearest to the volcano, they determined to go thither to obtain information relative to the adventure. The Alcalde Don F. Olivares, who, 'though the owner of Popocatepetl, had never reached the summit, gave them all the information he possessed, offered to accompany them, and procured guides and carriers for their instruments. They appointed the next day to go to his Hacienda de St. Catalina, which is at the very foot of the principal mountain and belongs to that estate.

On the 19th they proceeded to the hacienda, where they were soon joined by Señor Olivares, who was prevented by some business from accompanying them any farther. He furnished them a guide who conducted them through a thick forest, to the highest limit of the pines, which they found to be 12,544 feet above the ocean. Here they passed the night. At midnight it rained, which was soon afterwards followed by a severe hoar frost.

On the 20th of April, contemplating to reach the summit this day, they distributed the instruments among the carriers, and mounted on the mules, began the ascent at half after three in the morning by the light of the moon. After travelling a short distance they left all vegetation, and entered a district of loose stones and sand, which although hardened considerably by the rain, greatly fatigued the mules. In this manner they ascended on the south-west side of the mountain, until half past six when they could proceed no further with the mules, as much because they were too fatigued, as on account of the steepness of the volcano's side. They therefore dismounted, and abandoning the mules, gave the barometer in charge to Quintana. They resumed their ascent through a soil composed of loose sand and stones, with many fragments of pumice stone, being desirous of reaching some rocks which appeared to be connected with the summit. Here, however, the difficulties commenced; the acclivity was very

steep, the footing so loose that every step they made forward they slipped back nearly the same distance; and the thinness of the air fatigued them so much that they could not advance more than fifteen or twenty steps without resting. In this manner they proceeded about half a mile, until they reached the rocks, where they waited for the Indians who followed more slowly. During this time the thermometer stood at 28° of Fahrenheit. The sky was perfectly clear, but a dense stratum of vapor rested on the horizon, which prevented them from perceiving any object, and made it appear as if they were in the midst of an ocean. At 8 o'clock A. M. they first saw the sun. As soon as the Indians arrived, they took a light breakfast, and continued ascending among large loose stones, which have rolled from the summit, and, arrested by each other in their course, have formed a kind of zone, so lightly supported however, that the slightest touch sets them in motion. This naturally alarmed the Indians, who declined going any farther; but by persuasions and promises they succeeded in getting them to advance. Seeing, however, that the road was becoming rather worse, all further means of persuasion to induce them to proceed began to fail. They endeavored to ascend through a gulley which they had perceived on their left; but the way thither was very difficult, and was rendered more perilous by clouds which prevented their distinguishing any thing. Here the Indians entirely refused to stir any further, and having given them part of the provisions, they were sent with the baggage to wait at the place where they had encamped the night before. This circumstance very much discouraged the travellers. Being left without instruments they had to relinquish the physical and astronomical observations which they had proposed to make, and thereby missed the principal object of their journey. They nevertheless determined to persevere, for the purpose of examining well the situation, and noting such points as might facilitate any subsequent attempt undertaken with better preparations.

Soon after this the clouds dispersed, and they reached a passage which was very steep and covered with loose stones, and through which they ascended with much labor, extending their line so as to prevent the stones rolling on those below. The fatigue and the pain in their knees, obliged them to rest every eight or ten paces. After an hour's travelling in this manner they reached a body of basaltic rock, which being very steep they could not surmount but with great difficulty, and only by leaping from one rock to the other, at great risk. After this they got into a bed of loose sand, (apparently pumice stone reduced to dust,) and ascended to a very high rock, which from Mexico appears like a speck. The rock is a great mass of compact black basalt forming some imperfect pillars, the fissures being filled with solid ice.

They observed from time to time small stones falling upon them, as if thrown from above, and began to experience headache and nausea, which affected Quintana more than the others. The barometrical observation here showed an elevation of 16,895 English feet above the ocean. After taking some slight refreshments, and resting about an hour, they continued their ascent.

It is impossible to detail the particulars of the frequent difficulties and risks encountered until the explorers reached the sandy acclivity which forms the dome of the mountain, and the firmness with which they overcame them. At this point they took another short rest—fancying themselves very near the end of their labors, and deceived by the great rarefaction of the air, which made objects appear much nearer than they really were, they forgot what they had already undergone, and Mr. Glennie was entirely taken up with the prospect of soon putting his barometer in operation on the very summit. At this time Quintana who had smoked a good deal and was otherwise much fatigued, complained of excessive headache and fell down exhausted. They concluded that at these great elevations smoking is as impracticable as the use of ardent spirits. The servant was vainly encouraged to proceed, and finding it impossible, they directed him to await their return where he was.

They had before them a smooth expanse of sand, which on their left was covered, from the summit down, with ice or crystallized snow, forming a great variety of cubic and prismatic figures. Continuing their ascent along the edge of this snow, they heard a noise like distant thunder, and concluding that it was raining somewhere, they proceeded about a league, making frequent halts, being greatly distressed with violent pains in the head and knees, nausea, and difficulty of respiration. They had passed the whole day in absolute solitude; encountering neither plant, bird nor even the least insect. All they saw around them, were fractured rocks, that had undergone fusion, blistered fragments, and heaps of rubbish, sand and ashes. While contemplating these images of destruction, they unexpectedly, about five o'clock P. M., arrived at the border of an immense abyss, throwing up a shower of stones, with a noise similar to that produced by the waves of the sea beating against a wall. Natural emotion and surprise obliged them to recede some paces. Their hair stood on end—their shoulders fell—and they felt a sudden nauseating emptiness of the stomach. Without being able to speak, they could but look at each other, until this sensation of sickness and horror had subsided. They then returned to observe the crater, and examined the barometer, whose mercurial column measured only 15.63 English inches, while the thermometer attached to it was at 39° and the detached one 33° Fahrenheit. They then sat down to contemplate the scene around them, to take notes, and

make drawings.

They observed that most of the stones which were thrown up in the eruptions, fell within the crater, the rest fell over the south side. The dull sound which was constantly heard within increased from time to time, and terminated with an explosion, at which time stones, sand, and ashes were thrown up. Those eruptions were frequent—some stronger than others. From various places in the interior and near the edge of the crater, arose small columns of smoke, the principal of which were three on the east side, and at a considerable depth within the crater. The crater itself has the appearance of a large funnel, whose sides are but little inclined, and the bottom of which is not visible. The sides are furrowed by numerous gulleys which descend from around the mouth of the crater, having the appearance of the radii of a circle towards the centre. There are three distinct rings, or excavations, which divide the crater into four zones of different dimensions, the largest being that nearest the mouth, and which is of solid rock, the others appear to be composed of sand. The snow occupies only the exterior part of the summit, and that part of the interior of the crater which faces to the north, where its limits cannot be discovered. The mouth of the volcano is nearly circular, about a mile in diameter, and appears much lower on the eastern than on the western side. The lip of the southern side is very thin, and so broken that it seems impossible to walk on it, while the northern part, on the contrary, is broad and more even.

On account of a thick stratum of mist by which they were surrounded, the intrepid travellers could only see the summit of the peak of Orizaba, and the neighboring snow-capped mountains to the north.

Having completed the observations, and night approaching, they descended by the same way towards the place where they had left the servant, with the intention of passing the night there and returning to the summit next morning; but finding the man in a high fever with a violent pulse and headache, they resolved on descending. To relieve him, he was carried over the most difficult places, and finding it impossible to descend by the same path by which they had ascended in the day, they took at once that bend of the mountain which is called "de los Neveros;" and which, although very steep, is composed of loose sand through which they descended very rapidly. It was after night when they arrived at the limit of vegetation, but having taken a different direction, they did not strike the place where they expected to meet the Indians. They made a large fire as a signal, but the Indians did not make their appearance; and on the following morning, the 21st of April, separating to the right and left, and after shouting, they soon rallied the Indians. The reunited party descended to the rancho de la

Vaqueria, and from this they passed through the village of Atlauca; at eight in the evening reached Ameco, and on the 23d of April returned to Mexico.

Names of places.	N. Latitude	Longitude east from Mexico.	Elevation above the level of the ocean.	
Ameco a village	19° 7′ 40″	0° 23′ 30″	8,216	Eng. feet.
St. Nicolas de los Ranchos	19° 4′ 21″	0° 32′ 30″	8,087	do.
Tochimilco			6,930	do.
Superior limit of pines			12,544	do.
Limit of all vegetation			12,693	do.
Picacho de S. Guliermo ^[55]			16,895	do.
The most elevated border of the crater of the volcano of Popocatepetl			17,884	do.
Rancho de la Vaqueria			10,784	do.

REMAINS OF ANTIQUITY IN THE STATE OF PUEBLA.

THE PYRAMID OF CHOLULA.

The vast plain of Puebla, separated from the Valley of Mexico by its gigantic chain of bordering mountains, is full of interesting associations and studies for the antiquarian; but, among all of the sites signalized in the history of the Aztecs or of the Spanish Conquest, no one is more generally sought by the traveller than the Pyramid of Cholula. Its lofty remains lie about three leagues westward from the city of Puebla, and are easily reached by a pleasant ride over the plain. The pyramid was originally built of sun dried bricks, or, *adobes*, rising in four stories connected by terraces. Many years ago, in cutting a new road from Mexico towards Puebla, it became necessary to cross a portion of the base of this pyramid, and, in the course of the excavation, a square chamber was opened, which was found to be constructed of stone with a roof supported by cypress beams. Some idols, carved in basalt, a number of painted earthen vases, and two bodies were found in this cavity, but as no care was taken of these relics by the discoverers, and as their explorations were not prosecuted deeper into the bowels of the gigantic mound, the world is now quite as ignorant of its ancient uses as it was during the possession of the country by the Spaniards. The most recent publication upon the subject of Cholula by Señor Gondra, the Curator of the

National Museum, in the University of Mexico, merely repeats the thrice told tales of the last century.

The top of this pyramid is reached by paths that climb its sides amid masses of *debris* and groves of bushes which have driven their roots deeply between the fissures of the bricks. The level summit protected by a parapet wall,—and once the shrine of Quetzalcoatl—the "Feathered Serpent," or "God of the Air,"—is now adorned with a small dome-crowned chapel, surrounded with cypresses and dedicated to the Virgin of Remedios; while, from all parts of the eminence, a magnificent panorama of the fruitful plain spreads out at the feet of the spectator.

The following extract from a communication by an officer of our army, in 1847, during the invasion of Mexico, contains some interesting facts, and corrects scientifically the measurements of the pyramid which were made by Baron Humboldt:

All the mornings of this elevated region, even in the rainy season, are bright and charming; the sun rises in unclouded splendor, gilding one of the most magnificent landscapes the imagination can conceive, whilst the atmosphere is so pure and elastic that it is a positive pleasure to breathe it. On such a morning, in company with the 4th regiment of artillery, acting as infantry, and a squadron of horse, we sallied from the city through the *garita* of Cholula, and soon found ourselves in the extensive plain skirting the base of the volcanoes of Puebla—Popocatepetl and Iztaccihuatl. Before us glittered in the morning's sun their snow-capped summits; on our right rose the Malinche, with its craggy crest partially enveloped in a wreath of mist; whilst behind us, in the far distance, towered the indistinct form of the Orizaba—that well-known landmark of the seaman, that serves to guide him in calm and in storm, hundreds of miles along the Mexican coast. The nearer landscape was as soft and picturesque as its more distant features were grand and sublime. A green meadow or prairie extended around us for some miles in every direction, dotted with villas and haciendas, and relieved by occasional patches of cultivation, and avenues and clusters of the beautiful shade willow. Herds of cattle and horses grazed as quietly on the surrounding estates as though "grim-visaged war" had long since "smoothed his wrinkled front," and our military escort, as it wound its way over the fair landscape, with glittering arms and glancing banners, seemed more like a holyday procession than a band of stern veterans so recently from the conflict, and so soon to enter it again. A ride of an hour and a quarter, which our horses, as they snuffed the morning breeze and scented the fresh grass of the meadows, seemed to enjoy as much as their riders, brought us to the base of the far-famed

pyramid, which, independently of its historical recollection, and the great interest attached to it as a work of art, forms one of the most picturesque features of the landscape. At a short distance it presents the appearance of a natural mound, covered with a luxuriant growth of trees and shrubbery, and is surmounted by a simple chapel, whose belfry towers some eighty feet above the pyramid. A road winds round the pyramid from base to summit, up which we passed on horseback. This road is cut into the pyramid, in some places, six or eight feet, and here one sees the first evidence of the artificial construction of the latter. It is built of *adobes*, or sun-dried brick, interspersed with small fragments of stone—porphyry and limestone. Its dimensions, as stated by Humboldt, are: base 1,060, elevation 162 feet; but its altitude is much greater. On the day of our visit, Lieutenant Semmes, of the navy, who had provided himself with a pocket sextant and tape-line for the purpose, determined its altitude to be 205 feet. As this measurement differed so widely from that of Humboldt, Lieut. S. requested Lieut. Beauregard, of the engineers, who visited the pyramid a few days afterwards, to test his observations; which Lieut. B., using a longer base, did, making the altitude 203 feet. These two observations, from different points, with different bases, and both with the sextant, show conclusively that Humboldt, who used a barometer, is in error. The mean of the two is 204 feet, which we may henceforth regard as the true height of this extraordinary monument—being nearly half as great as that of the pyramid of Cheops in Egypt. The pyramid of Cholula is quadrangular in form, and truncated—the area of the apex being 165 feet square. On this area formerly stood a heathen temple, now supplanted by the Gothic church of our Lady of Remedios. The temple on this pyramid was, in the days of Cortéz, a sort of Mecca, to which all the surrounding tribes, far and near, made an annual pilgrimage, held a fair, and attended the horrible human sacrifices peculiar to their superstition. Besides this great temple, there were, as we learn from the letters of Cortéz to Charles V., and also from the simple diary of his doughty old Captain, Bernal Diaz, some 400 others in the city, built around the base of the larger. The city itself contained 40,000 householders, and the whole plain was studded with populous villages. The plain is now comparatively a desert, and two or three thousand miserable leperos build their mud huts and practice their thievish propensities upon the site of the holy city.

RUINS OF THE PYRAMID OF CHOLULA.
RUINS OF THE PYRAMID OF CHOLULA.

THE TERRITORY OF TLASCALA.

The history of Mexico has ever held in sacred regard the region of this ancient republic, whence Cortéz and the Spaniards derived such eminent assistance in the conquest of the Aztec Empire. Immediately after that event it was erected into a province, under which character it was always regarded until the political emancipation of Mexico from Spain, and even after that event up to the period of the adoption of the Acta Constitutiva, when Tlascala was raised to the dignity of a State, as an integral part of the Mexican Republic. The constitution, sanctioned on the 4th of October, 1824, deferred defining absolutely the political character of this region; but on the 24th of November of the same year, it was constitutionally declared to be a Territory of the Confederation. When the Central Government was subsequently adopted, it was added, under the denomination of a district, to the Department of Mexico; but when the federal system was restored by the movement of the 6th of August, 1846, which was afterwards nationalized by the decree of the provisional government on the 22d of August of the same year, and confirmed by the sovereign congress on the 18th of May, 1847, Tlascala re-entered the federal association in its original character of a territory.

Tlascala comprehends within its limits a superficial extent of four hundred square leagues, and contains one city, one hundred and nine villages, eighteen settlements, one hundred and sixty-eight haciendas or large estates, ninety-four *ranchos* or small farms, eight grist mills, two iron works, and one woollen factory. It is divided into the three *partidos* of Tlaxco, Huamantla and Tlascala, the latter of which contains the capital town of the same name about seven leagues north of Puebla. The territory is of an oval form, lying between forty minutes and one degree thirty-three minutes east longitude from Mexico, and nineteen degrees, and nineteen degrees forty-two minutes of north latitude. Its climate is mild and healthful, and its population, which in 1837, was rated at about eighty thousand, has been found to increase, on comparison of a number of years, about one thousand eight hundred and seventy-eight annually, of which nine hundred and thirty-seven are males, and nine hundred and forty-one females.

The productions of Tlascala are chiefly of a cereal character, but its genial climate and soil are capable of yielding the fruits of the *tierras calientes*, *frias*, and *templadas*.

The capital town of TLASCALA is situated between two mountains, in 19° 16′ of north latitude, and 58′ east longitude from Mexico, near the only stream of importance in the territory, known as the Rio Atoyac or Papagallo, under which

name it passes through the State of Puebla on its way to the Pacific. The ancient numerous population of Tlascala is no longer found within its limits, and perhaps not more than four or five thousand individuals now inhabit it. But the town is nevertheless handsome;—its streets are regular; its private houses, town hall, bishop's palace and principal church are built in a style of tasteful architecture, while on the remains of the chief Teocalli of the ancient Tlascalans, a Franciscan convent has been built, which is perhaps one of the earliest ecclesiastical edifices in the republic. In the town itself and in its vicinity many relics and ruins of the past glory of Tlascala are still found by antiquarians, but they have hitherto been undisturbed by foreign visitors and remain unnoticed by the natives. Huamantla and Tlaxco are the chief towns or villages in the *partidos* which bear their names.

CHAPTER V.

STATE OF MEXICO—AREA—DIVISIONS—POPULATION—FEDERAL DISTRICT—VALLEY—HIGHWAYS—LAKES—ZUMPANGO, CRISTOVAL, CHALCO, XOCHIMILCO, TEZCOCO—SALT-WORKS—CITIES—SAN AUGUSTIN—FESTIVAL—TEZCOCO—TACUBA—TOLUCA—CASCADE OF REGLA—TOWNS—VALLEY OF CUERNAVACA—ACAPANTZINGO—ITS INDIAN ISOLATION—MINES IN THE STATE.

THE STATE OF MEXICO.

This State, which includes the national capital and the federal district, lies between $16^{\circ} 34'$ and $21^{\circ} 7'$ of north latitude and $100^{\circ}, 17, 30''$ and $105^{\circ}, 7', 30''$ W. longitude from Paris. It is bounded, west by the States of Guanajuato and Michoacan; south-west by the shores of the Pacific for 87 leagues; north by Queretaro; east by Puebla; and north-east by Vera Cruz. Its greatest breadth from east to west, from Chilapa on the boundaries of Puebla, to the haven of Zacatula, is, 104 leagues, and its extreme length from north to south, from Berdosas on the confines of Vera Cruz, to the west coast in the neighborhood of Acapulco and the boundary of Puebla in that direction, is, 124 leagues. The area of the State is 5,842 square leagues, more than two-thirds of which are covered with mountains and spurs of mountains, interspersed with vallies lying between 6,500 and 7,500 feet above the level of the sea. The *Nevada de Toluca* is the only mountain of extraordinary elevation in the State of Mexico, which breaks the uniformity of its lofty table lands. Popocatepetl and Iztaccihuatl, on the eastern limit of the Valley of Mexico, belong, it will be recollected, to the State of Puebla.

The political divisions consist of eight districts, with 38 *partidos*, or cantons, and 183 *ayuntimientos* or municipalities, subdivided into about 450 cities, towns and villages, as well as into a great number of *haciendas*, and minor

dependencies.

1st. The district of Acapulco, with the cantons of Acapulco, Técpan, Chilapa, Tixtla, and 13 municipalities.

2d. The district of Cuernavaca, with the cantons of Cuernavaca, Ciudad Morelos or Cuautla de Amilpas, and Xonatepec, and 17 municipalities.

3d. The district of Tasco, with the cantons of Tasco, Axuchitlan, Teloloapan, Texupilco, Sultepec, Temascaltepec, and Zacualpan, with 18 ayuntamientos or municipalities.

4th. The district of Toluca, with the cantons of Toluca, Ixtlahuaca, Tenango, Tenancingo, and 25 municipalities.

5th. The district of Tlalpam, with the cantons of Tlalpam, Chalco, Tezcoco, Teotihuacan, Zumpango, Tlanepantla, Quautitlan and 49 municipalities.

6th. The district of Tula, with the cantons of Tula, Huichapan, Actopan, Xilotepec, Ixmiquilpan, Zimapan, and 25 municipalities.

7th. The district of Tulancingo, with the cantons of Tulancingo, Pachuca, Apam, and 15 municipalities.

8th. The district of Huejutla, with the cantons of Huejutla, Mextitlan, Zacualtipan, Yahualica, and 21 municipalities.

The population in these districts was estimated in 1842, according to Mühlenpfordt, at:

1st District,	101,250
2d "	104,100
3d "	187,444
4th "	255,119
5th "	278,800
6th "	241,539
7th "	128,166
8th "	100,855

The call for congress in that year estimated the population of the State at 1,389,502, to which if we add 10 per cent. for increase since that period, we shall have a population at present of about 1,528,452.

The Federal District includes the city of Mexico, in the valley of that name, together with the towns and villages of Tacubaya, Chapultepec, Santa Fé, Tacuba, Guadalupe, Azcapotzalco, Los Reyes, St. Angel, Mixcoac, and

Mexicalcingo. Its inhabitants may be estimated at 450,000,—about 200,000 of whom reside in the capital.

The Valley of Mexico is in the midst of the ridges of the Mexican Sierras, at a height of 7,500 feet above the level of the ocean. It is oval in shape, and hemmed in on all sides by porphyritic mountains and eminences, from which the volcanoes of Popocatepetl and Iztaccihuatl, shoot up beyond the region of eternal snow.

Its greatest length, from the mouth of the stream of Tenango in the lake of Chalco, to the foot of the Cerro de Sinóc, in the neighborhood of the canal Huehuetoca is $19\frac{1}{2}$ leagues, and its greatest breadth, from San Gabriel at Tezcoco, to the sources of the river Acapusalco at Quisquiluca, is $13\frac{1}{4}$ leagues. Its area is $258\frac{3}{8}$ square leagues, $23\frac{1}{3}$ of which are covered by lakes. On the south, east, and west, the mountains maintain a probable average height of 10,000 feet above the sea, while at the north their depression is considerable, and through the gaps and vallies the waters of the lakes are discharged towards the Gulf of Mexico.

Six great highways centre in the capital, and leave it to traverse the principal districts of the confederacy.

1st. The road to Acapulco on the west coast, which passes out of the valley over its southern rim of mountains at the point known as the Cruz del Marquez, about 2,284 feet above the city of Mexico, or 9,784 above the level of the sea.

2d. The road to Toluca, by Tianguillo and Lerma.

3d. The road to Queretaro, Durango, &c. called *El Camino de tierra adentro*, which leads across the eminences at the north of the valley, by an elevation of about 100 feet only above the level of the lakes. This road is the highway for the internal trade of Mexico with the northern provinces.

4th. The road to Pachuca and Real del Monte in the mining district, across the Cerro Ventoso.

5th. The road to Puebla, across Bonaventura and the plains of Apam.

6th. The *new* road to Puebla and Vera Cruz, by Rio Frio and San Martin, across the northern shoulder of the volcano of Popocatepetl. Its greatest elevation is at the barranca or ravine of Juanes, 10,486 feet above the level of the sea. Besides the two last mentioned roads there is a third, between the volcanoes of Popocatepetl and Iztaccihuatl, by Tlamanalco, Ameca, La Cumbre, and Cruz del Correo, passing out of the valley of Mexico into those of Cholula and Puebla.

Five lakes are embosomed in the valley in the immediate neighborhood of Mexico:—

1st. The lake of Zumpango, is the northernmost, and has an area of about $1\frac{1}{4}$ square leagues. A dam, called *La Calzada de la Cruz del Rey*, divides it into two basins, the westernmost of which is known as the Laguna de Zilaltepec, and the easternmost, the Laguna de Coyotepec. It is 26 feet higher than the mean level of the lake of Tezcoco, and supplies the rivers Pachuca and Quautitlan. The little village of Zumpango lies on its northern shore.

2d. The lake of San Cristoval is immediately south of the preceding, and is likewise divided by a dam into two basins, the northern called the Laguna de Xaltocan and the southern San Cristoval. In the first of these divisions are the villages of Xaltocan and Tomantla, built upon islands. This lake is twelve feet eight inches higher than that of Tezcoco, and its superficial area nearly 4 square leagues. On its shore lies the village of San Cristoval.

3d. The lake of Chalco spreads out at the southern extremity of the valley, and contains the village of Jico built on an island in its bosom. It is divided from the lake of Xochimilco by a dam, or *calzada*, across which the road passes from Tuliagualco to San Francisco Tlaltenango.

4th. The lake of Xochimilco is separated, as we have described, from that of Chalco; both of these basins cover a superficial area of $6\frac{1}{2}$ square leagues; and their level, according to Baron Humboldt, is 3 feet $9\frac{1}{2}$ inches above the great square of Mexico.

5th. The lake of Tezcoco is that in which the ancient city of Tenochtitlan was built upon the spot at present occupied by the modern city of Mexico, whose walls, however, are now reached by a canal of nearly a mile in length from the western borders of this inland sea. The rivers Teotihuacan, Guadalupe or Tepeyacac, Papalotla and Tezcoco are voided into it. The difference between its water-mark and the level of Mexico, which in Humboldt's time was four feet and one inch has been found by recent measurements to be 18 inches more. Its superficial extent is about 10 square leagues, and its waters are plentifully impregnated with salt, supplying the material for numerous works which are rudely conducted. A thick crust or deposit of carbonate of soda constantly whitens the edges of this lake, which are left bare by the receding of the waters after they have been swept over the leeward shores by the strong winds that occasionally prevail in the valley. The deepest parts of the lake of Tezcoco never contain more than from 6 to 8 feet of water, while some portions are not covered by more than two or three feet. There are two springs of mineral waters in the neighborhood of the capital;—one at Guadalupe, three miles from Mexico, and another at El Peñon, a volcanic pustule which rises abruptly from the plain on the margin of the lake of Tezcoco. The temperature of the latter is quite high.

The mode in which the valley is relieved from the danger of inundations in consequence of the rising of the waters of the lakes has been already noticed in a previous portion of this work.^[56] The *desague*, according to recent reports, requires considerable repairs and improvements for the future security of the capital.

The principal cities, towns and villages of this State are:—The national and state capital Mexico;—St. Angel, three leagues from the capital;—Tacubaya, about equidistant from Mexico, containing a number of beautiful residences, and an archiepiscopal Palace surrounded by groves and gardens; Santa Fé, Tlalpam or San Augustin de las Cuevas, four leagues south of the capital, situated upon the first slopes of the mountains, and filled with charming dwellings, to which the Mexicans occasionally retire during the warm season. It is in this town that the festival of St. Augustin is kept in the month of May, and during the three days of its celebration, Tlalpam is a scene of gaiety rarely equalled elsewhere on this continent. Rich and poor pour out from the capital to partake of the unrestrained amusements of the season, and thousands of dollars are lost at the gambling table or in the cock-pit, without which no Mexican festival is considered complete. The Mexican ladies appear at the balls which are given every night, or during the afternoon, on the green at the Calvario, and vie with each other in the splendor and variety of their dresses.

Ajusco, is a village south of Tlalpam:—Chalco, lies on the borders of the lake of that name, and is surrounded by the villages of Acohualpan, Totolapan, Tapostlan, Jico, Tlapacoya, Xochimilco, Mexicalcingo, Iztapalapan, Colhuacan, Huitzilopocho, Itztacualco, Churubusco, and Cuyuacan, most of which are inhabited by Indians and Mestizos who supply the markets of the capital. The Indians of Chalco, with their *caballos de palo* or "wooden horses," as they fancifully call their boats, carry on an extensive trade with Mexico and its vicinity. They navigate their lake and the canal leading to it with great dexterity; and large boats, capable of containing fifty or sixty persons, are almost daily seen leaving the landings at Mexico in order to convey passengers and freight to the neighboring country.

Tezcoco, lies on the eastern shore of the lake of that name, opposite Mexico, and at the distance of about 12 miles. It is no longer a town of much importance, but is interesting for its historical associations and for the ancient remains within its limits and neighborhood which will be subsequently described.

Tacuba is the site of the Spanish army's refuge after the *noche triste* or "melancholy night," during which Cortéz and his band were driven from the Aztec capital in the year 1520. The image of the *Virgin of Remedios*, has been

generally kept in a chapel in this village, and has often been brought to the capital in seasons of danger, distress or disease.

TLANEPANTLA; QUAUTITLAN; SAN TOMAS; SAN CRISTOVAL XALTOCAN; TONANTLA; TEHUILOYUCA; ZUMPANGO; HUEHUETOCA; are towns and villages north of Mexico.

SAN JUAN DE TEOTIHUACAN, and OTUMBA, lie east of the lake of Tezcoco, and are interesting for the fertility of their neighborhood and for their antiquities.

A ridge of lofty mountains, west of the capital, rising from the plain beyond the limits of Tacubaya separates the valley of Mexico from the valley of Toluca, in which is found the town of TOLUCA at the foot of the porphyritic mountains of San Miguel Tutucuitlalpillo, at an elevation of 8,606 feet above the level of the sea. It is a beautiful town, celebrated for its soap and candle factories; and the epicures of hams and sausages, procure their choicest dainties from its neighborhood. Lerma, lies on the banks of the pond from which the river Lerma springs; and Istlahuaca, twelve leagues from Toluca, is found in a spur of the same valley.

THE CASCADE OF REGLA. THE CASCADE OF REGLA.

The elevations, north of the valley of Toluca, which separate it from the valley of the river Tula, vary from 10,000 to 7,500 feet, and, in the bosom of the latter vale, is found the town of TULA, twenty-two leagues north-west of the capital. It is regularly built, on broad streets, and is celebrated for its Sunday-market, to which the Indians and Mestizos of the adjacent country flock in numbers.

TULANZINGO and APAM, are the chief towns of the districts;—PACHUCA is a mining town 8,112 feet above the sea, and, next to Tasco, the oldest mineral work in Mexico. It contains, with its suburbs of Pachuquillo, about 5,000 inhabitants.

REAL DEL MONTE, is another mining town, two leagues northerly from Pachuca, at an elevation of about 9,000 feet. Its climate is cold, and its extremely rarefied air is dangerous for lungs unaccustomed to breathe the atmosphere of such lofty regions. Within a few leagues of this place is the celebrated Cascade of Regla.

ATOTONILCO EL CHICO, or EL CHICO, is also a mining village, 7,737 feet above the sea, 4 leagues north-west from Pachuca, and 25 north-east from Mexico. It is

situated on the slope of a beautiful valley, surrounded by high mountains, whose peaks peer above the tops of the forest. In the vicinity of Chico, about 5 leagues west and north-west lie the mines of Capula and Santa Rosa.

ATOTONILCO EL GRANDE is a village 7 leagues north of Real del Monte.

ACTOPAN and ITZMICUILPAN lie in the midst of fine agricultural regions.

ZIMAPAN, is a mining town, about 10 leagues north-west of Itzmicuilpan, and 42 from Mexico, situated on the slope of a wide and deep valley, which is watered by a copious brook.

San José del Oro, is a village and mining district, north of ZIMAPAN.

Huejutla; Mextitlan; and Zacualtipan, complete the enumeration of important towns or villages in this part of the State.

From the height of 9,784 feet above the sea, at the Cruz del Marquez, the road descends across the sierra at the southern end of the valley of Mexico, into the valley of Cuernavaca, which, as we have already remarked in the historical part of this work, is a corruption of the Aztec "Quaunahuac." This broad, beautiful and rich valley, lying between three and four thousand feet *lower* than the valley of Mexico, winds gradually into the vallies of Cuautla and Puebla around the eastern spurs of Popocatepetl, and is remarkable for its fruitfulness and salubrity. Sugar, coffee, indigo, and all the tropical plants and trees, are successfully cultivated, and the 48 sugar estates comprehended within its limits, produce not less than 200,000 hundred weight of raw and refined sugar, besides 50,000 barrels of distilled spirits.

The chief town is Cuernavaca, lying 3,998 feet above the sea, 3,426 below the city of Mexico, and 5,786 feet beneath the Cruz del Marquez, from the neighborhood of which the whole panorama of this splendid valley bursts upon the traveller. Cuernavaca rests on a tongue of land projecting into the valley between two steep barrancas or ravines. Plentifully supplied with water, and situated in the midst of the *tierra caliente*, it is, of course, buried among luxuriant foliage which is never touched with frost. The town may, therefore, be justly called a garden, in whose midst rise the picturesque houses of the townfolk,—the walls of the church built by Cortéz,—and the dwelling that was erected during the Spanish dynasty by the fortunate miner Laborde. The grounds, attached to this edifice, were laid out with care and taste. Lakelets spread out among the profuse vegetation; *bellevues* were erected at every spot whence a favorite prospect of the valley might be obtained; and bowers were built in the shadiest corners amid lofty palms or choice varieties of native and

exotic plants. Time and neglect have done their work upon this beautiful structure; but the vegetation is so abundant and graceful, that the ruined portions are soon filled up and concealed by flowers or leaves. Few spots on earth afford a more agreeable retreat to a man who is willing to pass his life in a tropical climate and in a stagnant society.^[57]

ACAPANTZINGO is a village in the neighborhood of Cuernavaca, whose Indian inhabitants are remarkable for their entire separation from the rest of the Mexican population. They have never mingled their blood with the Spaniards during the three hundred years of foreign dominion, but have always preserved, intact, their own laws, habits, institutions, language and customs. They work on the neighboring plantations; but, with this exception, refuse all intercourse with the Mexicans, or part in their government. The authorities have never forced them to abandon their secluded system; but seem to have respected their feeble rights, as the invaders respected the republic of San Marino in Italy during the wars that succeeded the French revolution.

CACAHUAMILPA, or CACAHUAWAMILPA, an Indian village in whose vicinity lies the remarkable cavern of that name which winds

CITY OF MEXICO.
CITY OF MEXICO.

for many miles in the heart of the mountain, and is filled with some of the most curious and gigantic stalagmites and stalactites on our continent.

YAUTEPEC is a village between the vallies of Cuautla and Cuernavaca; and is celebrated for the excellence and quantity of its tropical fruits. Zapotes, bananas, anonas, guayavas, pomegranates, pine apples grow luxuriantly, with the least care or labor, and at least thirty thousand dollars worth of sweet oranges are annually sent from it to the market of Mexico.

CUAUTLA DE AMILPAS, or CIUDAD MORELOS, is a town in the valley of that name, and made the staunch and memorable resistance to the Spaniards, under the heroic Morelos, during the revolutionary war. It lies 24 leagues S. S. East from the Valley of Mexico,—13 east from Cuernavaca, and is 4,019 feet above the level of the sea. Its climate and productions resemble those of Cuernavaca, but it has never recovered from the effects of the deadly siege.

Passing in a south-westerly direction from the Valleys of Cuautla, Cuernavaca, Mexico and Toluca, we enter the rich metallic region of Tasco which lies upon the declivities of the Sierra Madre, sloping towards the Pacific. In this district we find the town of TEMASCALTEPEC, which grew up in the midst of a mining country, formerly rich in the production of silver, but now almost abandoned for such purposes. The North Americans were induced to adventure largely in the mines of this district immediately after the revolution, but their capitals were entirely lost in works which were found to have been abandoned by the Spaniards as valueless, long before they were sold by speculators to companies from the United States. The climate of Temascaltepec is mild and agreeable; and, when the mines were productive, it must have been an agreeable residence. The inhabitants, who have abandoned their former mineral speculations, now devote themselves to the manufacture of cotton shawls and *rebozos*.

EL VALLE; REAL DEL CRISTO; SULTEPEC; La Plata; TEXUPILLO; ZACUALPAN; HUESULTEPEC; ALMOLOYAN; MALINALTENANGO and TECAMOTEPEC are villages in the vicinity of Temascaltepec.

TASCO is a mining town and capital of the canton or district of that name,

5,853 feet above the sea. The village itself is not important, but is nevertheless worthy of note as the oldest mining region in the confederacy. Soon after the conquest it was wrought for *tin*, which had been found in the neighborhood by the Indians; and in the year 1752, Laborde, fully developed its mineral wealth in silver.

Extending our observations further to the south-west, we reach the district of Acapulco, which is divided between the slopes of the *Sierra* and the shores of the Pacific. The declivities of the Cordillera are cut by deep vallies, which open their long and regular vistas towards the ocean. The principal places in this part of the State of Mexico, are CHILAPA, with 4,000 inhabitants; MEZCALA; CHILPANTZINGO; MAZATLAN; APANDARO, with 3,500 inhabitants; ZIRANDARO, and ACAPULCO.

BAY OF ACAPULCO.

The city of ACAPULCO is the capital of its district and a port in the Pacific in $16^{\circ} 50' 29''$ north latitude, and $102^{\circ} 12' 12''$ west longitude from Paris. It lies in a bay, 19,700 yards long, from East to West, protected by a ring of granitic hills and rocks, in which ships may easily load. The entrance to the bay is broad; and the anchorage good, but the water is not deep. Acapulco was formerly the seat of Spanish trade between Mexico and the East; but its small population of 3,000 Mulattos, Zambos and a few Mexicans, who are chiefly pearl divers, fishermen and farmers, fully indicates the decline of its commerce and civilization.

The mountains of the State of Mexico are rich in deposits of precious and base metals. North and north-east of the Valley of Mexico are the mining districts and mines of Real del Monte, Moran, Atotonilco el Chico, Pachuca, El Cardinal, Zimapan, Lomo del Toro, Macroni, Pechuga, and San José del Oro. West and south-west of the Valley, are the districts of Rancho del Oro, Temascaltepec, Real del Cristo, Sultepec, Zacualpan, Tasco, Tepantitlan, Tetéla del Rio, and several others. These were all diligently worked by the Spaniards prior to the revolution, but have not been found as profitable by the foreigners who undertook their management since the Independence of Mexico. In the year 1835, numbers of British subjects and Germans formed companies to work these mines, and although the results have been favorable in some places, the greater

part of these luckless enterprises have been altogether abandoned.^[58] Such has been the sad issue in most of the speculations in *silver* mines; but we learn that a native company has explored and worked an *iron* mine at the foot of the Volcano of Popocatepetl, which promises to repay them for their trouble and expense with a plentiful supply of this useful metal.

CHAPTER VI.

DESCRIPTION OF THE CITY OF MEXICO—CATHEDRAL—ITS ARCHITECTURE AND RICHES—THE PALACE—UNIVERSITY—MARKET—CHAMBER OF DEPUTIES, ETC.—PORTALES—MINERIA—LA MERCED—SAN DOMINGO—CHARACTERS AND COSTUMES—PASEOS—ALAMEDA—AQUEDUCTS—PASSEO NUEVO AND DE LA VIGA—ALAMEDA—DESCRIPTION OF IT—LIFE IN MEXICO—THEATRES—OPERA—DOMESTIC LIFE—GENUINE BUT CAUTIOUS HOSPITALITY—LEGEND OF THE VIRGIN OF GUADALUPE.

THE CITY OF MEXICO.

A STREET IN THE CITY OF MEXICO. A STREET IN THE CITY OF MEXICO.

The city of Mexico has generally been reputed by travellers as the most beautiful on the American Continent. Its picturesque site, in the lap of the lovely valley, bordered by broad meadows and lakes, has doubtless contributed greatly to this opinion, and it is, indeed, necessary for a stranger to reside for a long time within

INTERIOR OF CATHEDRAL. INTERIOR OF CATHEDRAL.

its walls before he becomes sufficiently disenthralled from the spells of climate and national scenery, in order to do justice to the other American capitals. Mexico, unquestionably, is the queen of Spanish cities on this side of the Atlantic; but, in external taste, in modern elegance, and an agreeable combination of splendor and comfort, it does not compare favorably with the chief towns in the United States.

Built in regular, square blocks, on a dead level, it wants the picturesque breaks or abruptness, which are only found on inequalities of surface. Its houses, erected around quadrangles—with a court yard or *patio* in the centre of each,—

are stern and massive edifices; but they have rather the air of castles designed for defence or seclusion, than of habitations whose cheerful portals extend a hearty welcome to every passer. They partake of the age in which they were constructed, and of the traditional architecture of Southern Europe. Yet,—in the pellucid air of these lofty regions,—with its fancifully *frescoed* walls basking in the pure sunshine, and relieved against the dark background of surrounding mountains;—its streets filled with a motly and picturesque crowd;—its towers and domes breaking the regular evenness of the flat roofed dwellings,—and its splendid groves in the *alamedas* and *paseos*,—Mexico is, indeed, a capital worthy a great nation, as well as of the enduring recollection and praise of every traveller who visits it.

The plan of the city is as regular as that of a checquer board. Its straight streets divide it from east to west and north to south; whilst, nearly in the centre, the great square or Plaza spreads out for many an acre, surrounded by the chief edifices of the State, the Corporation or the Church.

On the northern portion of the plaza is erected—on the alleged site of the great *teocalli*, or pyramid temple of the Aztecs,—the cathedral, with its adjacent *Sagrario*. It is, externally and internally, an imposing building of the seventeenth and eighteenth centuries; for although its architecture is neither regular, classical, nor conformable to the rules of any distinct order, yet its massiveness and elaborate detail, impart to it a certain degree of effective grandeur. We have always found it impossible to receive, or impart an idea of architectural beauty or magnificence by description alone. The best writer can but catalogue dimensions and details, and his account is, therefore, always more of a builder's estimate or bill, than a picture which impresses our minds with a vivid image of the real object. We turn, therefore, gladly from the feeble pen to the graphic pencil, and refer the curious reader to the accurate plates which accompany this volume, for a better idea of the internal and external appearance of this sacred edifice, than we can convey by language alone.

Yet there are parts of the cathedral to which even the pencil cannot do justice. The floor of this magnificent temple,—made of loose and heavy boards, which are moveable at pleasure, in order to allow sepulture beneath them,—is the only part of it which seems neglected or shabby. Every thing else is gorgeous beyond conception, although the splendor is more colonially barbaric, than nationally classic. Profusion is the chief characteristic. It seems as if the priests and the pious worshippers had designed to heap up rather than arrange their offerings in honor of the Almighty, and as if their piles of precious metals would form the most graceful as well as grateful emblem of their religious sincerity. In the

wilderness of columns, statues, shrines, oratories, altars and fonts, the traveller stands amazed and confused; and leaving the pictures of the church to demonstrate its complete effect, he retreats upon the *metallic* standards which surround him, in order to convey the best estimate of this queen of American temples.

The exterior walls front upwards of four hundred feet on the plaza, and run back about five hundred feet to the narrow street of Tacuba. Entering the main portal, whilst the huge bells are clanging in the two steeples above it, you face the *choir* for the clergy, which is built of rare, carved woods, and elaborately covered with gilded images, whose burnished surface flashes in the sun-light. Beyond this is the high altar, raised from the floor on an elevated platform, and covered with ornaments, crosses, and candle-sticks, wrought in the precious metals. From this sanctuary,—extending around the choir, and probably near two hundred feet in length,—runs a railing, between four and five feet high, and proportionally massive, composed of gold and silver very slightly alloyed with copper. And on the summit of the high altar rests the figure of the Virgin of Remedios, whose dowry in dresses, diamonds, emeralds and pearls is estimated at not less than three millions of dollars.

On the east of the cathedral, fronting the west, and bounding the whole eastern limit of the plaza, is the national palace, formerly the residence of the viceroys, and now occupied by the president, as a dwelling. It is an immense quadrangular building, constructed on the ground which it is supposed was covered by the palace of Axayacatl, in which Cortéz was lodged by Montezuma, when he first arrived in the Aztec capital. Besides affording room for the president and his family, this huge edifice contains all the offices of the several secretaries of state; the general treasury and tribunal of accounts; the supreme court; the headquarters of the general-in-chief; the two chambers of deputies and the senate, both of which are elegant apartments, and, especially that of the deputies;—two barracks for infantry, cavalry, and a park of artillery;—two prisons; some shops; a botanical garden; and the mint. South of the National Palace, but not fronting the plaza, are the University, containing the National Museum, in front of which is the magnificent modern market, built during the administration of Santa Anna in 1842.

THE CHAMBER OF DEPUTIES.
THE CHAMBER OF DEPUTIES.

Directly opposite the façade of the cathedral, in the south-eastern corner of the plaza, is the Casa Municipal, or City Hall, which is occupied partly by the corporate authorities, and partly by the merchants' Lonja, or exchange. On the western side of the square there are no public buildings; but the palace of Cortéz, which was erected by the conqueror and rebuilt and still owned by his descendants, covers a portion of its front and deserves to be mentioned for its associations if not for its architectural beauty. The whole of the side walks on the southern part of the plaza, and a portion of the western, beyond the Calle Plateros, or street of the silversmiths, are protected by a broad and massive corridor or portico, called the *portales*, in which the traveller will constantly find crowds of hawkers, pedlars, shopmen, letter writers, clothiers, fruit sellers, liquor venders, crockery dealers and book hucksters. A few squares west of the plaza, is situated the magnificent palace of the Minería, or School of Mines, one of the most elegant edifices in the capital.

COLLEGE OF MINES—(EXTERIOR.)
COLLEGE OF MINES—(EXTERIOR.)

In noticing the general splendour and luxury of ecclesiastical architecture in Mexico we should not omit to mention particularly the beautiful convent of La Merced, a view of whose elegant interior court and corridor is presented in the opposite plate. Gloomier recollections, however, are conjured up from the past by beholding the church of San Domingo and the neighboring inquisition, which was the prison and the place of torture to so many unfortunate victims dining the vicerojal government of New Spain.

It is, in the centre or heart of the city, that all the characteristic habits and costumes of the people may be most readily observed. The great body of the crowd is, of course, composed of the common classes—the males in their shirts and trowsers with a blanket thrown

CONVENT OF LA MERCED
CONVENT OF LA MERCED

CARBONERO. BEGGAR. AGUADOR.

CARBONERO. BEGGAR. AGUADOR.

over their shoulders, and the females in chemise and closely cinctured petticoat of fanciful colors, whilst their heads, and thinly clad bosoms, are folded and partly concealed in their graceful *rebozos*. Then there are the wretched *leperos*, whose long and tangled hair falls in wierd strands over their tawny necks and dirty brows, beneath which flash the sharp black eyes that are constantly on the watch for something to do, to drink, to eat, or to steal. In the neighborhood of the *pulquerias* or liquor shops, crowds of these social vermin swarm and sleep.

CHURCH OF SAN DOMINGO AND THE INQUISITION. CHURCH OF SAN DOMINGO AND THE INQUISITION.

Pushing his way, eagerly and industriously through the crowd, the laborious *aguador*, or water carrier elbows his way, as he trots his rounds to fulfil his daily task with his twin jars of the refreshing fluid, one of which he bears upon his back, suspended by a strap around his brow, and balanced by another which depends from a leathern thong, which rests upon the back of his head. Hard by the *aguador*, appear the *carbonero*, or coal dealer,—the poultry seller,—the crockery pedlar, or the porter,—all of whom bear their burdens on their shoulders, and move along in that ambling trot which is peculiar to the laborers and Indians of Mexico. Large numbers of women with oranges, pears, potatoes, tomatoes, onions, lemons, *guyavas*, *aguacates*, *chirimoyas*, plantains, fish and eggs, swell the increasing crowds. The butcher drives along a diminutive donkey, on whose saddle he has erected his peripatetic shambles, filled with beef or mutton, whilst, at the corners and on the edge of the side walks, sit long rows of Indian women with pans of savory *chile* sauces and heaping baskets or cloths of steaming *tortillas*. All these eager venders of the necessaries and luxuries of life, engage public attention by shouting the quality and value of their wares at the top of their voices. Sound and motion are the predominant features of the varied panorama; and the stunned stranger is glad to retreat into quiet nooks and byeways in which he meets the stately gentlewoman and cavalier, dressed in the becoming habiliments of their station. When ladies go abroad in Mexico to shop or visit, they universally use their coaches; yet every woman daily *walks* to mass,—and, whilst engaged in this religious pilgrimage, exhibits the old and habitual costume of black silk gown and lace mantilla, which she has derived from her Spanish ancestors. This is a charming dress. It exposes the black, lustrous hair of the graceful wearers, and fully develops that majestic yet

feminine gait with which the Mexican women seem to glide and undulate along their path. The inseparable fan,—her constant companion, play thing and interpreter, in the saloon, the ball room, the theatre or the church,—rests carelessly, in her right hand, which coquettishly clasps the folds of her mantilla; and, from beneath its silken folds, her large lustrous eyes gleam soft and languishingly above her pale but healthful cheeks. If Mexican ladies are not so variously beautiful as the women of northern lands, in whose veins the blood of many nations has mingled, they are most loveable creatures in spite of the uniformity of their national type. There is a degree of exquisite tenderness, and an expression of affectionate sincerity, in the face of Mexican women, which instantly wins not only the respect but the confidence of the gazer. Nor does their character in real life contradict their amiable physiognomy. Faithful as a friend and as a wife, the Mexican lady is a person, who, with the educational advantages enjoyed by their northern sisters, would rightfully maintain as high a position in the social scale, with, perhaps, a more delicate degree of sensibility.

The lower classes of females are of course different from the upper ranks both in appearance and personal qualities. They are of impure blood. Spaniard, Indian, Negro and Malay, have

FRIAR. PRIESTS. LADY. GENTLEMAN.
FRIAR. PRIESTS. LADY. GENTLEMAN.

POBLANAS.
POBLANAS.

contributed to their ancestral pedigree, and their race is consequently mixed; yet, impure as they are by descent they have not failed, like all imitative inferiors to catch the manners and bearing of the aristocracy. There is hardly a Mexican girl,—whose whole wardrobe consists of her chemise, petticoat, rebozo, comb, looking-glass and shoes,—who does not move along the street, when in full dress, with the queenly step and coquettish display of eye and hair from beneath her cotton *rebozo*, which we have just admired in the Mexican *doña*.

The costume of Mexican gentlemen is the usual European dress worn by the same class among northern nations. But, in addition, the broad folds of a massive cloak are always thrown over their shoulders upon the slightest pretext or

provocation of the weather, whilst their nostrils are constantly refreshed by the fragrant fumes of a cigar or cigaritto.

The city of Mexico possesses two magnificent *Passeos* and an *Alameda* in which all classes of the people habitually recreate themselves. The city is supplied with water by splendid aqueducts, bringing the limpid streams from the neighboring hills.

TERMINATION OF AQUEDUCT IN CITY OF MEXICO. TERMINATION OF AQUEDUCT IN CITY OF MEXICO.

The *Paseo Nuevo* lies west of the city towards Chapultepec and Tacubaya. It is a broad avenue, laid out tastefully amid the beautiful meadows that surround the city, and is broken at intervals by fountains of stone, and shaded by rows of stately trees. When the weather is fine, which it usually is for six or eight months of the year, the disengaged people pour out to this gay resort, near sunset, on foot, in coach, or on horseback, to enjoy the refreshing breeze and to greet each other on this social exchange. The *Paseo* is broad enough to allow several coaches, to drive abreast if needful, but the course is usually occupied by only two lines of advancing and returning carriages or horsemen. This promenade parade circulates up and down the highway for an hour; but when the evening bells toll for *oracion*, every hat is raised for a moment and every horse's head immediately turned homewards.

The *Paseo de la Viga*, is on the other side of the city, and is preferred by many persons to the *Paseo Nuevo*. It skirts one of the canals leading to the lake of Chalco, and affords the stranger an opportunity of observing the crowds of Indians who linger along the banks, or push off at evening in their boats, crowned with flowers and strumming their guitars if the day happens to be one of festivity.

This *Paseo* was constructed under the viceroyalty of Revilla-Gigedo, whose improvements of the city and neighborhood of Mexico have contributed so greatly to the elegance and beauty of the capital.

THE ALAMEDA FOUNTAIN. THE ALAMEDA FOUNTAIN.

The *Alameda* is a beautiful grove of lofty forest trees planted in a rich soil in the western section of the city and on the road to the

PASSEO NUEVO.
PASSEO NUEVO.

PASEO DE LA VIGA.
PASEO DE LA VIGA.

Paseo Nuevo. It occupies a space of ten or twelve acres, enclosed by a substantial stone wall, which is surrounded by a deep and flooded moat. The gates are closed daily at the *Oracion*; and the spot is thus protected carefully from all improper uses as well as from wanton destruction. Around the whole of the inner wall, lines of substantial stone seats are erected, and, in front of them, an excellent carriage road affords a drive for those who are not disposed to mingle in the gayer circle of the *passeos*. Within this highway the plantations begin. Paved paths cross and recross the dense groves in a labyrinth of lines, while, at intervals, fountains and secluded benches break the uniform solemnity and quietness of the spot. In the centre of the enclosure, a massive fountain, surmounted by a gilded statue of Liberty, rises nobly in the midst of a broad area, whose top is almost *domed* with the arching branches of the trees, which admit a scant but lovely light through a narrow aperture, like the sky-light of the pantheon at Rome. The birds, unassailed for years within this grove, have flown to it as a sanctuary, and the branches are forever vocal with their natural music. Situated as it is on the edge of the town, and surrounded by houses, it nevertheless seems buried in the depths of a forest; and perhaps no spot, in America, is so fitted for the enjoyment of a quiet man, who can either take his exercise on foot or horseback, beneath the sheltering trees, or wile away his hours with book and pencil on the comfortable seats in the shady woods. It is the favorite resort in the morning of all classes who are obliged to rise betimes and go abroad for health. Students, priests, monks, lovers, loungers, dyspeptics, consumptives, nurses, and troops of lovely children resort to the *Alameda* as soon as the gates are opened, and study, meditate, pray, flirt, exercise, or romp, until their appetites or the sun warn them of the flight of time.

In these drives, in dress, dining, domestic duties, mass, and theatre the hours

of a Mexican's day are chiefly consumed. This catalogue of "idle occupations," does not, of course comprise all classes, but includes that portion of the aristocracy which is every where set apart by its fortunate exemption from necessary toil. In a country so rich as Mexico this class must necessarily be large; and, if it begins the day in plain black, and on its knees in chapels, it ends its waking hours amid the blaze of dress and jewels in the family box in the theatre. In most of the countries of southern Europe, and in all their old colonial possessions, the theatre is one of the necessities of life, and a box is as indispensable as a dwelling. It forms a neutral ground upon which all can meet without the requirements of a forced hospitality, and consequently it affords all the pleasures of general society without the necessity of expensive entertainment. There are great disadvantages attending upon this constant dwelling in the public eye and in the blaze of artificial light; yet it is so agreeable a mode of killing time in Mexico, that the habits or the nature of the people must change essentially before we may expect to find them surrounding nightly the domestic hearth instead of the dramatic stage. Yet we should not be unjust to the Mexicans in this condemnation of one of their agreeable habits, which originates perhaps as much in their climate as in their tastes. Fine skies and genial atmospheres drive people into the open air. Wintry winds, desolate heaths, ice and snow, gather and group them into the nestling places of home. When houses become in this way mere shelters instead of shrines we might well pardon the taste which leads a sensitive people to enjoy the beautiful landscape as long as day permits it to be seen, or to retreat, at nightfall, into those splendid theatres in which they may behold the mimic representation of that varied activity of life to which their monotonous career is a comparative stranger.

NEW THEATRE.

NEW THEATRE.

Nevertheless, a well-bred Mexican family is one of the most delightful circles into which a genteel stranger can be admitted. The

INTERIOR OF A MEXICAN HOUSE.

INTERIOR OF A MEXICAN HOUSE.

formal manners of the Spaniards have descended to the Mexicans. You are

received cordially but carefully, and you must either be useful or *known*, before you are admitted into the confidence of a family. Until this occurs your reception and departure from a Mexican dwelling are quite as ceremonious as your initiation into a Masonic lodge. Bows, gestures, shrugs, grimaces, and all the ordinary rites of external politeness are plentifully bestowed on the stranger;—"But sad is the plight of the luckless knight," who imagines that these elegant formalities literally mean what they profess. Americans, especially, whose extraordinary and loose social facilities habituate them to an unrestrained intercourse with all the members of families as soon as they are either prudently or imprudently introduced to them,—are often in danger of making this sad mistake in Mexico. Neither wealth, education, nor political position, entitle an individual in that republic to pass the threshold of distant and civil intercourse. The Mexican's house, purse, or *daughter*, are not at "your disposal," although he tells you that everything he possesses is "*à la disposition de Usted!*" Yet, when his acquaintance has ripened into friendship, and he understands that you appreciate his tastes, his country, his language, his prejudices, his religion, and his habits, or do not visit him, as many foreigners have done, merely to scoff and condemn,—then, indeed, the social manners of the Mexican relax into intimacy, and the attention he bestows on you may be more firmly trusted because it was so cautiously yielded. The stranger who penetrates a Mexican house under such circumstances, finds its hospitality unbounded, and its generous inmates his devoted and faithful servants either for life or until he forfeits their esteem by treachery or misconduct.

THE VIRGIN OF GUADALUPE. THE VIRGIN OF GUADALUPE.

In every Mexican church, monastery, convent, palace, house, hut, hovel, hacienda, or rancho, the traveller will not fail to observe an image of "The Virgin of Guadalupe." Many men receive the name of "Guadalupe," in baptism, and almost every woman has it added to the others she receives from her parents or sponsors. A saint whose tutelary influence is at once so national and so curious deserves especial mention in the notice of a country over whose people she is supposed to exercise a mysterious dominion; and we therefore present the reader the following translation from the Spanish of Don Ignacio Barillo y Perez, in which the history of her miraculous appearance is set forth with more detail than we have elsewhere encountered.

The story of the Virgin is implicitly believed by the great mass of the people; and the wonderful picture, described in the following account, adorned with invaluable precious stones, is now preserved in a massive golden frame, in the collegiate church of Guadalupe erected at the foot of the hill of Tepeyacac. On the 12th of every December, the anniversary of the miraculous visit, the people pour forth from the capital to the sacred shrine and witness the splendid rites instituted in honor of the saint. In the temple and at the holy well, they are met by crowds of country folks and Indians, who come from far and near on the same errand, while the whole pompous ceremonial is countenanced by the presence and apparent devotion of all the high officers of government including the president himself.^[59]

**LEGEND OF THE APPARITION OF THE MOST HOLY VIRGIN
MARY OF GUADALUPE; THE PATRON SAINT AND
PROTECTRESS OF MEXICO.**

Tepeyacac is a small mountain whose southern side is a scarp and inaccessible precipice which looks to Mexico, situated on the south of it at the distance of about three miles. Its ascent, by whatever part undertaken, except that of the pathways made to facilitate the access, is extremely rough and stony. Its whole surface is covered with crowsfeet, buck and hawthorn, which are common to such sterile wastes. The Indian name, Tepeyacac, signifies the abrupt extremity or termination of hills, and in this bluff, terminate all the hills to the north of the capital.

It was celebrated in the days of heathenism for the worship paid in this place to the mother of the false gods of the Indians, but it is more celebrated at present for the adoration which is worthily paid to the Mother of the true God in her beautiful temple.

As Juan Diego,—an Indian recently converted, of pure and unblemished morals, though of lowly birth, was passing by this place on Saturday, December 9th, 1531, on his way to hear mass and participate in the Christian worship which the Franciscan fathers taught in the district of Tlatelolco, at the hour of early dawn, he heard, upon attaining the brow of the little mountain, which he was ascending on the western side, a sweet, sonorous and harmonious music, as of little birds upon its summit. The ravishing tones and rare melody attracted his attention and arrested his steps. On looking up, as was natural, he saw a white and shining cloud, surrounded by a rainbow, and in its centre a most beautiful lady, like the image we now venerate in the sanctuary, who calling with a sweet and gentle voice, addressed him in his own language with wonderful suavity and

told him she was the Virgin Mary, Mother of God, whose mass and doctrine he was going to hear, and she commanded him to go to the bishop and tell him that it was her will that a temple should be built to her upon that spot, in which she would show herself a pious mother towards him, his nation, devotees, and as many as should solicit her support and protection in their hour of need. She directed him to tell all he had seen and heard, and added: 'Be sure, my son, for whom I feel a delicate and tender love, that I will repay all you do for me; I will render you famous; and I will endow you with benefits for the diligence and labor you display. Now, my servant, in whom I delight, thou hast heard my desire, go thou in peace.'

The Indian promptly obeyed and went to the palace of the bishop, the illustrious Señor Don Francisco de Zumarraga, who since the year 1528, had resided in Mexico with the title of Protector of the Indians, and who afterwards became the archbishop. The prelate heard him with surprise, and prudently directed him to return on some other occasion, when having well considered and examined into so singular an event, he might deliberate as to what was proper to be done by him.

The Indian returned with the answer to the Most Holy Virgin whom he found in the same place. Prostrating himself before her, with words of submission peculiar to the Indians, he repeated the reply of the bishop, adding that, in order to secure compliance with her will, it would be necessary to send some person of authority and credit, as it appeared to him he was not believed because he was an humble man and a plebeian. The Most Holy Virgin, with no less benignity and suavity than on the previous occasion, replied: 'To me neither servants nor followers whom to send are wanting if I should I wish, since I have multitudes at my command; but it is agreeable to me now that *thou* shouldst perform this mission, and make the solicitation. Through your intervention I wish to give effect to my will, and desire you to speak again with the bishop, and tell him he must build a temple in honor of me on this spot; and that it is the Most Holy Virgin Mary, Mother of the true God, who sends you to him.' Juan Diego answered: 'Do not be offended, my Queen and Holy Lady, at what I have said, which is not intended to excuse me from this office.' Desiring to satisfy the Most Holy Virgin, although fearful the bishop would not give credit to his story, he pledged himself to repeat the message the next day; and promised, that at the setting of the sun, he would be at that spot once more with the reply. Bidding adieu to the blessed apparition with profound humility, he went to his village and his house, but it is not known whether he mentioned to his wife, or other person, his strange adventure.

The following day, Sunday, December 10th, 1531, Juan Diego went again to hear mass and participate in the Christian worship. Upon the conclusion of the service, he went diligently to discharge his mission, and although the servants of the bishop delayed him a long time at the entrance of the palace, he succeeded at length in coming into the prelate's presence. With lively expressions of feeling, which made that dignitary shed tears of tender pleasure, he prostrated himself before the bishop, and told him he had a second time seen the Mother of God, who commanded him to return and repeat that it was her will a temple should be built in honor of her on the spot at which she appeared. The bishop listened with great attention, and examined him with many questions, in the answers to which he could detect no discrepancy; and, in fine, knowing it could neither be a dream nor fiction of the Indian, he told him that what he had said was not sufficient to ensure credibility; that he must ask some *sign* from the Holy Lady, by which it might be known that it was really the Mother of God who sent him.

The Indian, with intrepid confidence, replied that he would ask whatever the bishop desired; when the latter, observing that he was not abashed, but offered to ask for the signs, ordered him to go, but, meanwhile, secretly despatched two confidential members of his family to follow the Indian, and to observe with whom Juan Diego spoke on his arrival at the hill of Tepeyacac. They did so; but when they arrived at the bridge over the river that empties, at the foot of the hill, into the lake which lies to the east of Mexico, the Indian disappeared from the spies who were watching him. They examined the summit, brow, and circumference of the hill, without failing, in their anxious solicitude, to explore every ravine, fissure, and fragment of it, but not finding him in any part, they concluded that the native was a deceitful impostor, and confirmed in that idea, they returned to the bishop, begging him to punish the Indian if he repeated his imposition.

As soon as Juan Diego, who was in advance of the servants, arrived at the top of the hill, he found there the Most Blessed Mary awaiting the prelate's answer. Pleased with his attention and promptitude, she directed him to return the next day, when she would give him a sign that would ensure credibility with the bishop. The Indian promised to do so, but he could not comply with the mandate of Our Lady, to return the next day, December 11th, 1531, as he found on reaching home that his uncle, Juan Bernardino who held the place of father in his affections, had fallen ill of a malignant fever, which the Indians call *cacolixtli*, on which account he was detained that day in administering to him some simples used by the Indians, all of which, however, he applied without avail. At length, the infirmity assumed a fatal character, and the patient asked Juan Diego to call

in a priest, from whom he might receive the Holy Sacrament and Extreme Unction.

The 12th of the same month, before the dawn of day, Juan Diego set out for the Confessor, but on approaching the mountain near the place where he had seen and spoken to the Most Holy Virgin, foreseeing that she might blame him for his want of care in not having returned, and that she might detain him to carry the signs to the bishop, and considering moreover that the message he bore did not admit of delay, he pursued another path lower down the mountain, towards the eastern part of the hill, imagining that there he would not meet the Virgin. But this did not turn out as he supposed, for passing the spot whence a fountain was flowing, on turning to the brow of the hill, he saw the Holy Mother descending from the summit to meet him in the path! The Indian, surprised by the saintly apparition, was greatly alarmed; but the Holy Virgin, with an affable countenance, said to him: 'Whither goest thou, my son? What road is this thou hast taken?' Juan Diego was sadly confused, frightened, and abashed; but the amenity with which Our Lady met him renewed his courage; and prostrating himself at her feet, he said: 'Do not be offended, Beloved Virgin, at what I am about to say to you.' And, after saluting her *to ascertain the state of her health*, he began to exculpate himself by briefly narrating the unfortunate situation of his uncle, begging her to have a little forbearance with him, and that he would return some other day to obey her commands.

The Holy Mary heard him with incomparable benignity, and replied, 'Hear, my son, what I say. Do not allow yourself to be disturbed or afflicted by any thing; neither fear infirmity, affliction, nor grief. Am not I, your mother, here? Are you not under my shield and protection? Do you need more? Give yourself neither trouble nor concern on account of the illness of your uncle, who will not die of this present malady; and, moreover, rest satisfied that even at this very instant he is perfectly cured.'

The Indian, consoled and satisfied by the Virgin's assurance, was filled with divine confidence, and without caring for any thing else, he asked for the sign he was to take to the bishop. The Virgin told him to ascend the hill to the spot where she had previously conversed with him, and cutting the flowers he would find growing there, to collect them in his *tilma* or blanket and bring them to her.

The Indian obeyed unhesitatingly, although he knew that these rude wastes produced nothing but thorns even in the most flourishing springtide.

Arrived, however, at the summit, he found a *bed of various budding flowers, odorous and yet wet with dew*. He cut, collected and placed in his *tilma* as many of them as it would hold and bore them to the Most Holy Virgin, who awaited

him at the foot of a tree, called by the Indians Cuautzahautl, (a species of palm of wild growth, bearing only white flowers similar to those of the white lily,) which grew in front of and near the source of the fountain. The Indian bowed humbly and exhibited the flowers which he had cut. The Virgin taking them in her blessed hands impressed them with a holy virtue and arranged them in the Indian's *tilma*, (which was, in fine, to be the repository of her sacred image,) and said to him, 'This is the sign which I wish you to take to the bishop, in order that he may build me a temple on this spot;' and she charged him, saying, 'show no one what you have until you arrive in his presence!'

With this she dismissed Juan;—and the Indian rejoicing in the sign, (for he knew that through it his embassy would have a happy issue,) he hastily took the path to Mexico.

Juan Diego arrived at the palace of the bishop with the credentials of his embassy, and informed various members of the family that he wished to speak with him. Nevertheless he could not obtain permission to enter, until, enraged at his importunity and perceiving his *tilma* full of something, they sought to ascertain what it contained; and although in obeying the mandate of the Most Holy Virgin, he resisted and hid from their sight these miraculous flowers, they did not desist from using violence to discover what he seemed so anxious to conceal. Seeing, however, that they were only flowers wet with dew, and admirable for their beauty and fragrance, they thrice attempted to seize some without being able to do so, for the powerful hand of the Virgin resisted their violence, affixing the blossoms in such a manner to the *tilma* that upon touching them they appeared painted or interwoven in the material of the garment itself. This portentous novelty caused them to hasten to the bishop with the information that Juan Diego was waiting to speak with him.

As soon as the prelate was informed of the circumstances, he ordered the Indian to enter instantly. As Juan displayed his *tilma* to show the blessed sign, the flowers fell, and the image of the Most Holy Virgin, which we venerate in the Sanctuary of Guadalupe, appeared miraculously painted upon the *tilma* or garment of the Indian! At this wonderful sight the astonished bishop and those about him prostrated themselves and adored it with the greatest veneration. They were struck with the beauty and freshness of the flowers flourishing in the midst of winter, but much more by the heavenly beauty of the image before them, from which they neither attempted nor were able to withdraw their eyes.

No less astonished was Juan Diego at seeing in his *tilma* the image of the one who had commanded him to bear the sign to the bishop, when he thought he was only bringing flowers.

The bishop arose, and with due reverence untied the knot that suspended that sacred cloth from the back of the Indian's neck. He took it to his Oratory, and, hanging it up with the greatest possible respect, gave thanks to God for so striking a miracle; and thus he became the treasurer and depository of the richest jewel in the crown of America.

The bishop detained and ministered unto the Indian that day, and, on the following, went with a multitude to the hill, in order that he might point out the spot upon which the Blessed Virgin desired that a temple might be built.

Arrived at the hill, he indicated the places in which he had seen and spoken with the Sovereign Queen,^[60] and, asking permission to visit his uncle Juan Bernardino, (whom he had left in danger,) the bishop gave his consent, and ordered some of his companions to accompany Juan, directing them, if they found Juan Bernardino well, to bring him thither.

Upon arriving at the village of Tolpetlac and approaching the house of Juan Bernardino, the convalescent Indian came forth to receive his nephew and ask why he was accompanied by so honorable a cortege. Thereupon Juan Diego related what had transpired; when Juan Bernardino, interrupting him, said, that in the self-same hour in which the Most Holy Virgin announced his recovery, she had in fact not only cured him, but had appeared and directed him to build a temple to her at Tepeyacac, where her image should be called HOLY MARIA DE GUADALUPE.

The servants brought the two Indians to the presence of the bishop;—and having examined Juan Bernardino concerning his infirmity, the manner in which he had received his health, and the form under which Our Lady appeared to him, and many other questions to satisfy himself concerning such a strange occurrence, which he could hardly credit,—the bishop took the Indians with him to his palace.

And now the fame of the miracle was rapidly spread abroad through the whole city; and all the towns folks clamoring to have the sacred image exposed to the adoration of the public, and running tumultuously to the palace of the Bishop, he caused it to be borne to the Cathedral Church, over whose highest altar it was placed during the building of the hermitage at the place the Indian pointed out. Thither it was transferred when the edifice was completed, which did not take place in fifteen days as is the opinion of some Guadalupian authors, but in two years and fifteen days, on the 26th day of December, 1533."

**COLLEGIATE CHURCH OF GUADALUPE.
COLLEGIATE CHURCH OF GUADALUPE.**

**AZTEC SERPENT FIGURE.
AZTEC SERPENT FIGURE.**

**AZTEC SERPENT FIGURES.
AZTEC SERPENT FIGURES.**

CHAPTER VII.

**ANCIENT REMAINS IN THE STATE OF
MEXICO.**

ANTIQUITIES IN THE MUSEUM—STATUE OF CHARLES IV.—CONDITION OF THE MUSEUM—FEATHERED SERPENTS—VICEROY'S PORTRAITS—CORTÉZ—PORTRAIT—ARMOR—PEDRO DE ALVARADO—IMAGES—VASES—TEZCOCO—PALACE—TROUGH—MASSIVE MOUNDS—TESCOCINGO—HILL—ITS ANCIENT ADORNMENTS—ANCIENT BELLEVUE AND RESERVOIR—TEZCOCAN SPLENDOR—BOSQUE DEL CONTADOR—PONDS—LAKES—ARBORS—PYRAMIDS OF TEOTIHUACAN—HOUSES OF SUN AND MOON—PATH OF THE DEAD—CARVED PILLAR—PILLAR AT OTUMBA—PYRAMID OF XOCHICALCO—HILL OF XOCHICALCO—ITS STRUCTURES.

THE largest collection of the moveable antiquities of Mexico, belonging to the Aztec and probably to the Toltec period of the occupation of the valley or adjacent country, is found in the Museum which occupies two or three rooms and part of the court yard of the University building. In the centre of the quadrangle around which this edifice is erected is the fine bronze statue of Charles IV., cast in the capital by a native Mexican. It is an admirable work, and before the revolution stood in front of the cathedral in the plaza or great square. The Spanish sovereign is habited in an antique Roman dress, and is seated on horseback. His right hand, holding a baton, is stretched forward, in an attitude of command and the folds of a massive robe fall gracefully from his neck, over the hind limbs of his horse. His brow is bound with a laurel wreath, and a Roman blade rests on his thigh, whilst the animal is represented in the act of advancing

slowly and treading on a quiver of arrows.

This statue is, of course, liable to some just criticism, founded on the bad models for horses which the artist had recourse to in Mexico whilst engaged in his task; and although a due degree of strict adherence to historical portraiture did not permit him to exalt too much the personal characteristics of the king, he has nevertheless contrived to infuse a great deal of power into the statue so as to entitle it to a fair comparison with some of the best European equestrian works in bronze. All the minor parts of the figures and their decorations are finished with the utmost neatness, and another

COURT OF UNIVERSITY. COURT OF UNIVERSITY.

proof is given, in this statue of the genius possessed by the natives for the imitative arts. It was the work of Tolsa, and was first opened to public view on its pedestal in the plaza, in the year 1803, under the viceroval government of Iturrigaray.

In a corner of this court yard, on the left of the portal, amid a quantity of ancient lumber and relics, are the sacrificial stone and the gigantic idol statue of Teoyaomiqui, described in the first volume of this work. Here, too, are the huge serpent images, carved from basalt, which are presumed to have been used in the worship of Quetzalcoatl—the "feathered serpent,"—the "god of the air."

After an examination of the massive relics which lie in the court yard of the University, we ascend by a broad stone staircase to the corridor surrounding the quadrangle on the second floor. The lower story of this edifice is occupied by the college chapel and the hall or recitation room, whose lofty ceiling and windows, gloomy walls, and carved oaken seats and pulpit, remind the stranger of the fine old monastic chambers in similar institutions in Europe.

The apartments of the second floor open upon the broad corridor under a light and tasteful arcade, and several rooms on the northern side are devoted to the national collections, which, at the period of our visit to Mexico in 1841 and 1842 were badly arranged and classified. The salary devoted to the curator was scarcely adequate to support him, and he probably paid more attention to the politics of the present day than to the antiquities of the past. Nevertheless, we found him to be an intelligent gentleman, fond of the relics, images and legends of the Aztecs. He would, doubtless, have organized the valuable collection had he been suitably aided, recompensed, or enabled to devote the whole of his time

to the archaiology of his country.

The first apartment on this side of the building is a sort of Spanish lumber room, the wall of which is *friezed* with a series of the viceroys, whilst, in a corner, stand the fragments of a throne, waiting, perhaps, the order for their reconstruction upon the ruins of the *presidential chair*. Hard by this royal relic, in appropriate contrast, is an unfinished bas relief of a trophy of liberty; and above the sculpture, suspended against the wall in a rough pine coffin, hangs an Indian mummy, which was exhumed in the fields of Tlaltelolco north of the capital. Another side of this saloon is occupied by full length portraits of Ferdinand and Isabella. In the next chamber, west of this, the mass of the smaller Aztec relics has been collected and preserved in cases. A small library, containing some ancient manuscripts, and the splendid work of Lord

VASES FROM TULA.
VASES FROM TULA.

ANCIENT MUSICAL INSTRUMENTS.
ANCIENT MUSICAL INSTRUMENTS.

AZTEC MASKS, HATCHETS, PIPES, STAMPS, RING, DISTAFF.
AZTEC MASKS, HATCHETS, PIPES, STAMPS, RING, DISTAFF.

**YOKE, KNIFE, SMALL VASES AND ALTARS USED IN AZTEC
SACRIFICES.**
**YOKE, KNIFE, SMALL VASES AND ALTARS USED IN AZTEC
SACRIFICES.**

ANCIENT VASES AND VESSELS.
ANCIENT VASES AND VESSELS.

Kingsborough on Mexican antiquities, are preserved in this apartment, while

on the surrounding shelves, are deposited specimens of the pottery, vases, pipes, idols, images, bows, arrows, axes, masks, sacrificial instruments, beads and altars of the Aztecs.

Around the frieze of this room, as around that of the preceding, are portraits of Mexican viceroys, at the head of which is the picture of the conqueror Hernando Cortéz, from which the engraving in these volumes has been accurately copied. Its authenticity is unquestionable, for its history has been carefully traced to the period of the third viceroy, Don Gaston de Peralta, Marques de Falces. This portrait represents the hero of the conquest differently from any other picture we have found either engraved or in oil, and exhibits the mingled air of elevated veneration and command, of firmness and dignity, reflection and resolute action, which are the chief historical characteristics of this personage. In a corner, beneath the portrait, is a plain, unornamented suit of steel armor, which belonged to the hero. Its small dimensions convey no favorable impression of the hero's size or strength. The armor, and patent of nobility granted by Charles V. to Pedro de Alvarado, the companion of Cortéz, are also preserved in this saloon. The royal document is exceedingly interesting from the fact that it contains the autographs of the emperor and of Cortéz, who signed it as El Marques del Valle de Oajaca.^[61] Near these relics of two of the leaders of the conquering army, preserved religiously under glass in a golden frame, is the crimson silken banner, bearing the image of the Virgin, crowned with a golden coronet and surrounded with twelve stars, under which that army is alleged by the antiquarians to have marched the second time against the Aztec capital.

In the apartment west of this, and facing on the plaza del Volador, are the collections in natural history, which have been chosen apparently, rather as curiosities than for scientific purposes. The specimens of birds, beasts and reptiles, are indifferently preserved and classified, and even the collection of minerals, which, in Mexico, ought to be of the most perfect character, scarcely deserves mention as an important illustrative cabinet.

The number of small images, which are usually called idols, contained in the cases of the principal saloon is very large, and specimens are presented from most parts of the territory comprised in the empire of the Aztec sovereigns, as well as from Mechoacan. Some of the finest of these, both large and small, are exhibited in the plates annexed to this section; and we do not describe them minutely or singly, because they depend for their interest upon their forms, which are better depicted in drawings than language. Most of these were carefully delineated and measured by the author of this work himself, and their

accuracy may be confidently relied on.

Two of the most beautiful and rare objects comprised in this collection, are the terra-cotta funeral vases, one of which is represented in the accompanying engraving. It was exhumed some years ago in the northern suburb of the capital, known as St. Juan Tlaltelolco, the neighborhood of the ancient site of one of the Aztec teocallis. It is one foot ten inches high, and one foot three and a half inches in diameter. Its upper portion was filled with human skulls, and the lower with bones of the rest of the frame, while the top was carefully covered with the circular lid, which is given in the plate. The Indian head, winged and crowned with a circlet of twisted bands and feathers, the graceful handles, and the semicircle of sunflowers and ears of corn, which curves beneath the central ornament, will give the reader an accurate idea of the reliefs with which this vase is adorned. Besides these symbols of eternity, fruition and fullness, the vessel still exhibits the brilliant colors of blue, vermillion, lake, yellow and brown, with which it was originally tinted.

Some beautiful specimens of the ancient musical instruments of the Aztecs, are also preserved in this museum, and correct drawings of their flageolets, whistles, drums and rattles, will be found in the engravings.

TEZCOCO—TESCOCINGO.

We turn naturally from the ancient capital of the Aztec empire to the remains of art and architecture which are yet found on the site of Tezcoco, the second city in the realm, and in its vicinity. It was in this place that Cortéz prepared for his second assault upon the city of Tenochtitlan or Mexico, and here he put together and launched on the lake the vessels which he had caused to be fashioned in Tlascala on the other side of the mountains that bound the eastern edge of the valley of Mexico. The spot where these vehicles of his troops across the waters of Tezcoco were first deposited in their proper element is still pointed out by the inhabitants, and is known as El Puente de las Brigantinas, though it is now more than a mile from the shore of the lake.^[62]

FUNERAL VASE AND COVER.

FUNERAL VASE AND COVER.

In the north-west section of the modern town of Tezcoco, on the top of a shapeless mass of pottery, bricks, mortar and earth, which is thickly overgrown with aloes, there are several large slabs of basaltic rock, neatly squared and laid

due north and south. According to the legends of the spot this is the site of one of the royal residences, and like most of the antiquities of Mexico, is connected with the name of the best known emperor, as the palace of Montezuma. When Mr. Poinsett visited Tezcoco in 1825, this heap had not been pillaged for modern architectural purposes, as much as it has been since that period. Among the ruins of the supposed palace he then found, a regularly arched and well built passage, sewer, or aqueduct, which was formed of square stones the size of bricks, cemented with the strong mortar which was so much used by the Indians in all their works. In the door of one of the rooms he noticed the remains of a "very flat arch," the stones comprising which were of prodigious size and weight. On this spot, some years ago, was found the sculptured basin, which, at the period of our visit, had been transferred to and preserved in the collection of the Ex-Condé del Peñasco in the city of Mexico.

TROUGH FROM TEZCOCO. TROUGH FROM TEZCOCO.

In the southern part of Tezcoco, are the massive remains of three vast pyramids, whose forms are still remarkably perfect. They succeed each other in a direct line from north to south, and, according to our measurement, are about four hundred feet in extent, on each of their fronts, along the base line. They are built partly of burned and partly of sun dried bricks, mixed up with fragments of pottery and thick coverings of cement, through which neat canals had been moulded to carry off the water from the upper terrace. Bernal Diaz del Castillo informs us, that the chief *teocalli* of Tezcoco was ascended by one hundred and seventeen steps; and, from the quantity of obsidian fragments, images, vessels and heads of idols we found upon the sides of these structures, it is not unlikely, that they, like the *teocallis* of the capital were devoted to the same bloody and impious rites. In some of the private houses of this town, many larger idols or images cut from basalt are still preserved, and in 1825, Mr. Poinsett saw at the residence of the commandant several of these figures, which were better formed and designed than most of the Indian statues he had previously encountered in his Mexican travels.

TESCOCINGO.

About three miles across the gently sloping levels which spread out east of the town of Tezcoco, a sharp, precipitous conical mountain rises abruptly from

the plain, which is stripped of the forests that once probably clothed its sides, and is now only covered with a thick growth of nopals, bushes and aloes. From the quantity of Indian remains found on this elevation and in its vicinity, there is no doubt that it was the site of an Aztec palace, or was connected with the adjacent plain by some architectural works that have been destroyed in the centuries that have elapsed since the conquest. The traveller climbs this steep mountain with great labor, and finds nearly every part of it covered with the *débris* of ancient pottery and obsidian; and, in many parts of his ascent, he is aided by the remains of the spiral road, cut in the solid rock, which evidently once wound from its base to its top. Fifty feet below the summit, looking exactly north, the massive stone of the mountain has been cut into seats surrounding a recess leading to a steep wall which is said to have been covered with a Toltec or Aztec calendar. The sculptures upon the rock have, however, been destroyed by the Indians, who cut through it as soon as they found the spot an object of interest to strangers. These simple and superstitious beings imagined that the quest of gold, alone, could induce travellers to leave the capital, cross the lake, and toil up to the summit of this elevation, and, accordingly they bored through the carved rock to obtain the buried treasure, until they have formed a hole in the mountain, which is now the hiding place and probably the home of a large number of squalid wretches. On the absolute top of the mountain no traces of an edifice are now observable; but as the Spaniards supposed it had been desecrated by Indian rites in the olden time, it has been sanctified by the erection of a cross, from whose feet the whole valley of Mexico, with its lakes, plains, towns and majestic panorama of encircling mountains, bursts on the sight of the wearied traveller.

Returning to the recess from the summit, and winding thence by a spiral path down the eastern slopes of the hill, we find the road suddenly ended by a wall which plunges precipitously down the mountain for about two hundred feet. At this termination of the pathway, cut in the solid rock, we found another recess, surrounded with seats, while, in the centre of the area, was a circular basin, a yard and a half in diameter, and three feet deep, into which water was formerly introduced, through the small aperture in the square pipe which is delineated in the engraving.

ANCIENT RESERVOIR.
ANCIENT RESERVOIR.

This basin has, of course, been also connected with the fame of the emperor, and is known as "Montezuma's bath." Its true use, however, is perfectly evident to those who are less fanciful or antiquarian than the generality of visitors. The picturesque view from this spot, over a small plain set in a frame of the surrounding mountains and glens which border the eastern side of Tescocingo, undoubtedly made this recess a favorite resort for the royal personages at whose expense these costly works were made. From the surrounding seats, they enjoyed a delicious prospect over the lovely but secluded scenery, while, in the basin, at their feet, were gathered the waters of a neighboring spring, which, whilst refreshing them after their promenade on the mountain, gurgled out of its stony channel and fell in a mimic cascade over the precipitous cliff that terminated their path. It was to this shady spot that they no doubt retired in the afternoon, when the sun was hot on the west of the mountain, and here the sovereign and his court, in all probability, enjoyed the repose and privacy which were denied them amid the bustle of the city. Antiquarianism would be greatly assisted in its researches and conjectures, if it recollected that the *nature* of civilized men is the same in all ages, and that it is easier to judge the architectural remains of our ancestors by this standard than by the fanciful or classical rules, which they are dramatically disposed to conjure up in order to interpret the past.

The hill or mountain of Tescocingo is connected with another hill on the east by a tall embankment about two hundred feet high, upon whose level top,—which may be crossed by three persons abreast, on horseback,—are the remains of an ancient aqueduct, built of baked clay, the pipes of which are now as perfect as on the day they were first laid. The water was brought hither by a canal around the hill to which it is connected by the embankment; while, east of this, and uniting the last hill with another elevation, there is a second aqueduct raised on an embankment, which was fed by other aqueducts and canals that formerly conducted the water from the eastern mountains about three leagues distant.

Such are some of the remains of Tezcocan sumptuousness, in the neighborhood of the ancient capital of this region; and, together with the ancient grove of cypresses, known as El Bosque del Contador, lying across the levels north-west of Tezcoco, may be regarded as the most remarkable relics of the princes and people of the Tezcocan monarchy. The grove of the Contador is formed by double rows of gigantic cypresses, about five hundred in number, arranged in a square corresponding with the points of the compass and enclosing

an area of nearly ten acres. At the north-western point of this quadrangle another double row of lordly cypresses runs westwardly towards a dyke, north of which there is a deep oblong

ANCIENT AQUEDUCT AT TEZCOSINGO.
ANCIENT AQUEDUCT AT TEZCOSINGO.

PYRAMIDS OF TEOTIHUACAN.
PYRAMIDS OF TEOTIHUACAN.

tank, neatly walled and filled with water. From the soft spongy character of the soil in the centre of the great quadrangular grove—which it is impossible for any one to cross without danger of being mired in the unsubstantial morass,—it is supposed that the vast area was once occupied by a lake, whose waters were probably forever renewed by the hydraulic works we have already described in the neighborhood of Tescocingo. Along the raised banks, and beneath the shadows of the double line of majestic trees, were the walks and arbors in which Nezahualcoyotl and his courtiers amused themselves. The ponds and lakes were filled with fish and frequented by the wild fowl that now cover the margins of the Mexican lakes; while the same benignant sky and delicious climate that bless the descendants of the Spaniards, reigned then, as now, over the dusky children of the soil.^[63]

PYRAMIDS OF TEOTIHUACAN.

A ride on horseback of about three hours at a pleasant pace, will bring the traveller from Tezcoco to the village of St. Juan, lying in an extensive level bordered on all sides by ridges and mountain spurs, except towards the east, where a depression in the chain leads into the plains of Otumba, upon which Cortéz fought so remarkable a battle when pursued by the victorious Aztecs. In the centre of the levels of St. Juan are the two remarkable pyramids of Teotihuacan,—the Tonatiuh-Ytzagual, or "house of the sun," and the Meztli-Ytzagual, or "house of the moon." These vast masses first break upon the sight as the ridge is crossed. At that distance the foliage and bushes that cover them are not easily discerned, and the perfect figure of the original structure seems to be revealed in all its freshness. As the objects are approached, however, the work

of time upon the monuments becomes evident. The sharp pyramidal lines are all broken. Aloes, nopals, magueys, mesquite and parasites crawl and cling over every part of the ruined heaps; and the whole mass resembles a crumbling but gigantic pile of rocks and earth, which is scarcely distinguishable from the adjacent hills until its structure is closely examined.

PLAN OF THE RUINS OF THE PYRAMIDS OF TEOTIHUACAN.
PLAN OF THE RUINS OF THE PYRAMIDS OF TEOTIHUACAN.

Ascending the one hundred and twenty-one feet of the house of the Sun, we reach a level platform on the summit, whence a charming prospect extends for many miles to the south and east over cultivated fields. At the southern base of this pyramid, which measures six hundred and eighty-two feet, there are four small mounds, and beyond these there is a range of lesser *tumuli* running towards an elevated square of mounds lying between the stream west of Teotihuacan and the present road to Otumba. On the west front, five *tumuli* surround an oval mound whose centre is depressed, and all of these jut out westwardly towards a line of similar grave-like elevations lying on both sides of the avenue that leads to the house of the Moon. This road is the Micoatl, or path of the dead, which the ancient writers locate in the valley of San Juan.

The other pyramid, or house of the Moon is smaller, and like its neighbor is composed of rock, stones, pottery and cement,—covered with the debris of obsidian and terra-cotta images which lie scattered from the top to the base amid the tangled aloes and creepers that have struck their roots deeply into the crevices. The house of the Sun is not known to have any cavity within its body, but in the house of the Moon, between the second and third terraces, a narrow passage has been detected, through which two wells or sunken chambers, about fifteen feet deep, may be reached by crawling on hands and knees over an inclined plain for a distance of about eight yards. The walls of this cryptic entrance, and of the sunken chamber are made of the common sun dried bricks, but there are no remains of sculpture, painting, or bodies to reward an antiquarian for groping through the dark and dusty aperture.

South of this pyramid of the Moon, is the Micoatl or path of the dead, to which we have already alluded. Two elliptical elevations rise at the south-east and south-west corner of the Teocalli, upon each of which there are three mounds, whilst their diameters are bisected by other rectilinear elevations upon each of which there are five similar mounds. Four circular and one square

mound lie within the area of this inclosure, and the whole appears to form a massive portal of tumuli to the majestic pyramid. A long double line of minor mounds stretches away to the south on the sides of the avenue, until all traces of them are lost in the field in front of the temple of the sun with whose groups of tumuli this path was in all likelihood formerly united. The student will obtain a better idea of the localities of these remains by examining the plan which was carefully prepared by the author, on the spot, in 1842. At B, on the plan, there is a large globular mass of granite measuring nineteen feet eight inches in circumference, upon which there is some rude carving which has been found to bear some resemblance to the Aztec figure of the sun;—and in the semicircular enclosure among the *tumuli*, at C, is placed the sculptured granite stone, represented in the annexed cut. It lies due east and west. The dark shadow at B, represents a sink or hollow three inches deep at the sides, and six at the top and bottom. This is known as the "fainting stone," as it is alleged that all who recline on its surface are sure to experience lassitude, or loose animation for a while!

OTUMBA.

This place is famous in the ancient history of Mexico, but no remains of importance have been found in its vicinity or within the limits of the village. When Mr. Poinsett visited it during his residence in Mexico as Envoy from the United States, he observed no relic of the past worthy of examination or record except the fragment of a pillar represented in the annexed drawing.

THE PYRAMID OF XOCHICALCO.

About eighteen miles south of Cuernavaca, in the State of Mexico, there is a *cerro* or hill, known as Xochicalco or the "hill of flowers," whose summit is occupied by the remains of an ancient stone pyramid. The traveller reaches this eminence after travelling over a wide plain intersected by deep barrancas, and almost entirely denuded of trees and shrubbery. The base of this hill is surrounded by the remains of a deep wide ditch, and its top is attained by five spiral terraces, supported by walls of stone joined with cement. At suitable distances from each other, along the edge of this winding path are the remains of

bulwarks fashioned like the bastions of a fortification. On the summit there is a wide extensive level, the eastern part of which is occupied by three truncated cones, resembling the smaller mounds found among the pyramids of Teotihuacan. On the other three sides of the esplanade there are other masses of stones, which may have also been portions of similar *tumuli*. The stones of which these lesser mounds were constructed have evidently been nicely shaped and covered with a coat of stucco.

Passing upward, amid tangled trees and vines, along the last terrace, and through the cornfield which is cultivated on the plain at top by an Indian *ranchero*, the traveller at length stands before the remains of the elegant structure that once crowned the summit with its carved and massive architecture. The reports of engineers who visited this pyramid in years long past, and the legends of the neighborhood, declared that it originally consisted of five stories, placed upon each other at regular intervals and separated by narrow platforms. But of all these, nothing now remains except portions of the first body, which is formed of cut porphyry and covered with the singular emblems which are accurately represented in the annexed plate of the north-western angle.

Amid the neglect of the viceregal government, and the revolutionary disturbances subsequent to the rebellion against Spain, this beautiful monument of ancient art, seems to have been entirely forgotten, save by the neighboring *haciendados* or planters, who used it as a quarry, from which they might supply the wants of their estates without the trouble or expense of a stone cutter. In the middle of the eighteenth century the fine terraces were yet perfect. But, as the country became settled in the neighborhood, the farmers began to pilfer from the mass, and, not long before we visited it in 1842, an adjacent land owner had carried off large loads of the sculptured stones to build a dam in a neighboring ravine, for the use of his cattle.

REMAINS OF THE PYRAMID OF XOCHICALCO.
REMAINS OF THE PYRAMID OF XOCHICALCO.

The story of this pyramid that has been thus far spared, is rectangular; and, facing north, south, east and west, in exact correspondence with the cardinal points, it measures sixty-four feet on its northern front above the plinth, and fifty-eight on the western. The distance between the plinth and frieze is about ten feet, the breadth of the frieze is three feet and a half, and the height of the cornice one foot and five inches. The most perfect portion is the northern front;

and, here, the carving in relief, which is between three and four inches deep, is most distinctly visible. The massive stones,—some of which are seven feet eleven inches long, by two feet nine inches wide; five feet two inches long, and two feet six inches broad, and five feet long, two feet seven inches high, and four feet seven inches broad,—are all laid upon each other without cement, and kept together simply by the pressure and gravity of the general architecture. These dimensions of the fragments of so splendid an edifice will give the reader an idea of the labor and ingenuity which were employed in its construction. For it must be remembered, that not only was the Indian skill taxed in the design and shaping of the stones in the immediate neighborhood, but that the weighty materials were drawn from a considerable distance, and borne up a hill three hundred feet in height, without the use of horses. The terraces supporting the spiral path, and their bastion-like bulwarks, were subjects of equal labor; while the broad deep ditch, surrounding the whole, was in itself a work exacting the most patient industry. Few nations have probably devoted more time and toil to a work which was perhaps partly religious and partly defensive.

These are the external works upon the Cerro of Xochicalco, but it appears from good authority, and from the report of the neighborhood, that the hill itself was partly hollowed into chambers. Some years since a party of gentlemen, under the orders of government, explored these subterranean retreats, and, after groping through dark and narrow passages, whose side walls are covered with a hard and glistening gray cement, they came to three entrances between two enormous pillars cut from the rock of which the hill is formed. Through these portals they entered a chamber, whose roof was a cupola of regular shape, built of stones placed in circles, while at the top of the dome was an aperture, which probably led to the surface of the earth or the summit of the pyramid. Nebel, who visited the ruins some years ago, relates an Indian tradition, that this aperture ascended immediately above an altar placed in this chamber, and that the sun's rays fell directly on the centre of the shrine when that luminary was vertical!

CHAPTER VIII.

STATE OF MECOACAN—BOUNDARIES—ELEVATIONS—VOLCANO OF JORULLO—THEORIES OF HUMBOLDT AND LYELL—PRESENT CONDITION—RIVERS OF MECOACAN—CLIMATE—HEALTH—INDIANS—DEPARTMENTS—AGRICULTURE—TOWNS—MINES—JALISCO—BOUNDARIES—POPULATION—RIVERS—LAKES—DIVISIONS—MANUFACTURES—AGRICULTURE—FACTORIES—GUADALAJARA—TOWNS—SAN JUAN DE LOS LAGOS—TEPIC—SAN BLAS—MINES—ISLANDS—MINING REGION—INDIANS—CHARACTER AND HABITS—CHURCH AND SCHOOL—EDUCATION—BISHOPRIC—TERRITORY OF COLIMA—EXTENT—CLIMATE—PRODUCTIONS—TOWNS.

THE STATE OF MECHOACAN.

THE State of Mechoacan is the old Spanish Intendencia of Valladolid, and includes a great part of the ancient Indian Kingdom of Mechoacan, or Mechoacan of the Tarascos. It is bounded on the north by Guanajuato, north-easterly of Querétaro, south-easterly by Mexico, westerly by Jalisco, and south-westerly, for a short distance, by the Pacific.

This State lies chiefly on the western slope of the Cordillera, and is cut up by hills and genial vallies. The highest point within its limits is the Peak of Tancitaro, which, in all probability, is an extinct volcano. East of this, and south of the village of Ario, the Volcano of Jorullo burst forth on the night of the 29th of September, 1759.

The great region to which this mountain belongs has been already described in our account of the geological structure of Mexico. The plain of Malpais forms part of an elevated platform, between 2,000 and 3,000 feet above the level of the sea, and is bounded by hills composed of basalt, trachyte, and volcanic tuff, clearly indicating that the country had previously, though probably at a remote period, been the theatre of igneous action. From the era of the discovery of the New World to the middle of the last century, the district had remained undisturbed, and the space, now the site of the volcano, which is thirty leagues distant from the nearest sea, was occupied by fertile plains of sugar cane and indigo, and watered by the two brooks, Cuitimba and San Pedro. In the month of June, 1759, hollow sounds of an alarming nature were heard, and earthquakes succeeded each other for two months, until, in September, flames issued from the ground, and fragments of burning rocks were thrown to prodigious heights.

THE VOLCANO OF JORULLO. THE VOLCANO OF JORULLO.

"Six volcanic cones, composed of scoriæ and fragmentary lava, were formed on the line of a chasm which ran in a direction from N. N. E. to S. S. W. The least of these cones was 300 feet in height, and Jorullo, the central volcano, was elevated 1,600 feet above the level of the plain. It sent forth great streams of basaltic lava, containing included fragments of rocks, and its ejections did not cease till the month of February, 1760.

"Humboldt visited the country more than forty years after this occurrence, and was informed by the Indians, that when they returned, long after the

catastrophe, to the plain, they found the ground uninhabitable from the excessive heat. When he himself visited the place, there appeared around the base of the cones, and spreading from them, as from a centre, over an extent of four square miles, a mass of matter of a convex form, about 550 feet high at its junction with the cones, and gradually sloping from them in all directions towards the plain. This mass was still in a heated state, the temperature in the fissures being on the decrease from year to year, but in 1780 it was still sufficient to light a cigar at the depth of a few inches. On this slightly convex protuberance, the slope of which must form an angle of about 6° with the horizon, were thousands of flattish conical mounds, from six to nine feet high, which as well as large fissures traversing the plain, acted as fumeroles, giving out clouds of sulphuric acid and hot aqueous vapor. The two small rivers before mentioned disappeared during the eruption, losing themselves below the eastern extremity of the plain, and reappearing as hot springs at its western limit. Humboldt attributed the convexity of the plain to inflation below; supposing the ground, for four square miles in extent, to have risen in the shape of a bladder to the elevation of 550 feet above the plain in the highest part. But this theory is by no means borne out by the facts described; and it is the more necessary to scrutinize closely the proofs relied on, because the opinion of Humboldt appears to have been received as if founded upon direct observation, and has been made the ground work of other bold and extraordinary theories. Mr. Scrope has suggested that the phenomena may be accounted for far more naturally by supposing that lava flowed simultaneously from the different orifices, and principally from Jorullo, united with a sort of pool or lake. As it poured forth on a surface previously flat, it would, if its liquidity was not very great, remain thickest and deepest near its source, and diminish in bulk from thence towards the limits of the space which it covered. Fresh supplies were probably emitted successively during the course of an eruption *which lasted a year*; and some of these, resting on those first emitted, might only spread to a small distance from the foot of the cone, where they would necessarily accumulate to a great height.

"The showers, also, of loose and pulverulent matter from the six craters, and principally from Jorullo, would be composed of heavier and more bulky particles near the cones, and would raise the ground at their base, where, mixing with rain, they might have given rise to the stratum of black clay which is described as covering the lava.

"The small conical mounds called 'hornitos' or little ovens may resemble those five or six small hillocks which existed in 1823 on the Vesuvian lava, and sent forth columns of vapor, having been produced by the disengagement of

elastic fluids heaving up small dome-shaped masses of lava. The fissures mentioned by Humboldt as of frequent occurrence, are such as might naturally accompany the consolidation of a thick bed of lava, contracting as it congeals; and the appearance of rivers is the usual result of the occupation of the lower part of the valley or plain by lava, of which there are many beautiful examples in the old lava currents of Auvergne. The heat of the 'hornitos' is stated to have diminished from the first; and Mr. Bullock, who visited the spot many years after Humboldt, found the temperature of the hot spring very low,—a fact which seems clearly to indicate the gradual congelation of a subjacent bed of lava which, from its immense thickness, may have been enabled to retain its heat for half a century. The reader may be reminded, that when we thus suppose the lava near the volcano to have been, together with the ejected ashes, more than 500 feet in depth, we merely assign a thickness which the current of Skaptar Jokul attained in some places in 1783.

"Another argument adduced in the support of the theory of inflation from below, was, the hollow sound made by the steps of a horse upon the plain; which, however, proves nothing more than that the materials of which the convex mass is composed are light and porous. The sound called "*rimbombo*" by the Italians, is very commonly returned by *made ground* when sharply struck, and has been observed not only on the sides of Vesuvius and of other volcanic cones where a cavity is below, but also in plains, such as the Campagna di Roma, composed in a great measure of tuff and other porous and volcanic rocks. The reverberation, however, may be assisted by grottoes and caverns, for these may be as numerous in the lavas of Jorullo as in many of those of Etna; but their existence would lend no countenance to the hypothesis of a great arched cavity, four square miles in extent, and in the centre 550 feet high.^[64]

"Mr. Burkhart, a German director of mines, who examined Jorullo in 1827, ascertained that there had been no eruption there since Humboldt's visit in 1803. He, went to the bottom of the crater, and observed a slight evolution of sulphurous acid vapors, but the "hornitos" had ceased entirely to give forth steam. During the twenty-four years intervening between his visit and that of Humboldt, vegetation had made great progress on the flanks of the new hills, and the rich soil of the surrounding country was once more covered with luxuriant crops of sugar cane and indigo, and there was an abundant growth of natural underwood on all the uncultivated tracts."^[65]

The State of Mechoacan is extraordinarily rich in rivers and streams. The Lerma, Balsas, Zitacuaro, Huetamo, Cluranúeco, Marquéz, Aztala, Tlalpujahuá,

and some smaller streamlets and brooks are found in its vallies; while the lakes and ponds of Cuizco or Aaron, Patzcuaro, Huango, Tanguato, and Huaniqueo afford supplies to numerous neighborhoods. The climate of Mechoacan is regular, not liable to extraordinary or sudden changes, and remarkably genial. On the Pacific coast and in its vicinity, as in the other middle and southern States of the Confederacy, agues and intermittent fevers prevail; but the population seems to have increased considerably since the beginning of this century, and even in a larger proportion than in some other parts of Mexico. In 1849, the number of inhabitants was estimated to be not less than 590,000. Three Indian tribes still dwell within its borders: 1st, the Tarascos; 2d, the Otomies; 3d, the Chichimecas. The whole southern half of the State is peopled with Indians.

Mechoacan is divided into 4 departments and 62 municipalities:

1. Department del Norte, with 14 municipalities.
2. " del Oriente, with 15 municipalities.
3. " del Sur, with 11 municipalities.
4. " del Poniente, with 22 municipalities.

These 4 departments contain the three cities of MORELIA, PATZCUARO, and TZINTZOUTZAN;—the three towns of Zitacuaro, Zamora, and Charo;—256 villages, 333 *haciendas*, and 1,356 *ranchos*, which are divided among 83 parishes.

The agricultural productions of Mechoacan are similar in character to those of the other Western States of Mexico lying within the same longitude. The best sugar plantations are about 12 leagues from Patzcuaro. At the foot of Jorullo, cotton, indigo, cacao and sugar are planted; and mainoc or cassava, potatoes and yams are sown in genial spots, whilst maiz, wheat, barley and magueys are cultivated in the higher and cooler regions. The finest tropical fruits are raised in the warm portions of the State.

The capital of Mechoacan is Morelia, sometimes called Valladolid, or Valladolid de Mechoacan. Its modern title is derived from the name of the insurgent leader Morelos.

MORELIA lies 6,398 feet above the level of the sea, in latitude 19° 42' North, 103° 12' 15'' W. long. from Paris,—between the two streams which water the Valley of Olid. It is a small, but handsome town, possessing some fine churches, and a charming paseo and alameda. The climate is mild and wholesome, but snow falls occasionally during the winter.

PATZCUARO lies on the south-eastern bank of the lake of that name.

TZINTZOUTZAN is about 4 leagues from Patzcuaro, in a northerly direction, upon the banks of the same lake. It was once the capital of the ancient Indian Kingdom of Mechoacan, but is now only a small village of 2,000 inhabitants, who have nevertheless bestowed on it the title of—"City." Some relics of the Tarascan architecture are said to be found at this place, but we do not possess any authentic accounts or drawings of them.

ZITACUARO is the capital of the old mining district 7 leagues south of Angangueo, 6,451 feet above the sea, and contains about 2000 inhabitants. Many small Indian villages are also found in the neighborhood, but they do not require special notice.

ANGANGUEO is a mining town 7 leagues south of Tlalpujahua, with about 1,900 inhabitants.

San Pedro y San Pablo de Tlalpujahua, also a mining village and district, 35 leagues north north-west from Mexico, eastward of Morelia, and about 6 leagues south of the left bank of the Lerma. It lies in a beautiful mountain region at the foot of the *Cerro del Gallo*, 8,386 feet above the sea. Two leagues north of Tlalpujahua, is the *Hacienda de Tepetongo*, remarkable for its warm springs, which rising amid volcanic rocks, maintain a temperature of 27° Reaumeur; and are freely resorted to by the neighboring Indians. Cuizco; Huaniqueo; Zamora; Tancuancicuaro; Tarecuato; Tlazazalca, Tanguato, are the remaining towns and villages in this part of the country deserving mention. In the Department *del Norte*, we find Sirisicuaro; Santa Anna; Araron; Copandaro; Teremendo; Pareachecuaró, and Tirepiteo. In the Department *del Oriente* lie San Felipé; Patambero; Enadio; Orocutui; Tusanla; Clirangangueo; Tichiqueo; Huetano Pungarahuato; and Cayuca. In the Department *del Sur*, are Ario; Tacambaro; Turicato; Churumuco; Santiago Coalcoman; Uruapan and Tancitaro. In the Department *del Poinente*, we find Chilchote, with about 4,700 inhabitants, and Tincuindui.

The mining districts of Mechoacan are Tlalpujahua, Angangueo, and Ozumatlan. Formerly, the mines of Zitacuaro, Ingnaran, and a few other districts were somewhat renowned for their value; but, at present, they are either entirely abandoned or only slightly worked.

THE STATE OF JALISCO.

The present State of JALISCO and former Intendency of Guadalajara, formed

together with Zacatecas, the old Spanish kingdom of New Galicia. It is bounded on the north by Durango; on the north-west by Sinaloa; on the north and east by Zacatecas and Guanajuato; on the south and south-east by Mechoacan and the Territory of Colima; and on the west by the Pacific coast, for a distance of 160 leagues. The State stretches from 19° 5' to 23° 55' of north latitude; and from 103° 45' to 108° 28' 30'' west longitude from Paris. Its population is estimated at about 700,000.

The greater part of Jalisco lies on the western slope of the Cordillera; and its table lands, which resemble those of the great plateau of Mexico, are somewhat cut up by mountain spurs. The upper regions consequently are comparatively sterile, whilst the lowlands are rich and fruitful.

The Sierras of Bayona, in the north-west end of Chalchihuitéc, in the north-east of the State, are its most remarkable mountain ranges. The Rio Grande de Santiago is the principal stream in Jalisco; but during the six months of the dry season, its waters are either extremely shallow or disappear altogether. The Bayona is a boundary between this State and Sinaloa.

The LAKE OF CHAPALA, lies about fifteen leagues from the city of Guadalajara, and forms a basin among the mountains of 36 to 40 leagues in length by 5 to 8 in breadth. Its usual depth is about six and a half fathoms. Its scenery is remarkably beautiful, and it supplies the neighborhood plentifully with fish and water-fowl.

Jalisco is divided into eight Cantons or Departments:—Guadalajara, Lagos, La Barca, Sayula, Etzatlan, Autlan, Tepic and Colotlan;—containing 8 large cities and towns, 318 small villages, 387 haciendas or plantations, and 2,534 ranchos or farms.

The agricultural productions of Jalisco combine those of the *tierras calientas* and the *tierras templadas*. On the upper plateaus, grain and agaves are chiefly planted, and on the coast, sugar and cotton. A small quantity of cochineal is also raised, and in the district of Autlan de la Grana, plantations of the cacao-tree have been made. All the fruits of the tropical and temperate zones are readily grown; sheep, mules, horses, goats, neat-cattle, are raised in great abundance, and not less than 10,000 head of cattle are found on many haciendas de Gañado.

The manufactures of Jalisco are chiefly confined to rude cotton fabrics or some fanciful articles of dress. The people are celebrated for their gold and silver embroidery upon leather which is used in the manufacture of saddles and horse equipage.

Nearly all the importations into this State come either by land from San Luis

Potosi, the city of Mexico, or San Blas, which is the chief port of Jalisco on the Pacific. A large portion of the foreign wares are doubtless smuggled into the interior, or introduced through the corrupt connivance of custom-house officers along the line of the west coast.

PLAZA OF QUADALAJARA.
PLAZA OF QUADALAJARA.

The city of GUADALAJARA, 150 leagues from Mexico, the capital of Jalisco, is situated upon an extensive plain. Its handsome streets are airy, and many of the houses well built. There are fourteen squares, twelve fountains, and a number of convents and churches, the principal of which is the magnificent Cathedral, whose towers were injured by an earthquake in 1818. An Alameda is beautifully laid out with irregular alleys, planted with trees, interspersed with flowers, while, in the centre, a fountain throws up a constant stream of excellent water.

Within the town, the *Portales* are the principal rendezvous, and contain numerous shops and stalls filled with European and East India fabrics, fruit of all kinds, earthenware from Tonalá, shoes, mangas, saddlery, birds, sweetmeats of Calabazato, and a thousand other varieties to attract the passers by. Each of the stalls pays a small ground rent to the convents of Guadalajara, and thus afford an ample revenue to the brotherhoods.

The population of the town may be estimated at 50,000. Its air is mild and wholesome, and during the season when the neighboring vegetation is refreshed by rains, the scenery of Guadalajara is considered as picturesque as that of the city of Mexico.

In the district of Lagos lies the town of SAN JUAN DE LOS LAGOS, in a deep ravine, almost upon a level with the river of the same name, and with its mud houses and wild scenery, offers no evidence of the gay and festive appearance it presents during the famous annual fair which is held in it, commencing the 5th of December, and lasting eight days. At that period, San Juan is the resort of merchants, with their wares from all parts of the Republic, and all the planters or wealthy rancheros within an hundred leagues, resort thither with their families.

There is a beautiful church in this town, dedicated to Our Lady of the Lake, and medals struck in honor of her are sold at the door of the temple.

In the district of *la Barca* are the towns of La Barca, Tlachichilco, Chapala, Axixi, Ojotepéc, Aranda and Atotomilco.

In the district of *Etzatlan*, we find the capital village of Etzatlan, Cocula, San Martín, Améca, Tequila and Agualco.

In the district of *Sayula*, are Sayula, Zapotlan el grande, Zapotitli, Tuspan and Zacualco.

In the district of *Autlan*, we find Autlan de la Grana, a town with 4,000 inhabitants, La Villa de la Purificacion, with 3,000, Mascota, San Sebastian and Tecolotlan, which are large villages.

In the district of *Tepic* lies the town of Tepic, a fine well built town in the midst of a rich mountain plain, 2,963 feet above the level of the sea, and next to the capital, the finest and most populous town in the State. Besides this, there are Pochotitlan, Compostella, Ahuacatlan, S. Maria del Oro, Santiago, Centispac, Acaponeta, and Guajicoria. Three leagues north-east of the latter, a warm spring is found in the neighborhood of the *Cerro de Huicalapa*.

The capital of the district of *Colotlan*, is San Antonio de Colotlan, containing about 4,000 inhabitants. In this district we also find Santa Maria, a large and populous village lying 5,659 feet above the sea, Huejucar, Cartagena, Tlaltenango and Bolaños, a mining town.

The best sea-port of Jalisco is that of San Blas, whose town lies in 21° 32' 24'' north latitude and 107° 35' 48," west longitude from Paris, upon a rock of basaltic lava, 90 feet high, isolated entirely on three sides, and reached by a bad road on the fourth. The haven is land-locked, and the anchoring ground good and deep; but during the rainy season the levels around the rock which is the foundation of the town, become filled with stagnant pools until the whole adjacent country is covered with water. The burning sun of the coast acts rapidly upon these shallow marshes and fills them with insects and miasma. San Blas soon becomes uninhabitable, and its population betake themselves either to Tepic, Guadalajara, or the first elevations of the mountains in the interior.

The only mining region of any note in Jalisco is that of Bolaños. The mines of Hostotipaquillo, near Tepic, are now abandoned; those of Guichichila, Santa Maria del Oro, Santa Martin and Ameca, in the district of Etzatlan, in the neighborhood of Cocula, are partially wrought. Among the unexplored sites of base and spurious metals in this State, we may mention those found in the vicinity of Compostella, those near the ranchos of *Rosa Morada* and *Buena Vista*, towards the coast, between the villages of Santiago and Acaponeta, and those near Guajicoria, north of the last named village.

The Islands of La Isabela, San Juanico and Marias, lie on the Pacific coast of Jalisco.

The aborigines of Jalisco, formerly warlike and devoted to a bloody religion, belong to the tribes of Cazçanes, Guachichiles and Guamanes. They are most

generally tillers of the ground, adhering to the doctrines of the Catholic church, and they have particular fondness for settling a while in lonely and wild regions, and for changing their place of residence frequently. The manners and customs of the Guachichiles are in many respects peculiar. They still use the bow and arrow as weapons. Their quivers are made of deer and shark skins, and the points of their reed arrows are formed of a hard wood and rarely of copper. The garments of the men consist of a kind of short tunic, roughly made by themselves of blue or brown cotton material, with a girdle hanging down in front and behind, to which is generally added a pair of trousers of tanned goat or deer skin. Married persons, men as well as women, wear straw hats with broad rims and high crowns, ornamented with a narrow ribbon of bright colored wool and tassels. Their black bushy hair is worn very long, bound with bright colored ribbons and tassels, or plaited in queues. No unmarried person, male or female, dare wear a hat. The women are clothed with an under garment of rough wool or cotton and a mantle of the same material, which has an aperture on top through which they pass their heads. When sober they are peaceable and easily controlled, but when intoxicated violent and quarrelsome. At marriage the husband has the right of taking his wife on trial and of sending her back to her parents after some time if she should not please him, and this, even if she should be pregnant by him. This, however, does not prevent such a female marrying afterwards. If she gives satisfaction, the husband has the ceremony performed by a priest or monk, who for this purpose makes a yearly circuit, and often performs the marriage and a baptism at the same time!

Church and school matters, particularly the latter, are provided for in the State of Jalisco in an inferior manner to other parts of the Mexican Republic. A few years ago, there were in the entire State only 113 elementary schools attended by not more than 6,167 children. The instruction was limited almost exclusively to reading, for of this entire number, according to official accounts, there were not more than 2,092 learning to write. For instruction in the higher branches there were in the entire State only two indifferent institutions located in the capital—one the Seminario Conciliar for instruction of the clergy, with thirteen chairs and a species of academy, founded since the revolution, called El Instituto, with chairs for anatomy, modern languages, mineralogy, mathematics, &c. The seminary was attended by 120 boarders and 329 day scholars. The institution had one director, ten professors, two assistant teachers, a secretary, etc.; the available funds of the same consisted, independent of a fee paid by the wealthier scholars, of scarcely any thing but an addition of two thousand and seventy dollars granted by the State treasury. Jalisco felt deeply this sad

condition of public instruction, and numerous propositions for its amelioration and thorough reformation were made, but money was wanting and fit men for the professorships, and discretion and tact on the part of the authorities, and it is scarcely to be expected that since that time public instruction has been essentially bettered. The "Instituto" since then has been made a university. The State forms a separate bishopric. It was erected in the year 1548, and embraced at that time in like manner the present States of Durango and New Leon. The bishop had his seat first at Compostela; in 1569 it was transferred to Guadalajara. In 1631 Durango was separated from Jalisco, and in 1777 both were made distinct bishoprics. The episcopal chapter of Jalisco consisted of three dignitaries, four canons and four prebendaries.

THE TERRITORY OF COLIMA.

This territory is bounded north by Jalisco, south by Mechoacan, east by both of these States, and west by the Pacific. It extends between the degrees of $18^{\circ} 18'$ and $19^{\circ} 10'$ of north latitude, and $102^{\circ} 51'$ and $104^{\circ} 2'$ west longitude from Greenwich. Its surface is generally level, broken by hills, from among which rises the mountain of Colima, the westernmost of Mexican volcanoes. It lies in the north-eastern corner of the Territory, and reaches a height of 9,200 feet above the level of the sea.

The climate of Colima is warm—on the coast it is hot—but the territory is generally considered healthy and fruitful in all portions. Its population is estimated at about 45,000. Cotton, sugar, tobacco and cacao are produced by its agriculturists, while on the coast large quantities of salt are made from the waters of the sea. Rich iron deposits have been recently found, and individuals have commenced developing this important source of national wealth.

The chief town of the Territory is COLIMA, about two leagues south of the volcano, containing between fifteen and twenty thousand inhabitants. The other towns and villages are Almoloyan, with 4,000 people, Xala, Ascatlan and Texupa. The haven of Manzanillo, or port of Colima, as it is sometimes called, is seventeen leagues west of the capital; and with but small expense to government might be made one of the best anchorages in the Republic.

THROWING THE LAZO.
THROWING THE LAZO.

CHAPTER IX.

SINALOA—BOUNDARIES—CLIMATE—DIVISIONS—INDIANS—PRODUCTS—TOWNS—
MINES.—SONORA—BOUNDARIES—DIVISIONS—RIVERS—CLIMATE—INDIANS—
TRADE—TOWNS—MINES.—TERRITORY OF LOWER CALIFORNIA—BOUNDARIES—
CHARACTER—POPULATION—PRODUCTS—PEARLS—SALT—MINES—SEALS—WHALES
—CLIMATE—PORTS—TOWNS—POPULATION.—STATE OF GUERRERO.

THE STATE OF SINALOA.

Sinaloa is bounded on the south by Jalisco, on the east by Durango, on the south-west by Chihuahua, on the north by Sonora and on the west by the Pacific coast for a distance of 200 leagues along the Gulf of California. It lies between $22^{\circ} 35'$ and $27^{\circ} 45'$ of north latitude and 107° and 113° west longitude from Paris. The river Cañas divides it from Jalisco, and the Mayo from Sonora. Its length from south-east to north-west is about 180 leagues, and its breadth in the centre 50 to 56 leagues. This State is partly mountainous and partly level coast land. On the east it lies on the limits of the Cordilleras of Mexico. The levels begin in the west near the boundaries of Jalisco, and stretch out their broad sand-wastes to the town of Alamos and the river Mayo, until they are lost in the State of Sonora. This region is scorched with a blazing sun, and is of course but thinly peopled and little cultivated. Near the city of Alamos a more genial country begins. The central and eastern parts of Sinaloa are rich in table lands and values, while the slopes of the mountains are thickly wooded. In the interior the rains are not heavy nor the warmth intense. A mild and genial air prevails during the whole year; but on the coast the heat is excessive, and all who are able escape from it into the interior.

The State of Sinaloa is divided into three departments:—

1st. The department *del Fuerte*, with three cantons, viz: Fuerte, Alamos and Sinaloa.

2d. The department of *Culiacan*, with two cantons, viz: Culiacan and Cosalá.

3d. The department of *San Sebastian*, with three cantons, viz: Sebastian, Rosario and Piastla.

The principal streams and rivers of this State are those of las Cañas, or Rio de Bayóna, the boundary line in the direction of Jalisco; the Rosario, and the coast streams of Mazatlan, Piastla, Elota and Tavala. There are besides these the Culiacan or Sacuda, Imaya, Mocerito, Ocroni, del Fuerte and Mayo.

The Indians belong to various tribes. The Coras, Nayarites, and Hueicolhues are found in the south; north of these dwell the Sinaloas, Cochitas and Tubares; and still further north, on the streams of the Ocroni, Ahomé, del Fuerte and Mayo, we find some tribes of Guasáres, Ahomes and Ocronis. The Mayos inhabit chiefly the regions west and north-west of the town of Alamos.

The white inhabitants of this State are chiefly descendants of emigrants from Biscay and Catalonia in Spain.

Sinaloa is regarded as a productive State, and yields good crops of grain in the portions which are easily irrigated. Wheat, Indian corn and barley, together with some cotton, sugar and tobacco, are cultivated successfully; whilst all sorts of fruits and vegetables are found in abundance.

The principal towns are Mazatlan, a port with anchorage on the west coast, which is much visited by European and American vessels, and has been the seat of a very large smuggling trade in which the wares of India and of northern nations were exchanged for the precious metals of Mexico, her grain and skins.

Asilos del Rosario and the Villa de San Sebastian lie in the department of San Sebastian. San Ignacio de Piastla is the capital of a canton. Culiacan lies in the department of Culiacan. Sinaloa or Villa de San Felipe y Santiago de Sinaloa, the Villa del Fuerte or Montesclaros, and Alamos, are the other towns of note in this State.

Sinaloa is rich in metallic deposits of base and precious metals, the chief of which are found at Asilos de Rosario, Cosala, Copala, Alamos, and San José de los Mulatos.

THE STATE OF SONORA.

Sonora bounds eastwardly on Chihuahua and New Mexico; southwardly on Sinaloa; and westwardly on the Gulf of California for 238 leagues between the mouths of the Mayo and the Colorado. Its northern boundary is now the line which divides the Republic of Mexico from the Californian possessions of the United States.

The western and southern portions of Sonora are generally flat. In the south, between the rivers Mayo and Yaqui and the Presidio of Buena Vista, there is a fruitful region, whose productiveness is enhanced by a number of small lakes formed during the rainy season on the levels, which are used by the careful agriculturists for the irrigation of their farms. On the eastern boundary of the State, the ridges of the Cordillera begin to rise, until they tower into the massive mountains which form the Sierra Madre, among the spurs of which many valuable metallic deposits have been discovered. The fine and productive vallies of Bavispe, Oposura, Sonora and Dolores are found in the neighborhood of this mountain country.

Sonora is divided into two Departments:

1st. The Department of Arispe, with three cantons, viz: Arispe, Oposura and Altar.

2nd. The Department of Horcasitas, with three cantons, viz: Horcasitas, Ostimuri, and Petic.

The chief rivers are the Mayo, the boundary in the direction of Sinaloa; the Yaqui or Hiaqui; the Rio Grande de Bavispe; Oposura; Sonora; Dolores; Guayamas; Rio de la Ascencion; San Ignacio; Gila; San Francisco or Rio Azul; San Pedro; Santa Maria and the Rio Colorado.

The climate of Sonora is warm throughout the year; but the early spring is subject to remarkable and rapid changes of temperature, and to sudden variations of wind between the north and east. From April to the end of September the thermometer ranges between 75° and 84° Fahrenheit.

A large portion of Sonora is occupied by Indian tribes, some of which are partially agricultural where they have been brought into contact with the whites; but the greater portion may be regarded as belonging to the wild nomadic bands which have hitherto harassed the northern settlements of Mexico. In the eastern part of the State, on the banks of the Sonora and Oposura, and in the vicinity of the town of Arispe and the mineral region of Nocasari, we find large numbers of the Opátas. North of the Ascencion, and stretching far inland from the coast, are the Pimos Altos, the most northerly bands that have submitted to the influences of Christianity or of partial civilization. The nomadic tribes in the north and north-east of the State are Papayos or Papábi-Otawas, the Yumas, the Cucapas or Cupachas, the Cajuenches, the Coanópas, the Apaches Tontos, the Cocomaricopas, the Pimo Galenos, the Apaché Gilenos, Apaché Mimbrenos, and Apaché Chiricaguís. Of all these wild and savage tribes, the Apachés are the most uncontrollable.

The trade of Sonora is chiefly carried on at Guyamas, in latitude 27° 40' N. and 114° W. longitude from Paris,—one of the best harbors in West Mexico, in a healthy region, containing about 3,000 inhabitants;—and at Petic, forty leagues north north-east from Guyamas, in about 29° 20' of north latitude. The latter town, containing about 8,000 inhabitants, is the depôt for goods imported through the port of Guyamas which are designed for the northern districts of Mexico. Besides these two important places, there are the towns of San Miguel Horcasitas, with 2,500 inhabitants; Arispe, with 3,000; San José de Guyamas 350 to 400; Bayoreca; Onabas; Presidio de Buena Vista; El Aguáge; Ures; Babiadora; Banamitza; Batuc; Matape; Oposura; Presidio de Bavispe; Presidio de Fronteras; San Ildefonso Cieneguilla; Presidio de Santa Gertrudis del Altar; Oquitoa; Presidio de la Santa Cruz; Presidio de Tuscon; and Presidio de Tubac.

The mineral characteristics are similar to those of Sinaloa.

THE TERRITORY OF LOWER CALIFORNIA.

The Territory of Lower California is comprehended in that long peninsular strip of land which extends from the present southern boundary of the United States to Cape St. Lucas, and which is washed on the east by the Gulf of California from the point where the Rio Colorado debouches into it, and on the west by the waves of the Pacific ocean. It lies between $32^{\circ} 31' 59'' 58'''$, and Cape St. Lucas, in about $22^{\circ} 45'$ of north latitude.

The country, generally, is represented to be one of the most unattractive in the warm or temperate regions. The peninsula, about 700 miles long, varies in breadth from thirty to one hundred miles, its mean breadth being about fifty. The surface of this region is formed of an irregular chain of rocks, hills and mountains, which run throughout the central portion of its whole length, and some of which attain a height of nearly five thousand feet. Amid these dreary ridges there are occasionally found a few sheltered spots which, though deluged by the torrents, have not been swept clear of productive earth, and in these there is a fertile soil of small extent, yielding a thin but nutritious grass. There are few streams or springs; trees of magnitude are scarce; and the heavy showers falling on the central rocky peaks and eminences are drained on the east and west into the Pacific and Gulf of California by the sloping sides of the peninsula, so as to bear with them into the sea a large portion of cultivable soil. In the plains and in most of the dry beds of rivers, water can be obtained by digging wells only a few feet deep, and wherever irrigation has been adopted by means of these wells, the produce of the fields has abundantly rewarded the agriculturist. Much of the soil is of volcanic origin, being washed from the mountains, as we have already stated, and its yield, by aid of irrigation, is alleged to be quite marvellous. It is probable therefore, notwithstanding the unfavorable aspect of the country as seen by a casual visiter, that its evil repute is chiefly owing to the indolent and roving character of the inhabitants, and that in the hands of an industrious and agricultural people, it would be capable of supporting a population much more numerous than the present. At an earlier period of the Territory's history, under the dominion of the missions, when very small portions of the soil were cultivated, and even those but rudely by the Indians, the four districts of San José, Santiago, San Antonio and Todos Santos, contained 35,000 souls, whereas the present population of the whole peninsula is probably not more than nine or ten thousand.

During the epoch when the missions of California still flourished the general

barrenness of this territory did not subdue the energy of the priestly fathers, who in the sheltered vallies near the different mission sites, which were carefully selected, produced Indian corn, grapes, dates, figs, quinces, peaches, pears and olives. Much of these fruits was preserved and exported to the opposite coast of Mexico. But these articles, together with pearls, tortoise-shell, bullocks' hides, dried beef, soap and cheese constituted the whole product and commerce of the peninsula. The waters of the gulf were in former days more valuable to the Californians than the shores. During the sixteenth century the pearl fishery produced a valuable revenue, and towards its close, six hundred and ninety-seven pounds of the precious article were imported into Seville from America; but at the last authentic dates of twenty years past, the fishery in lower California had dwindled into utter insignificance. Four vessels and two boats were alone engaged in it; and the two hundred divers who still searched the bottom of the coasts in their perilous trade, obtained only eighty-eight ounces of pearls valued at little more than thirteen thousand dollars.

The pearl fishery seems, however, to have revived somewhat, shortly anterior to the war with the United States, and a report from one of our most intelligent officers in the Pacific at that period, states that the annual exportation of pearls amounted then to between forty and fifty thousand dollars.

Valuable mines of gold, silver, copper and lead are known to exist in the peninsula, and although only a few are rudely worked, the labor expended on them is amply rewarded. The salt mines, on the island of Carmen, in the Gulf of California, near Loreto, are capable of supplying the whole coast of Mexico and California. The surface of the lake producing this valuable mineral is covered with a solid crust several feet in thickness, which is cut in blocks, like ice, and conveyed to the beach by convicts under the order of the Governor of Lower California, who has hitherto enjoyed a monopoly of the trade with Mazatlan and San Blas.

The country about La Paz, situated on the east coast, south of the bay of La Paz, and near the Pichilingue cove, is represented to be valuable for grazing. Some of the silver mines near San Antonio, about forty miles south, are productively wrought. Gold dust and virgin gold are brought to La Paz, and about one hundred thousand dollars of *plata*, are exported from it yearly. The whole coast abounds with fish, clams and oysters. Among the islands of the gulf immense number of seal are constantly found, and the whaling grounds on the Pacific coast are of great value. Magdalena bay alone has, at one time, contained as many as twenty-eight sail, all engaged in this fishery.

The coasts of Lower California are flat, sandy, irregular, and frequently

indented by coves, inlets and bays, while many islands lie near and border them in the gulf. The climate is regarded as healthful; the winter is short, and frost and ice are unknown. A pure air and a deep blue sky surround and span the region; but the heat of summer is intense, parching the thin soil, and rendering life almost insupportable in the more exposed regions, or in the narrow and confined glens.

The principal ports visited by merchantmen or whalers on the west or Pacific coast, are: 1st. That of San Quentin, in latitude $30^{\circ} 23'$, which is said to afford a secure anchorage for vessels of every description, and to be sufficient for the accommodation of a numerous fleet; and 2dly, the bay of Magdalena, which has acquired notoriety from being resorted to every winter by numbers of whalers. It is protected by the two large islands of San Lazaro and Margareta, and possesses many of the characteristics of an inland sea, being navigable for the distance of more than a hundred miles. It has several commodious anchorages. The bay of San José, near Cape San Lucas, is ordinarily frequented by coasters, and is sometimes visited by whalers and men-of-war, being the outlet of a valley, unusually fertile for Lower California, which extends upwards of forty miles inland, and affords probably the best watering and provisioning place on the peninsula, though it is a mere roadstead yielding no protection in the season of south-easters.

On the west coast of the Peninsula, north of Cape San Lucas, and between that point and the 24th degree of N. latitude are the bays of San Barnabé and De los Muertos. Between the 24th and 25th degrees is the bay of La Paz, an extensive indenture, protected towards the gulf by numerous isles and islets and affording excellent anchorages for vessels of any draft or any number. In this vicinity are the principal pearl fisheries as well as the most reputed mining districts. It is the outlet of the cultivated valley of Todos Santos and of the produce of the whole region lying between Santiago and Loreto. The cove or *estero*, opposite the town of La Paz, furnishes spacious and secure anchorage, which may be reached by vessels drawing not more than eighteen or twenty feet; while the cove of Pichilingue, at the south-eastern extremity of the bay, about six miles from the town, affords anchorage for vessels of any size; but the inner bay can be reached only by merchantmen. The bar, however, between the two is only a few yards in extent; and if the importance of the place should ever justify it, the channel might be deepened without much expensive labor. There is an anchorage at Loreto at about 26° north, and there are several places of resort and anchorage in the bay of Mulejé, between 26° and 27° , but none are deemed secure for large or small craft at any season. Several other ports are found on the

gulf further north, which are visited occasionally by coasters, but the region is as yet quite unexplored, and their commercial or military value is of course unknown. Beyond the bay of Mulejé, which is nearly opposite the Mexican port of Guyamas on the main continent, the gulf is so much narrower than further south, that it becomes in a great degree a harbor itself.

The only towns of any importance on the peninsula are those of Loreto, and La Paz the capital and seat of government. The population is of course chiefly an Indian and mixed race, for but few whites were ever tempted to prolong their residence in this lonely and unattractive region.

THE STATE OF GUERRERO.

This State was created by virtue of the fourth article of the Acta de Reformas, passed on the 18th of May, 1847, amending the constitution of 1847. By this article it was agreed that the STATE OF GUERRERO should be formed of the districts of Acapulco, Chilapa, Tasco and Tlapa, and the municipality of Coyucan,—the three first of which belonged to the State of Mexico, the fourth to Puebla, and the fifth to Mechoacan—provided the legislatures of these three States gave their consent, within three months.

It is understood that this consent was yielded, but as the organization of the new State has not been received, no elucidation of the geography of the region can be given except in the descriptions of the three original States whose districts were surrendered, and to which the reader is referred in the preceding pages.

ANCIENT HEADS MADE OF CLAY.
ANCIENT HEADS MADE OF CLAY.

CHAPTER X.

INTERIOR STATES.

STATE OF QUERÉTARO—BOUNDARIES—DIVISIONS—CHARACTERISTICS—RIVERS—POPULATION AND CLIMATE—DISTRICTS, ETC.—AGRICULTURAL PRODUCTS—FORESTS—FACTORIES—CITIES—MINES.—STATE OF GUANAJUATO—BOUNDARIES—EXTENT—SOIL—LAKE YURIRAPUNDARO—CLIMATE—EFFECT OF MALADIES—PRODUCTIONS—VINE—OLIVE—DIVISIONS—POPULATION—CITY OF GUANAJUATO—TOWNS IN THE STATE—HACIENDA OF JARAL—MINES—SILVER—COPPER—LEAD—CINNABAR.—ZACATÉCAS—BOUNDARIES—EXTENT—AGRICULTURE—DIVISIONS—POPULATION—TOWNS—ZACATÉCAS—AGUAS CALIENTES, ETC.—PRODUCT AND

THE STATE OF QUERÉTARO.

The State of Queretaro, one of the smallest members of the Republic, is situated between $19^{\circ} 35' 42'' 7'''$ and $21^{\circ} 17' 16'' 45'''$ of north latitude. By trigonometrical surveys made in 1837, the State was found to contain 869 square leagues, which were divided between the six districts as follows:

1	District of Querétaro	157	square leagues.
2	" San Juan del Rio	128	"
3	" Cadereyta	115¼	"
4	" Toliman	114¾	"
5	" Jalpam	203¼	"
6	" Amealco	150¾	"
	Total	<u>869</u>	

This State is bounded on the north by the State of San Luis Potosi, west and south-west by Guanajuato and Mechoacan, south by Mexico, and east by Mexico and Vera Cruz. It lies entirely on the central plateau of the Cordillera, and is consequently intersected by numerous mountain spurs and elevated hills, some of which are entirely bare, while others are covered with forests of various kinds of wood. The plains are frequently cut up by deep *barrancas* or gullies, rivers and streamlets. The agricultural portions of the State are consequently confined chiefly to the vallies of San Juan del Rio, Querétaro, Cadereyta, Amealco, Toliman and Jalpam, in which the soil, enriched by the vegetable products and debris drained from the

QUERETARO. QUERETARO.

mountain sides, is usually found to be very productive. Querétaro is generally remarked by travellers for the picturesque character of its scenery and the beautiful site of its haciendas, cities and ranchos. Mountainous as is this region, it has no single elevation of remarkable character in the geography of the republic. In a country thus physically formed and raised above the sea, important rivers are, of course, not easily encountered, and although there are fifteen streams which are dignified by the inhabitants with this title, the only two of

importance are the Tula or Rio de Montezuma, the boundary between the States of Mexico and Vera Cruz, and the Rio Paté which has cut its deep and stony bed in the porphyritic rock near San Juan del Rio. The temperature of the whole region is exceedingly cool and the climate is agreeable and healthy.

The population assigned to the State in 1845 was 180,161, classified thus:

Spaniards, Creoles and Europeans,	36,032
Indians,	90,080
Castes,	54,049
Total,	<u>180,161</u>

Querétaro is divided into six districts, comprising eight *partidos*.

1st. The prefecture of Querétaro, with the *partidos* of the capital and of La Cañada; in these two are found the town of San Francisco Galileo, the villages of Santa Rosa and Huimilpam, and the hamlets of Santa Maria Magdalena and San Miguel Carillo. $46\frac{1}{3}$ inhabitants to each square league.

2d. The district of the municipality of San Juan del Rio contains the village of Tequisquiapam, the hamlets of San Pedrito, San Sebastian, and the *rancheria* of La Barranca de los Cocheros. 71 inhabitants to each square league.

3d. The district of the municipality of Cadeyreta which contains the mining posts of El Doctor and Maconi, and the villages of San José Vizarron, San Gaspar, San Sebastian de Brual, and San Miguel Tetillas. $183\frac{2}{3}$ inhabitants to each square league.

4. The district of Santa Maria Amealco, containing the village of Huimalpam and the hamlets of San José de Ito, San Bartolo, San Miguel Deti, San Juan de Güedó, San Miguel Tlaxcaltepec, San Pedro Tenango, San Ildefonso, and Santiago Mexquitlan. 80 inhabitants to each square league.

5th. The district of San Pedro Tolimán, contains the villages of San Francisco Tolimanejo, Santa Maria Peñamillera, San Miguel Tolimán, San Miguel de las Palmas, a mission station, Santo Domingo de Soriano, San Antonio de Bernal, and the mining post of Rio Blanco. 213 inhabitants to the square league.

6th. The district of Jalpam, contains three *partidos* and in these there are two sub-prefectures, which are Landa and Aguacatlan a mining post; besides these there are the villages of Concá, Sancillo, Bucareli, Arroyoseco, Tancoyol and Xilapan; the mining posts of San José de los Amoles and San Pedro Escanela; and the missions of Tilaco and Pacula. 64 inhabitants to the square league.

The whole State is calculated to contain 124 *haciendas* or large plantations,

and 392 *ranchos* or farms, while nearly 30,000 of its inhabitants are engaged in agricultural pursuits.

The products of the soil are similar to those already described in the other States on the central plateau. In the valleys some of the tropical productions are found, but grain and cattle form the staples of the farmer's care. Very thick forests are seldom found in any part of the State, and many regions are almost entirely denuded. It will be seen from our chapter upon the manufactures of Mexico, that Querétaro is remarkable for the zeal and success with which it has applied itself to this branch of industry. Most of the woollen fabrics of this State are made of the Lana de Chinchorro which is produced within its limits, and is commonly sold at \$15 per 100 lbs. Besides this there is a species of cotton, raised in some of the districts, used in the manufacture of a favorite kind of mantas, shawls and rebozos. The trade of the State is carried on chiefly with Mexico, Vera Cruz and San Luis Potosi.

The principal city is that of Querétaro, the capital and seat of government, lying in 19° 58' 2'' 15''' N. latitude, and 1° 5' W. longitude from the meridian of Mexico, 6,365 feet above the sea. This fine, picturesque and well built town, containing about 50,000 inhabitants, is situated on the sides and summit of converging hills, and is divided into several parishes, or *curatos*, some of which are in the body of the city and others in the suburbs, being separated from the rest by a scant stream which has been dignified with the title of El Rio—the river. Querétaro stands nearly 7,000 feet above the level of the sea, and enjoys a delightful temperature. A noble aqueduct, two miles in length, with arches ninety feet high, spanning a plain of meadow land—joins a tunnel from the opposite hills, and supplies the city with an abundance of excellent water from a distance of two leagues. It is a magnificent and enduring structure, and the honor of its erection is due to the taste and judgment of the Marquis de Valero del Aguila, who caused it to be built at his own cost during his viceregal government of Mexico. Querétaro has become interesting in our history, inasmuch as it was the city in which the treaty of peace between Mexico and the United States was finally ratified by the Mexican Congress in 1848.

The other important towns are those of San Juan del Rio, San Pedro de la Cañada, and Cadereyta.

The chief mining district, and the only one of any note in the State, is that of *El Doctor*, in the district of Cadereyta. Its principal veins are those of El Doctor and San Cristoval; but famous as they once were, they are now of but little importance. The quicksilver mine of San Onófre, in the same region, is also failing.

The mining districts of El Doctor, Rio Blanco, Maconi and Escanelella, contain 216 mines—divided as follows: five of gold; 193 of silver; 7 of copper; 1 of lead; 1 of tin; 6 of quicksilver; 2 of antimony; 1 of jaldre.

THE STATE OF GUANAJUATO.

The State of Guanajuato is comprehended between 20° and 21° 49′ of north latitude, and 0° 31′ 05″ and 2° 51′ of longitude west from the meridian of Mexico, and is situated upon the grand Mexican Cordillera. It is bounded on the north by the State of San Luis Potosi, on the south by Mechoacan, on the east by Querétaro, and on the west by Jalisco and Zacatecas. Its superficial extent is 1,545 Mexican leagues of 26¹/₂ to the degree. With the exception of the State of Querétaro, Guanajuato is the smallest of the Republic, yet it contains, comparatively, the greatest number of inhabitants, as will be seen hereafter.

Large portions of the soil of Guanajuato are fertile; especially the magnificent and productive plains of the Bajío, in the southern part of the State, which extend for more than 34 leagues from Apasco to beyond Leon;—and, in the north, where the splendid plains or Llanos of San Felipe spread far and wide.

All the *Sierra* of Santa Rosa forms a chain of porphyritic mountains and elevations of greater or less elevation, which pass under the general name of *Cerros*. The highest of these, two leagues, north of the capital is known as the Cerro de los Llanitos. It rises to the height of 3,359 *varas* above the level of the sea, and is the loftiest in the State. Besides these, there are the *Cerros* del Gigante, El Cubilete, La Bufa, La Garrida, La Beata and San Juan de Mendoza.

The river Lerma, anciently known as Tolotlan, and commonly designated in Guanajuato as the *Rio Grande*, is the only one which really merits this name in the State, and crosses the southern portion of it for near 35 leagues. The river Laja and the river Turbio are of less consequence; and all the other streams, though generally known among the people of these districts by the dignified title of *rivers*, scarcely merit a higher position among the fluvial characteristics of the State than brooks or mountain torrents, which only obtain real consideration when they are swollen by heavy rains.

The lake of Yurirapúndaro, is the only one which belongs to this State;—it is four leagues long by one and a half in width, and embosoms several islands. Its sweet waters are filled with small fish, which are taken daily by the Indians, for the markets of the neighborhood and the capital, but its actual depth is unknown.

The climate of Guanajuato is genial, its sky nearly always clear, and its atmosphere pure. Owing to its site, immediately north of the torrid zone, the inhabitants do not suffer the extremes of heat or cold. Elevated about 8,000 feet

above the level of the sea, its rarefied atmosphere counteracts the direct rays of the sun, so that its mean temperature is 21° of the centigrade thermometer, whilst it never exceeds 28° in the months between April and June, which are generally reckoned the warmest in this part of the Republic. During this season the rain usually begins to fall, and lowers the temperature agreeably. The north wind prevails during the greater part of the year; yet near the period of the annual rains it changes for a while to the south, bringing with it an abundance of moist vapor to fertilize the soil. Nothing is sadder for the people of Guanajuato and the adjacent States than to find, as sometimes happens, the months passing without this customary change of wind. In such years the crops fail; the prices of grain consequently rise, and the poor classes suffer extremely. The year 1786, is known in the annals of this region, as one well remembered still for the famine that prevailed in consequence of a severe frost that occurred on the 28th of the preceding August, blighting the prospects of the farmer, and carrying off 8,000 victims in the capital and the adjacent mines alone. In the month of May agriculture often suffers from violent hail storms that prostrate the young grain which at this season of the year is usually extremely dry in consequence of the early heats and the want of irrigation.

The mild and pure climate of Guanajuato renders it a healthy residence. In its southern part, about Salvatierra and Yurirapúndaro, intermittent fevers, called *los frios*, or agues, occasionally prevail. Dropsy, rheumatism, common lever, and dysenteries, which usually sweep off large numbers of Mexicans, are milder and more

GUANAJUATO. GUANAJUATO.

easily treated in this region than in other portions of the Republic. The laborers in the mines formerly suffered from diseases of the chest, arising probably from the mephitic vapors which were confined in the badly ventilated galleries; but the Deputacion de la Mineria took this subject into consideration, and have forced the owners of mines by stringent laws to construct shafts and openings by which these buried workmen may receive continual supplies of fresh air.

Maize, wheat, frijoles, beans, and the common cereal grains are produced abundantly in the fertile plains of the Bajio and San Felipe. Corn, though the chief product for consumption, not only for man but for beasts, is often so abundant, that the farmers are obliged to export it to other States. The quality of

the wheat of this State is so excellent, that when it will bear the cost of transportation, it is sent to the national capital, where it commands a better price than even the grain raised in the immediate vicinity of the city. The *frijol*,—a fine dark, nutritious bean, which is commonly used throughout Mexico, by all classes, from the highest to the lowest,—grows abundantly in Guanajuato. The Chile pepper is used in Mexico, not only as a seasoning for food as in other countries, but as an aliment of life, which is placed on tables of all ranks at dinner. It is consumed both in its green and dry states, and in the latter, it is exported from Guanajuato to the capital, where the product of the haciendas or plantations at Apaseo are preferred by the epicures as being of the best flavor in the Republic. The vine, is also cultivated in various parts of this State, especially at Dolores Hidalgo, Celaya, and Chamacuero, but as manufactories of wine have not been established, its culture does not extend beyond the quantity of grapes required for consumption in the markets. The potato does not flourish in this State.

It is believed that the olive may be advantageously reared in Guanajuato. At the beginning of the present century, Joaquin Gutierrez de los Rios made the experiment at his *hacienda* de Sarabia, within the district of Salamanca. The scarcity and dearness of oil in Spain, at that period, in consequence of the war, enabled the mill established by this person to supply the neighborhood with the article at such prices, that the lucky proprietor realized a large income from his enterprize. But during the insurrection in 1810, his property was destroyed, and with it, a large part of his olive plantation. At present, considerable plantations are making at several haciendas, especially at that of Mendoza, where 30,000 olive trees had been already planted in 1849.

The State of Guanajuato is divided into four departments or prefectures:—1st. San Miguel de Allende; 2d. Leon; 3d. Guanajuato; 4th Celaya; whose capitals or chief towns bear the same names. The possession by this State of the great and celebrated *Veta Madre* which passes nearly through its centre, and of the wide and prolific plains of the Bajio and of San Felipe renders it equally valuable as a mining and agricultural region, and divides it fairly between the two branches of industry. Its population may be estimated at about 560,000; twenty-five per cent. of which comprises the whites, thirty-six per cent. the mixed races, and thirty-nine per cent. the Indian. Guanajuato contains three cities, four market-towns, thirty-seven villages, and four hundred and fifty estates, plantations and farms.

The capital of the State is the city of GUANAJUATO, or Santa Fé de Guanajuato, situated in 21° 0′ 15″ north latitude and 103° 15′ west longitude from Paris,

about 6,869 feet above the level of the sea, according to the measurement of Burkhart, and containing between 35,000 and 40,000 inhabitants. The town is perhaps the most curiously picturesque and remarkable in the republic. "Entering a rocky Cañada," says a recent traveller, "the bottom of which barely affords room for a road, you pass between high adobe walls, above which, up the steep, rise tier above tier of blank, windowless, sun-dried houses, looking as if they had grown out of the earth. You would take them to be a sort of cubic crystallization of the soil. Every corner of the windings of the road is filled with buildings of mining companies—huge fortresses of stone, ramparted as if for defence. The scene varies with every moment;—now you look up to a church with purple dome and painted towers; now the blank adobe walls, with here and there a spiry cypress or graceful palm between them, rise far above you, along the steep ledges of the mountain; and again the mountain itself, with its waste of rock and cactus, is all you see. The Cañada, finally seems to close. A precipice of rock, out of a rift in which the stream flows, shuts the passage. Ascending this by a twist in the road you are in the heart of the city. Lying partly in the narrow bed of the ravine and partly on its sides and in its lateral branches, it is only by mounting to some higher eminence that one can realize its extent and position. At the further end of the city the mountains form a *cul de sac*. The Cañada is a blind passage which can only be left by the road you came. The streets are narrow, crooked, and run up and down in all directions, and there is no room for plazas or alamedas. A little triangular space in front of the cathedral, however, aspires to the former title." Such is the aspect of a city which is the focus of a mineral region surrounded by more than one hundred mines, which are wrought by seventy-five thousand laborers.

In spite of all the natural difficulties and impediments for fine architecture, Guanajuato contains some fine edifices, especially among the private residences of the wealthy miners, such as the families of Otero, Valenciana, Rhul and Perez Galvez. The church of the Jesuits was built by the Marquis Rayas. Besides the cathedral, the town contains two chapels, three monasteries, five convents, a college, a Bethlehemite hospital, a theatre, a barrack, a mint, an university, and a gymnasium.

The VILLA DE LEON, is a market town west north-west from Guanajuato, in $21^{\circ} 6' 38''$ north latitude, and $103^{\circ} 39'$ west longitude, 6,004 feet above the sea, in the productive plain of Leon.

SAN FELIPÉ is another market town, 32 leagues north of Guanajuato, on the road to San Luis Potosi, 6,906 feet above the sea. Ten leagues north-east from San Felipé is the valuable estate of Jaral, the property of the Marquis del Jaral,

the wealthiest and largest land owner in Mexico. His stock of cattle, comprising horses, mules, horned-cattle, sheep and goats amounts to nearly three million head!^[66] Thirty thousand sheep alone, and as many goats, are annually slaughtered on this estate for the markets of Guanajuato and Mexico, where the sheep sell for from two and a half to three dollars a piece, and the goats from seventy-five cents to one dollar each!

CELAYA is a city, and next in importance to Guanajuato in the State. It lies in 20° 38' north latitude, and 102° 52' west longitude, near the boundary of Querétaro, 6,020 feet above the sea, and contains about 15,000 inhabitants.

SALAMANCA is a market town in the Bajío, nine leagues west from Celaya, and is the chief place of a region possessing twenty-nine haciendas, or plantation estates, and sixty-nine valuable farms. Its population is estimated at 15,000. Irapuato, lies about six leagues north-west from Salamanca, and contains perhaps an equal number of inhabitants.

SAN MIGUEL ALLENDE, formerly *San Miguel el Grande*, is the capital of the department of that name, lies directly north of Celaya, on the river de la Laja, where it cuts the division between the two departments. Dolores Hidalgo is on the same stream, north-west of the last town, and is remarkable in the annals of the country as the residence of the priest Hidalgo, under whose auspices the revolutionary movement against Spain originated.

The mineral products of this State have been and still continue very valuable. The chief silver mines are those of Guanajuato, Villalpando, Monte de San Nicolas, Santa Rosa, Santa Anna, S. Antonio de las Minas, Comanja, El Capulin, Comangilla, San Luis de la Paz, San Rafael de los Lobos, El Duranzo, San Juan de la Chica, Rincon de Zenteno, San Pedro de los Pozos, El Palmar de la Viga, San Miguel y San Felipe. All these mines and mineral districts recognize the jurisdiction of the Deputacion de Minería de Guanajuato, although some of them lie out of the immediate boundaries of the State.

Besides the silver yielded at these places, copper and iron are produced by some of them; and at El Gigante cinnabar has been discovered disseminated among other substances. Lead is taken abundantly from the mine of La Targea; but the mining operations of the State are chiefly confined to silver.

In the southern part of the State large quantities of soda are found near Celaya, Salamanca and Valle de Santiago; and in the north, in the vicinity of San Felipe, the earth is impregnated, in many places, with nitrate of potash or nitre. Mineral waters and thermal springs exist on the southern slope of the Cerro del Cubilete, near Silao, and are used by invalids; while in the jurisdictions of Leon, near Irapuato or San Miguel Allende and Celaya, other warm and sulphur

springs are found which are beneficially frequented by persons who suffer from rheumatism and cutaneous diseases.

THE STATE OF ZACATECAS.

This rich metallic region and State lies between the 21st and 25th degrees of north latitude and $102\frac{1}{2}$ and $105\frac{1}{2}$ west longitude from Paris. It is bounded on the north by Durango and Nuevo Leon on the east by San Luis Potosi; on the south-east by Guanajuato; and on the west and south-west by Jalisco. Its greatest breadth, from Sombrereté to Real del Ramos, in the State of San Luis, is fifty-seven leagues, and its extreme length is 90. The superficial area of the State is reckoned at 2,355 square leagues.

Zacatécas is a mountain country of the high plateau of Mexico, cut up by spurs of the Cordillera and inhospitably arid. The region between Catorcé in San Luis Potosi, and Sombrereté and Mazapil in Zacatécas is a broad plain, interspersed by a few

ZACATECAS.
ZACATECAS.

swelling knolls, and an occasional group of hills or small mountains. The agricultural productions are of course suitable to such a geological structure; but in the *Haciendas de Ganado*, or cattle farms, immense herds are constantly raised by the thrifty vaqueros of this region. As the country is unusually dry, water tanks, *algibes*, and *norias* are established on all the estates, and are watched with the greatest care. There is no river of any note whatever in Zacatécas. The Arroyo de Zacatécas, the Rio Xeres, the Rio Perfido, del Maguey, and Bañuelos, are but slender streams.

Zacatécas is divided into eleven partidos or districts. 1st. Zacatécas, 2d Aguas Calientes, 3d Sombrereté, 4th Tlaltenango, 5th Villa Nueva, 6th Fresnillo, 7th Xeres, 8th Mazapil, 9th Piños, 10th Nieves, and 11th Juchipila; possessing in all 3 cities, 5 market towns, 34 villages and mining works, 139 agricultural and cattle farms, 562 smaller similar establishments, 683 ranchos, 11 convents for monks, 4 for nuns, and four hospitals. The population has been calculated at about 350,000; and it is remarkable that, according to reliable statistical data, 14,937 more individuals were born than died in this State during the year 1830.

Births,—	males, 14,709 females, 14,086 <hr style="width: 100%;"/> 28,795	Deaths—	males, 7,012 females, 6,846 <hr style="width: 100%;"/> 13,858	Births, 28,795 Deaths, 13,858 <hr style="width: 100%;"/> Increase, 14,937
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The most valuable agricultural district lies in the district of Aguas Calientes. The best cultivation begins at the *hacienda* of San Jacinto, 12 leagues from the town of Zacatécas, and in this region it is reckoned that the farmers annually gather from their harvests, 140,952 fanegas of Corn (of 150 lbs.); 4,719 cargas (of 300 lbs.) of wheat; 7,293 fanegas of frijoles or beans, and 4,291 arróbas (of 25 lbs. each,) of chile.

The mainspring of the wealth of Zacatécas is its mineral production. The vein of the Veta Negra of Sombrereté has been the most productive in the new or old world. El Pavellon, La Veta Grande, San Bernabé, and the isolated hill of Proaño at Fresnillo constantly yielded in former times the most extraordinary results for the labor bestowed in working them. Their present value may be estimated from the chapter on Mines in the preceding book.

The chief cities, towns and villages of this State are the capital, ZACATÉCAS, containing from 25,000 to 30,000 inhabitants. It lies in 22° 47' 19'' of north latitude and 164° 47' 41'' west longitude, at an elevation of 7,976 feet.

The town itself is not visible until the traveller approaches within a mile and a half, when it is seen below following the turns of a deep barranca or ravine, of which the mountain of *la Bufa*, with a chapel on its crest, forms one side. The streets are narrow and dirty, and swarm with uncleanly children, whose appearance, like that of their squalid parents, is by no means prepossessing. But the distant view of the city is picturesque from the number of religious edifices which rise above the roofs of the other buildings. In the vicinity of the *plaza* there are some fine houses, and the market place presents a curious and busy provincial scene.

AGUAS CALIENTES is situated upon the banks of a stream of the same name, in a broad and rich valley, at the distance of 25 leagues south of Zacatécas. The neighborhood is famous for its warm thermal springs; the chief of which, El Baño de la Cantera, lies a league south-west of the town. Aguas Calientes contains several thousand inhabitants and is celebrated for its woollen manufactories, among which the one belonging to the family of Pimentel employed about 350 men and women at its looms.

FRESNILLO is a mining town, and capital of its district, 14 leagues north-west from Zacatécas, in the wide plain which divides the mountains of Santa Cruz and Organos from the mountain ranges about Zacatécas. It lies at the foot of the isolated knoll of Proaño, in which its mines are situated. The neighborhood of the town is pretty, but the region which intervenes between it and Sombrereté is a waste and sterile moorland.

SOMBRERETÉ is a mining town, and capital of its district, 25 leagues north-westward of Fresnillo, lying at the foot of the mountain of Sombreretillo, or "little hat," whose name is derived from a singular formation of rock on its summit which resembles that article of dress. In its vicinity are the once renowned and rich mines of La Veta Negra and El Pavellon.

Upon the table lands between Sombrereté, Fresnillo, and Catorcé, in the State of San Luis, are several towns or villages deserving of notice, and the *hacienda* of Sierra Hermosa, a cattle estate, which is one of the most remarkable in the Republic for its extent and production. It covers an area of 262 *sitios* or square leagues, and supports immense herds of horned cattle, horses, mules, goats and sheep. The latter, alone, are estimated at 200,000 head, about 30,000 of which are annually disposed of. The wool yielded by these animals amounts to from 4,000 to 5,000 arrobas yearly.

The other towns and villages of note are ASIENTOS DE IBARRA, Xeres, Villanueva, Mazapil.

RUINS OF QUEMADA.
RUINS OF QUEMADA.

The Sierra de Piños, Chalchiguitéc, Los Angeles, Plateros, and other metallic deposits were formerly celebrated for their productive value; but they are now either partially or entirely abandoned.

We may deduce some interesting statistical information from the labors of Berghes in regard to the mineral wealth of Zacatécas and the productiveness of its mines. According to the tables of this writer, published in 1834, it appears that from the year

1548 to 1810				the mines of this region produced \$588,041,956
1810 to 1818	"	"	"	20,060,363
1818 to 1825	"	"	"	17,912,475
1825 to 1832	"	"	"	30,028,540
				\$656,043,335

These rates gave an annual mean product, from

1548 to 1810	"	"	"	of \$2,244,434
1810 to 1818	"	"	"	" 2,507,545
1818 to 1825	"	"	"	" 2,558,925
1825 to 1832	"	"	"	" 4,003,128

It will be seen by reference to our table on page 88 of this volume, that the value of the products of Zacatécas in the ten years from 1835 to 1844, was \$43,384,215; giving a mean annual rate of \$4,338,421, and exhibiting the important fact, in spite of revolutionary troubles and consequent social, commercial and industrial disorganization, that the mineral yield of this region, instead of diminishing, has steadily *increased* with every year. In 1845, the *Mint* in Zacatécas issued \$4,429,353.

The State of Zacatécas contains some remarkable remains of Indian architecture on the CERRO DE LOS EDIFICIOS, situated two leagues northerly from

the village of Villanueva, twelve leagues south-west from Zacatécas, and about one league north of La Quemada, at an elevation of 7,406 feet above the sea.

RUINS NEAR QUEMADA.

"We set out," says Captain Lyon, in a volume of his travels in Mexico, "on our expedition to the Cerro de los Edificios under the guidance of an old *ranchero*, and soon arrived at the foot of the abrupt and steep rock on which the buildings are situated. Here we perceived two ruined heaps of stones, flanking the entrance to the causeway, ninety-three feet broad, commencing at four hundred feet from the cliff.

"A space of about six acres had been enclosed by a broad wall, the foundations of which are still visible, running first to the south and afterwards to the east. Off its south-western angle stands a high mass of stones which flanks the causeway. In outward appearance it is of a pyramidal form, owing to the quantities of stones piled against it either by design or by its own ruin; but on close examination its figure could be traced by the remains of solid walls to have been a square of thirty-one feet by the same height: the heap immediately opposite is lower and more scattered, but, in all probability, formerly resembled it. Hence the grand causeway runs to the north-east till it reaches the ascent of the cliff, which, as I have already observed, is about four hundred yards distant. Here again are found two masses of ruins, in which may be traced the same construction as that before described; and it is not improbable that these two towers guarded the entrance to the citadel. In the centre of the causeway, which is raised about a foot and has its rough pavement uninjured, is a large heap of stones, as if the remains of some altar, round which we can trace, notwithstanding the accumulation of earth and vegetation, the paved border of flat slabs arranged in the figure of a six rayed star.

"We did not enter the city by the principal road, but led our horses with some difficulty up the steep mass formed by the ruins of a defensive wall, inclosing a quadrangle two hundred and forty feet by two hundred, which to the east, is sheltered by a strong wall of unhewn stones, eight feet in thickness and eighteen in height. A raised terrace of twenty feet in width passes round the northern and eastern sides of this space, and on its south-east corner is yet standing a round pillar of rough stones, of the same height as the wall, and nineteen feet in circumference.

"There appear to have been five other pillars on the east, and four on the northern terrace; and as the vein of the plain which lies to the south and west is very extensive, I am inclined to believe that the square has always been open in

these directions. Adjoining to this we entered by the eastern side to another quadrangle, surrounded by perfect walls of the same height and thickness as the former one, and measuring one hundred and thirty-four feet by one hundred and thirty-seven. In this were yet standing fourteen very well constructed pillars, of equal dimensions with that in the adjoining enclosure, and arranged four in length and three in breadth of the quadrangle, from which, on every side, they separated a space of twenty-three feet in width, probably a pavement of a portico of which they once supported the roof. In their construction, as well as that of all the walls which we saw, a common clay having straw mixed with it has been used. Rich grass was growing in the spacious court where Aztec monarchs may once have feasted; and our cattle were so delighted with it that we left them to graze while we walked about three hundred yards to the northward, over a very wide parapet, and reached a perfect, square, flat-topped pyramid of large unhewn stones. It was standing unattached to any other buildings, at the foot of the eastern brow of the mountain which rises abruptly behind it. On the eastern face is a platform of twenty-eight feet in width, faced by a parapet wall of fifteen feet, and from the base of this extends a second platform with a parapet like the former, and one hundred and eighteen feet wide. These form the outer defensive boundary of the mountain, which from its figure has materially favored its construction. There is every reason to believe that this eastern face must have been of great importance. A slightly raised and paved causeway descends across the valley, in the direction of the rising sun, and being continued on the opposite side of a stream which flows through it, can be traced up the mountains at two miles distant, till it terminates at the base of an immense stone edifice which probably may also have been a pyramid. Although a stream (Rio del Partido) runs meandering through the plain from the northward, about midway between the two elevated buildings. I can scarcely imagine that the causeway should have been formed for the purpose of bringing water to the city, which is far more easy of access than in many other directions much nearer to the river, but must have been constructed for important purposes between the two places in question; and it is not improbable once formed the street between the frail huts of the poorer inhabitants. The base of the large pyramid measured fifty feet, and I ascertained by ascending with a line that its height was precisely the same. Its flat top was covered with earth and a little vegetation: and our guide asserted, although he knew not where he obtained the information, that it was once surmounted by a statue. Off the south-east corner of this building, and about fifteen yards distant, is to be seen the edge of a circle of stones about eight feet in diameter, enclosing as far as we could judge by scraping away the soil, a bowl-shaped pit, in which the action of fire was plainly observable; and the earth from which we picked

some pieces of pottery, was evidently darkened by an admixture of soot and ashes. At the distance of one hundred yards south-west of the large pyramid is a small one, twelve feet square, and much injured. This is situated on somewhat higher ground, in the steep part of the ascent to the mountain's brow. On its eastern face, which is towards the declivity, the height is eighteen feet; and apparently there have been steps by which to ascend to a quadrangular space, having a broad terrace around it, and extending east one hundred feet by a width of fifty. In the centre of this enclosure is another bowl-shaped pit, somewhat wider than the first. Hence we began our ascent to the upper works, over a well buttressed yet ruined wall built of the rock. Its height on the steepest side is twenty-one feet, and the width on the summit, which is level, with an extensive platform, is the same. This is a double wall of ten feet, having been first constructed and then covered with a very smooth kind of cement, after which the second has been built against it. The platform, (which faces to the south, and may, to a certain extent, be considered as a ledge from the cliff,) is eighty-nine feet by seventy-two; and on its northern centre stand the ruins of a square building, having within it an open space of ten feet by eight, and of the same depth. In the middle of the quadrangle is to be seen a mound of stones eight feet high. A little farther on we entered by a broad opening between the perfect and massive walls, to a square of one hundred and fifty feet. This space was surrounded on the south-east and west by an elevated terrace of three feet by twelve in breadth, having in the centre of each side steps by which to descend to the square. Each terrace was backed by a wall of twenty-eight feet by eight or nine. From the south are two broad entrances, and on the east is one of thirty feet, communicating with a perfect enclosed square of one hundred feet, while on the west is one small opening, leading to an artificial cave or dungeon, of which I shall presently speak.

"To the north, the square is bounded by the steep mountain; and, in the centre of that side, stands a pyramid of seven ledges or stages, which in many places are quite perfect. It is flat topped, has four sides, and measures at the base thirty-eight by thirty-five feet, while in height it is nineteen. Immediately behind this, and on all that portion of the hill that presents itself to the square, are numerous tiers of seats either broken in the rock or built of rough stones. In the centre of the square, and due south of the pyramid, is a small quadrangular building, seven feet by five in height. The summit is imperfect, but has unquestionably been an altar; and from the whole character of the space in which it stands, the peculiar form of the pyramid, the surrounding terrace, and the seats or steps on the mountain, there can be little doubt that this has been the grand Hall of Sacrifice

or Assembly, or perhaps both.

"Passing to the westward, we next saw some narrow enclosed spaces, apparently portions of an aqueduct leading from some tanks on the summit of the mountain, and then we were shown to the mouth of the cave, or subterranean passage, of which so many suspicious stories are yet told and believed. One of the principal objects of our expedition had been to enter this place, which none of the natives had ever ventured to do, and we came provided with torches accordingly: unfortunately however, the mouth had very recently fallen in, and we could merely see that it was a narrow, well built entrance, bearing in many places the remains of good smooth plastering. A large beam of cedar once supported the roof, but its removal by the country people had caused the dilapidation which we now observed. Mr. Sindal, in knocking out some pieces of regularly burnt brick, soon brought a ruin upon his head, but escaped without injury; and this accident caused a thick cloud of yellow dust to fall, which, on issuing from the cave, assumed a bright appearance under the full glare of the sun;—an effect not lost on the natives, who became more than ever persuaded that an immense treasure lay hidden in that mysterious place. The general opinion of those who remember the excavation is that it is very deep; and from many circumstances there is a probability of its having been a place of confinement for victims. Its vicinity to the great hall, in which there can be little doubt that the sanguinary rites were held, is one argument in favor of this supposition; but there is another equally forcible;—its immediate proximity to a cliff of about one hundred and fifty feet, down which the bodies of victims may have been precipitated, as was the custom at the inhuman sacrifices of the Aztecs.^[67] A road or causeway to be noticed in another place, terminates at the foot of the precipice, exactly beneath the cave and over-hanging rock, and conjecture can form no other idea of its intended utility, unless as being in some manner connected with the dungeon.

"Hence we ascend to a variety of buildings, all constructed with the same regard to strength, and inclosing spaces on far too large a scale for the abode of common people. On the extreme ridge of the mountain were several tolerably perfect tanks.

"In a subsequent visit to this extraordinary place, I saw some buildings which had at first escaped my notice. These were situated on the summit of a rock terminating the ridge, and about a mile and a half north north-west of the citadel.

"The first is a building originally eighteen feet square, but having the addition of sloping walls to give it a pyramidal form. It is flat topped, and on the centre of its southern face there appears to have been steps to ascend to its summit. The

second is a square altar, its height and base being each about sixteen feet. These buildings are surrounded at no great distance by a strong wall, and at a quarter of a mile to the northward, advantage is taken of a precipice to construct another wall of twelve feet in width from its brink. On a small flat space between this and the pyramid are the remains of an open square edifice, to the southward of which are two long mounds of stone, each extending about thirty feet; and to the north-east is another ruin, having large steps up its side. I should conceive the highest wall of the citadel to be three hundred feet above the plain, and the base rock surmounts it by about thirty feet more.

"The whole place in fact, from its isolated situation, the disposition of its defensive walls, and the favorable figure of the rock must have been impregnable to Indians; and even European troops would have found great difficulty in ascending those works which we have ventured to name the Citadel. There is no doubt that the greater mass of the nation who once dwelt here must have been established on the plain beneath, since from the summit of the rock we could distinctly trace three straight and very extensive causeways diverging from that over which we first passed. The most remarkable of these roads runs south-west for two miles, is forty-six feet in width, and crossing the grand causeway is continued to the foot of the cliff immediately beneath the cave which I have described. Its more distant extreme is terminated by a high and long artificial mound immediately beyond the river toward the hacienda of La Quemada. We could trace the second road south and south-west to a small rancho named Cayotl, about four miles distant, and the third ran south-west by south still farther, ceasing, as the country people informed us, at a mountain six miles distant. All these roads have been slightly raised, were paved with rough stones, still visible in many places above the grass, and were perfectly straight.

"From the flatness of the fine plain over which they extended, I cannot conceive them to have been constructed as paths, since the people who walked barefoot and used no beasts of burden, must naturally have preferred the smooth earthen foot-ways which presented themselves on every side, to these roughly paved roads. If this be admitted, it is not difficult to suppose that they were the centres of streets whose huts constructed of the same kind of frail materials as those of the present day, must long since have disappeared. Many places on the plain are thickly strewn with stones which may once have formed materials for the town; and around the cattle farms there are extensive modern walls which, not improbably, were constructed from the nearest street. At all events, whatever end these causeways answered, the citadel itself still remains, and by its size and strength confirms the accounts given by Cortéz, Bernal Diaz, and others of the

conquerors of the magnitude and strength of the Mexican edifices, but which have been doubted by Robertson, De Pau, and others. We observed also in some sheltered places, the remains of good plaster, confirming the accounts above alluded to; and there can be little doubt that the present rough, yet magnificent buildings were once encased in wood, as ancient Mexico, the towns of Yucatan, Tabasco, and many other places are described to have been in the voyage of Juan De Grijalvis in 1518, and also in the writings of Diaz, Cortéz and Clavigero.

"The Cerro de Edificios and the mountains of the surrounding range, are all of gray porphyry, easily fractured into slabs, and this, with comparatively little labor, has furnished materials for the edifices which crown its summit. We saw no remains of obsidian among the ruins or on the plain—which is remarkable, as it is the general substance of which the knives and arrow-heads of the Mexicans were formed; but a few pieces of very compact porphyry were lying about and some appeared to have been chipped into a rude resemblance of arrow-heads.

"Not a trace of the ancient name of this interesting place, or that of the nation which inhabited it, is now to be found among the neighboring people, who merely distinguished the isolated rock and buildings by one common name, 'Los Edificios.' I had inquired of the best instructed people about these ruins; but all my researches were unavailing until I fortunately met with a note in the Abbé Clavigero's history of Mexico which appears to throw some light on the subject. 'The situation of Chico-moztoc, where the Mexicans sojourned nine years is not known, but it appears to be that place, twenty miles distant from Zacatécas, towards the south, where there are still some remains of an immense edifice, which, according to the tradition of the ancient inhabitants of that district was the work of the Aztecs during their migration; and it certainly cannot be ascribed to any other people, the Zacatecanos themselves being so barbarous as neither to live in houses nor to know how to build them.'"

CHAPTER XI.

STATE OF SAN LUIS POTOSI—BOUNDARIES—LAKES—RIVERS—CLIMATE—DEPARTMENTS—PRODUCTS—SAN LUIS—TOWNS—MINING REGION.—NEW LEON—BOUNDARIES—CHARACTER—RIVERS—CLIMATE—DEPARTMENTS—AGRICULTURE—GRAZING, ETC.—MONTEREY.—COAHUILA—BOUNDARY—POSITION—CLIMATE—PRODUCTIONS—TOWNS.—STATE OF DURANGO—BOUNDARY—CHARACTER—DIVISIONS—STREAMS—PRODUCTIONS—CITY OF DURANGO—TOWNS—MINES—IRON—SILVER—INDIAN NECROLOGY—CAVE BURIAL.

STATE OF SAN LUIS POTOSI.

CITY OF SAN LUIS POTOSI.
CITY OF SAN LUIS POTOSI.

The State of San Luis Potosi is bounded on the east by the State of Tamaulipas; on the north by Nuevo Leon; on the west by Zacatécas; on the south by Guanajuato and Querétaro, and on the south-east by Vera Cruz. The western portion of the State is quite mountainous; but towards Tamaulipas, the Cordillera is somewhat broken, and a lower hilly country stretches out towards the south-east. The Panuco and the Santander are the only two rivers, and the lagunes of Chariel and Chila the only two lakes of importance in the State.

The climate of the mountain region and table lands is cold, while that of the lower elevations and flats towards the eastern boundary is much warmer, and, at certain seasons, very unhealthy.

The State of San Luis Potosi is divided into four departments, ten cantons, and fifty-two municipalities, with a population of over 300,000.

1st. Department of SAN LUIS with the cantons San Luis, Santa Maria del Rio and Guadalcazar.

2d. Department of RIO VERDE, with the cantons of Rio Verde and del Maiz.

3d. Department of TANCANHUITZ, with the cantons of Tancanhuitz and De Valles.

4th. Department of VENADO, with the cantons of Venado, Catorcé and Ojocaliente.

The agriculturists of San Luis are engaged chiefly in the production of corn, wheat, barley and fodder; all of which are yielded plentifully by the genial soil of the State. But the toils of the farmer and the generosity of the ground are not always repaid by suitable prices or a good market. Corn ranges from fifty cents to seventy-five the fanega; and even at this rate often lacks purchasers. Cattle are raised in large quantities, as in Zacatécas, Durango and Chihuahua. Manufactures are progressive. Woollen and cotton fabrics are produced of excellent quality and favor among the masses. Glass, leather, pottery and metallic wares are also made in large quantities, and a busy traffic in foreign goods is carried on with the port of Tampico, and the States of Zacatécas, Durango, Sonora, New Leon, Guanajuato, Mechoacan and Jalisco. The position of this State, and especially of its principal town, naturally makes it an *entrepôt* between the coast and the interior, for imports from America and Europe. Nevertheless, a small trade, only, exists in home products, and these are chiefly sent to New Leon and Coahuila.

The chief towns are SAN LUIS POTOSI, the capital of the State and seat of government, lying on a level plain, among the steep declivities of the Cordillera in the neighborhood of the sources of the Panuco, in 22° 4' 58'' north latitude, 103° 7' west longitude from Paris, 5,959 feet above the sea. It is a regular, well built city, with broad, paved streets, a fine *plaza* or public square, and six handsome churches, three convents, and one hospital. Its population may be estimated at 35,000.

GUADALCAZAR, is the capital of the *partido* or district of that name, 18 leagues north-west of San Luis Potosi, in 22° 31' 25'' north latitude and 102° 59' 30'' west longitude from Paris, 5,132 feet above the sea, in a valley south of a mountain group which was once extremely productive in mineral riches.

RIO VERDE is the capital of the Department of Rio Verde, 34 leagues east of San Luis. The town of VALLES, with 3,500 inhabitants, lies on the left bank of the Rio Montezuma, in the *tierra caliente*, on the boundary of the State of Vera Cruz. Its neighborhood is rich in sugar plantations and in tropical productions generally.

VENADO, 29 leagues north of San Luis, is the chief town of its Department; it lies on the road from the capital of the State to Catorcé, and contains about 8,000 inhabitants.

In the *partido* OJOCALIENTE lies the town of that name, 28 leagues north-west of the city of San Luis, and 10 leagues south-east of the capital of Zacatécas, 6,714 feet above the sea.

CATORCÉ is a mining town, likewise in the department of Venado, and is sometimes known by the sounding title of "REAL DE LA PURISIMA CONCEPCION DE ALAMOS DE LOS CATORCÉ." The name is supposed to be derived from the slaughter of fourteen Spanish soldiers who are said to have been killed in its vicinity by a tribe of savages inhabiting these wild mountain regions before the discovery of the adjacent mines.

Nothing can be more dreary, bleak and desolate than the aspect of the Cordillera of Catorcé. A few narrow mule paths, or the worn bed of a mountain torrent alone break the monotonous coloring of the mass; and the town placed at the great height of 8,788 feet above the sea, is completely hidden from below by the bold brow of the mountain.^[68] There is neither a tree nor a blade of grass on the steep and sterile flanks of these rocky elevations, though seventy years ago the whole district was covered with wood which might have endured for centuries had not the improvident and wasteful spirit of the first adventurers wantonly destroyed these valuable resources. Forests were burnt to clear the ground, and the larger timber which was required for the mines when they were

wrought again after the revolution, was brought from a distance of twenty-two leagues.

On reaching a high ridge above the adjacent valley, the town of Catorcé is immediately perceived at the feet of the traveller, lying in a hollow beyond which the mountain steeps again rise precipitously above a thousand feet,—the course of the *Veta Madre*, or great "mother vein," being distinctly traced upon it by the buildings belonging to the mines and miners. The site of the town is extremely singular, as it is intersected by deep ravines, or *barrancas*, upon the ledges of which many of the dwellings are erected. Some of these strange edifices, like those of Edinburg, have one story on one side, and two or three on the other; and most of them are surrounded by massive fragments of rock, amongst which the laborers shelter themselves from inclement weather.

In this region the most valuable mines of the State of San Luis Potosi have been found and wrought.

Within a few years past a profitable quicksilver mine was discovered, south of the capital, in the jurisdiction of the Hacienda de Villela. This mine, in the months of August and September, 1843, produced 1,068 pounds of the metal *en caldo*.

THE STATE OF NEW LEON.

This fine portion of the present Mexican Confederacy was colonized at the end of the sixteenth century by the Viceroy Monterey, and was then known by the proud title of EL NUEVO REYNO DE LEON, or, the New Kingdom of Leon. The modern State is bounded on the east by Tamaulipas; on the north by Coahuila; on the west by that State and Durango; on the south-west and south by Zacatécas and San Luis Potosi.

The geological formation of this State is generally mountainous. It lies among the first spurs and ridges of the Sierra Madre, south of the Rio Bravo, or Grande del Norte, and is interspersed with wide plains and fruitful valleys which produce good crops under careful cultivation. The rivers, all of which flow eastwardly towards the Gulf of Mexico, are the Rio Tigre, the San Juan, the Rio Blanco or Borbón, and the Sabinas, which passes into this State from Coahuila, and falls into the Rio Bravo near Revilla. There are numerous other small streams and brooks, of no geographical but of considerable agricultural importance. The climate is generally warm, except among the higher ranges of mountains; and, in summer, it is usually extremely hot, though healthy. The population is estimated at about 130,000.

New Leon is divided into five Partidos or Departments, with 25 districts.

1st. Department of Monterey, with seven districts: Monterey, Salinas Victorias, Absalo, San Nicolas Hidalgo, Pesqueria Grande, Santa Catarina, and Guajuco.

2d. Department of Cadereyta Ximenes, with five districts: Cadereyta, Santa Maria, Cerralvo, Agualeguas, and Santa Maria de las Aldamas.

3d. Department of Monte Morélos, with three districts: Monte Morélos, Mota and China.

4th. Department of Linares, with five districts: Linares, Galéana, Hualahuises, Rio Blanco and Concepcion.

5th. Department of Aldáma, with five districts: Villa Aldáma, Vallecillo, Sabinas, Lampazos and Tlascala.

The agriculture of New Leon has not been as carefully and successfully pursued as it might have been, in the hands of a different population. The annual product of the soil has been stated by the Mexican authorities, to average 120,600 fanegas of corn; 5,700 fanegas of frijoles or beans, and 46,500 hundred-weight of sugar;—the home market affording one dollar per fanega for corn, three dollars per fanega for frijoles, and three dollars per hundred weight for raw sugar.

The chief occupation of the landholders is the grazing of cattle, and the yearly return of animals, shows that the State is quite productive in this branch of rural labor. It is calculated by official reporters that New Leon annually feeds and sends to market:—50,000 horses, 12,000 mules, 75,000 large horned cattle, and 850,000 sheep, goats, and hogs. The local value of which is six dollars a head for horses, twelve for a mule, four for neat cattle, and from fifty cents to a dollar, a piece, for sheep, goats, and swine. The State is regarded as rich in minerals of silver and lead, but the mining operations are almost abandoned, except at Cerralvo and Vallecillo. Salt is made at the salt mines on the banks of the Rio Tigre. The domestic trade is carried on in State productions with Mexico and Querétaro, and North American or European fabrics are imported through the port of Tampico de Tamaulipas.

The capital of the State is MONTEREY, in 25° 59′ north latitude and 102° 33′ west longitude from Paris, about 220 leagues north of the city of Mexico, situated on the plain at the foot of the Sierra Madre on the margin of one of the affluents of the Rio Tigre. Its population is estimated at about 13,000, and its climate is considered agreeable and healthy. Monterey is connected with the history of North American victories, by the capitulation it made to General Taylor, September, 1846.

The other principal towns, villages and settlements in New Leon, are SAN FELIPÉ DE LINARES, containing 6,000 inhabitants, 40 leagues south-east of Monterey; Buena Vista, a village 7 leagues north-west of Linares; Cadereyta Ximenes, a small town of 2,000 people, 10 leagues south-east of Monterey; Salinas Victorias, 10 leagues north of Monterey; Pesqueria Grande, a village north-west from Monterey, and formerly the site of silver mines and salt works; Villa Aldama; San Carlos de Vallecillo; Lampazos; Agualeguas; China, and Galeana.

THE STATE OF COAHUILA.

Coahuila was formerly united with the ancient Mexican province of Texas, until the revolution, which resulted in the independence of the latter, sundered the bond and added it to the United States of North America. The present State of Coahuila is bounded on the east by New Leon and Tamaulipas; on the south by Zacatécas; on the west by the Indian territory known as the Bolson de Mapimi, Durango and Chihuahua; and on the north by Texas.

The whole State lies on the first steps of the Sierra Madre; its southern portion, beyond the Rio Sabinas, is extremely mountainous; but from the northern bank of this stream, the land sinks gradually into levels until it is lost in the well-watered and fruitful plains of Texas. The principal rivers in this State are the Rio Grande del Norte or Rio Bravo, the Sabinas and the Rio Tigre; and the chief lakes or lagunes are those of Parras and Agua Verde.

The climate of Coahuila is equable and healthy. From the middle of May to the middle of August the greatest heat is generally experienced, and, during this season, the country is torn by high winds which nearly every day begin to blow at sunset. The population of the State is estimated at about 97,000. Large bodies of Indians inhabit the lonelier regions of Coahuila; and, in the north, beyond the Rio Grande, the country swarms with ferocious tribes of Lipans and Cumanches. Agriculture is not flourishing though the soil of large portions of the State is good and capable of production. The remote position of Coahuila, and the thinness of its population, have probably obliged the inhabitants to congregate in towns and villages where they might afford each other mutual protection against the frontier savages; and thus they have been induced to abandon agriculture for the wilder life of vaqueros or herdsmen. Wheat, corn, beans and vegetables are easily raised in the best parts of the State, and in the vicinity of Parras extensive vineyards have been planted which produce an excellent wine. Horses, mules, wine and corn form the home commerce of the State; while in the neighborhood of Santa Rosa, and of two or three other villages, a small number of persons are

engaged in the exploration of mines.

The principal town of Coahuila is **SALTILLO**, or, as it is sometimes called, *Léona-Vicario*, situated in the south near the boundary of Nuevo Leon, twenty-five leagues westward of Monterey, at the foot of a hill in the midst of a fruitful region. Its geographical position, according to Wislizenius, is about $25^{\circ} 25'$ of north latitude, and 101° west longitude from Greenwich. It is a well built town, whose straight streets radiate at right angles from the public square, in the middle of which a tasteful fountain constantly supplies the population with excellent water. The population exceeds 20,000; and the town is celebrated for the production of woollen blankets and *serapes* or *ponchos*, which are in demand all over the Republic.

SAN FERNANDO, or, *La Villa de Rosas*, is a town and military post in the north of the State, south of the Rio Grande, containing about 3,000 inhabitants.

MONCLOVA, is a town of 3,700 inhabitants on the Coahuila, an affluent of the Rio Tigre.

PARRAS lies west of Saltillo, on the east bank of the lake of the same name, and some years ago was estimated to contain nearly 17,000 inhabitants, including the adjacent farmers, planters and their laborers. It is celebrated for its grapes and wine, as we have already remarked.

The other villages and settlements worthy of note are Villa Longia, Viesca y Bustamante, Santa Rosa, Guerrero, Cienegas, Abasoto, Nadadores, S. Buenaventura, San Francisco y San Miguel Aguayo, Capillania and Candela.

THE STATE OF DURANGO.

Durango is bounded on the north by Chihuahua; on the west by Sinaloa; on the east by Coahuila, and on the south by Zacatécas and Jalisco.

This State is penetrated, from near its centre, in a north-westwardly direction by the main artery of the great Cordillera; and whilst the north-eastern section of Durango slopes gradually downward towards the waters of the Rio Grande, its south-western part lies high up among the table lands and mountain spurs that lean towards Sinaloa and the Pacific coast. The climate of this mountainous State is healthy and cool, and its agricultural productions are similar to those of other Mexican States whose geological formation resembles it.

Durango is divided into twelve *partidos* or departments:—Durango, San Juan del Rio, Nombre de Dios, San Dimas, Mesquital Papasquiario, Oro, Indee, Tamasula, Cuencamé, Mapimi, and Nasas;—comprising 38 municipalities, 4 cities, 5 towns, 54 villages, 52 mineral works, 48 parishes, 111 haciendas, 48

estancias, and 521 ranchos. The population is estimated at about 300,000.

The chief streams and bodies of waters in the State are the Rio Nasas, Rio Guanábás, Rio Florida, and the lagunes of Cayman and Parras, the latter of which, though lying in Coahuila, bounds upon the edge of Durango.

The wealth of Durango exists in its minerals and in its cattle estates. Its *haciendas de cria* produce immense quantities of horses, mules, sheep and horned beasts which are readily sold in the various markets and fairs of the republic. At the hacienda of La Sarca, a stock of 200,000 sheep and 40,000 mules and horses, is constantly kept on hand, and at Ramos, which contains four hundred square leagues of land, 80,000 sheep are annually fed for their fleece, skins and carcasses. About 150,000 sheep are every year sent from Durango to the market of Mexico alone.

In the valley of Poanas, fifteen leagues east from the capital, there are fine corn lands; and in the deep valleys of the Sierra Madre even sugar is raised wherever the exposure and the moisture of the situation permits the successful cultivation of cane. Indigo and coffee grow wild in the warm barrancas on the genial slopes of the Cordillera; but neither of these articles is as yet cultivated by the planters. Cotton is grown in the vicinity of the Rio Nasas, and the town of Cinco Señores is the centre of a district covered with plantations which supply most of the factories of San Luis Potosi, Zacatécas and Saltillo. Mescal, a species of brandy is distilled in large quantities from the maguey which grows abundantly in Durango.

The capital of the State, seat of government, and residence of the bishop, is the city of DURANGO, sometimes known as *La Ciudad de Victoria*, or, *Guadiana*. It lies under 24° 25' north latitude and 105° 55' west longitude, at an elevation of 6,847 feet above the level of the sea, and sixty-five leagues north-westwardly from Zacatécas. It is in the southern section of the State, and was originally founded, in 1559, by the Viceroy Velasco, as a military post designed for the control of the Chichimecas. Its population at present may be estimated at between thirty and forty thousand.

This capital, and most of the other noted towns in Durango, owe their existence to the mineral wealth of the neighborhood. Before the mines of Guarisamey were discovered the city of Durango was a mere village, or *pueblo ranchero*, containing, as late as 1783, no more than eight thousand inhabitants. But the exploration of the mines infused life, activity, and wealth into the population, and the State progressed rapidly as its resources were developed. The fine streets of the capital, its great *plaza* or square, its theatre, and all its public edifices were erected by Zambrano, who is said to have extracted

upwards of thirty millions of dollars from his mines at Guarisamey and San Dimas. A mint has been established in the city, and, besides this, it possesses factories of cotton, glass and tobacco.

The towns of VILLA DEL NOMBRE DE DIOS, with 7,000 inhabitants, SAN JUAN DEL RIO with 12,000 and CINCO SEÑORES DE NASAS, are almost the only ones in the State unconnected with mines. The two first are supported chiefly by the sale of Mescal distilled from the maguey or aloe; and the last, by the extensive cotton plantations which have been already mentioned.

Besides these towns there are the Villa FELIZ DE TAMASULA, north-west of Durango on the boundary of Sinaloa; PAPASQUIARO with 6,000 inhabitants; Guarisamey, a mining town, in a deep and warm valley, surrounded with steep mountains near 9,000 feet high, and containing about 4,000 people; La Villa de Mapimi, north of the Rio Nasas, on the borders of the Bolson de Mapimi, and east of the Cerro de la Cadena, with about 3,000 inhabitants; Cuencame; El Oro; and many other villages and towns, too numerous and too unimportant for separate notice, but which deserve recollection as indicating the tendency of this region to aggregate population. The State contained in 1833, 250,000 inhabitants, according to good authority, and it is probable that at present it does not number less than 300,000.

Durango is rich in mineral deposits. Iron abounds within a quarter of a league of the gates of the capital. The Cerro del Mercado is entirely composed of iron ores of two distinct qualities,—crystallized and magnetic,—but almost equally rich, as they contain from sixty to seventy-five per cent. of pure metal. Silver is also abundant in the mountains; but the mines have been carelessly worked, and, in some places, are abandoned for want of suitable machinery or enterprize. The principal districts and places in which this precious deposit has been found and profitably wrought, are at Gavalines, Guarisamey and San Dimas, in the two last of which the fortunate adventurer Zambrano, acquired, during twenty-five years, the extraordinary wealth he possessed. These mines are divided into Tamasula, Canélas and Sianori, lying on the western slope of the Cordillera; and Guanasevi, Indée, El Oro, Cuencame and Mapimi, on the eastern declivities. They lie about five days' journey west of the capital.

The following interesting sketch of Indian necrology is given in the valuable and recent work of Mühlenpfordt upon the Mexican Republic.

In the State of Durango,—says this interesting German author,—especially in the unexplored portion of the Bolson de Mapimi, many relics of antiquity, important for the history of this country, are probably hidden. In the summer of 1838, a remarkable old Indian cave of sepulture was discovered in this singular

region. Among the few establishments which enterprising settlers have founded in that lonely territory which is overrun by wild Indians, one of the most important is the estate of San Juan de Casta, on its western border, 86 leagues north of the town of Durango. Don Juan Flores, its proprietor, rambling one day with several companions in the eastern part of the Bolson, remarked the entrance of a cavern on the side of a mountain. He went in, and beheld, as he imagined, a great number of Indians sitting silently around the walls of the cave. Flores immediately rushed forth in affright, to communicate his remarkable discovery to his friends, who at once supposed that the story of the adventurer was nothing but an affair of fancy, as they no where found any trace or foot path to show that the secluded spot had been hitherto visited. But, in order to satisfy themselves, they entered the cavern with pine torches,—and their sight was greeted by more than a thousand corpses in a state of perfect preservation, their hands clasped beneath their knees, and sitting on the ground. They were clad in mantles excellently woven and wrought of the fibres of a bastard aloe, indigenous in these regions, which is called *lechuguilla*, with bands and scarfs of variegated stuffs. Their ornaments were strings of fruit-kernels, with beads formed of bone, ear-rings, and thin cylindrical bones polished and gilt, and their sandals were made of a species of *liana*.

CHAPTER XII.

STATE OF CHIHUAHUA—POSITION—BOUNDARIES—EXTENT—CHARACTERISTICS—RIVERS—LAKES—INDIANS—DIVISIONS—CLIMATE—PRODUCTIONS—CATTLE ESTATES—MINT—MINES—PRINCIPAL TOWNS—CHIHUAHUA—EL PASO DEL NORTE—MILITARY IMPORTANCE—EL PASO WINE, ETC.—ANTIQUITIES—INDIAN RAVAGES—THE BOLSON DE MAPIMI—MEXICAN MODES OF TRAVELLING AND TRANSPORTATION—LITERA—MULES—ARRIEROS—CONDUCTA—COACHES—FREIGHT WAGONS—MEXICAN HABIT OF HOME-STAYING—WANT OF EXPLORATION—MODERN ADVANCEMENT.

THE STATE OF CHIHUAHUA.

The State of Chihuahua, containing an area of 17,151¹/₂ square leagues, or 119,169 English square miles, and reaching from 26° 53' 36'' to 32° 57' 43'' north latitude, is bounded on the north by New Mexico, east by Coahuila and Texas, south by Durango, south-west by Sinaloa, and north-west by Sonora. The great mountain chain of Mexico, which is the connecting link between the Rocky Mountains of the north and the Andes of the south, is here known as the Sierra Madre, and occupies chiefly the western part of the State, where its elevations attain a vast height, and at length, descend abruptly, cut by deep *barrancas* or ravines, until they are lost in the plains of Sonora and Sinaloa. Mexican authorities state the highest point of the Sierra Madre, at the Peaks of Jesus Maria, to be 8,441 feet above the level of the sea. The greater portion of Chihuahua consequently lies, like Durango, upon the *plateau* of Mexico, and only a small part upon the western slope of the Sierra Madre. The loftier elevations of the Cordillera, as it passes upward from Durango, lean towards the west until they pass the centre of Chihuahua, and then bending once more, nearly north, pursue their way through New Mexico into the remote wilderness of our Union. Towards the east these steps become gradually depressed until they are lost in the vast and uncultivated regions of the Bolson de Mapimi, whose elevation above the sea is still 3,800 feet, according to the measurement of Dr. Wislizenius.

Seventeen rivers and streams flow through the territory of this State. The Rio Bravo, or Rio Grande del Norte; the Rio Conchas; Florida; Chihuahua; Tonachi; Llanos; Casas Grandes; San Buenaventura; Carmen; Santa Isabel; Pasesiochi; Mulatos; Chiñapas; Parral; San Pedro; Batopilas; and Rio Grande de Bavispe. The lakes or lagunes are those of San Martin; Guzman; Patos, or Candelaria; Encinillas; and Castilla. The river Nasas, which rises in Durango debouches in the Lake of Cayman, in the Bolson de Mapimi. The climate resembles that of the adjoining State of Durango. In the year 1834, the population, according to official statistics was 145,182; at present, it is estimated at from 150,000 to 160,000, which number would give about 1.3 for each English square mile. This

is probably the actual number of inhabitants within the State, exclusive of Indians and some wild dwellers among the mountains who were not comprised in the census of 1833. Large numbers of aborigines occupy the lonelier portions of Chihuahua. Tribes of Tepehuanés, Llanos, Acotlames, Cocoyames and a few remnants of the Aztecs are found within its borders. In the Bolson de Mapimi, and on the borders of the mountain ranges of the Chanáte, El Diabolo Puerco, and Pilares, swarm numbers of the Apaches Mescaléros and Farones, who are often engaged in war with the savage and robber tribes of Cumanches, whose constant inroads into the Mexican territory are a source of incessant annoyance and insecurity to the people of the frontier. In the ravines and valleys of the Sierra de los Mimbres, in the north-west of the State, the Apache Mímbreños are found, while further south, in the wild and deep dells of Tararécua and Santa Sinfarosa various bands of the Tarahumares still pursue their hunter-life in perfect freedom.

There is some doubt, in consequence of the conflict of authorities, as to the divisions of the State of Chihuahua. According to the *Noticias Estadísticas* of Señor Escudero, published in 1834, it was composed of four districts: Chihuahua, Hidalgo, Paso del Norte, and Guadalupe y Calvo,—in the first of which are the *partidos* of Aldama, Cosihuirachi, Papigochi, and Jesus Maria de Rosales;—in the second, the *partidos* of Allende and Jimenez;—in the third, the *partidos* of Galeanas and Janos;—and in the fourth, those of Batopilas and Balleza or Tepehuanes. According to an article published by the same writer in the fourth volume of the Museo Mexicano, in 1844, he apparently entertains the opinion that the same divisions still continue; but, if the authority of another and very positive correspondent of the same work is to be relied on in reference to the last mentioned period, Chihuahua was divided into the *partidos* of Aldama, Allende, Balleza, Batopilas, Concepcion, Cosihuirachi, Galeana, Hidalgo, Jimenez, Paso, and Rosales, formerly Tapacolmes.

Nature has endowed Chihuahua with a pleasant and temperate climate and a fertile soil, which is said by those who are best acquainted with the State to be capable of producing abundantly, if the county is ever freed from savage inroads and filled with an industrious population of agriculturists. The forests, the streams, the valleys and the plains, all yield their tributes of valuable articles of trade. Vast herds of cattle are fed upon the large *haciendas de ganado*; and the mountains are veined with the precious deposits which form the wealth of so many other Mexican States. The prompt settlement of the frontier, and the security of its inhabitants against the Indians, under the protection of armed forces by the conterminous Republics, seem to be all that is requisite for the

development of the fine natural resources of this hitherto neglected State.

Field and garden cultivation is not much attended to by the present inhabitants; but wherever farming operations are carried on in suitable spots, corn, wheat, barley, frijoles, and all the finest fruits, plants and vegetables, are found to repay bountifully the husbandman's labor. Even indigo and cotton are found growing wild in some of the districts, notwithstanding the proximity of the mountain region, and the bleaker exposure of the soil.

At El Paso del Norte, the right bank of the Rio Grande, is covered for a distance of seven leagues with excellent vineyards, whose capital fruit produces an abundance of wine, which is greedily purchased in the markets of the adjacent States. In the neighborhood of Aldama, Allende, and of many other towns, the grape is also successfully cultivated, and the liquor produced is highly esteemed by competent judges. But the chief sources of the present prosperity of Chihuahua are its mines and cattle. The best data in our possession assign to this State 56 large estates, upon all of which about 70,000 horses, 190,000 horned cattle, and 550,000 head of sheep, swine and goats are constantly fed. The silver, gold and copper mines have been in former years exceedingly productive, and even in 1844, the mint of Chihuahua, struck \$61,632 in gold, and 290,000 in silver. In 1814, the coinage of the same institution reached the sum of \$1,818,604 in silver, after which period it ceased operating until 1832; but since then its annual emission has never exceeded \$544,244 in coins of both the precious metals. Gold was first struck at this mint in 1841, and in 1842 it sent into circulation \$164,744, since which its issue has sensibly decreased. The best copper mines at present known, are those of Santa Rita, near the union of the Rio Florida with the Rio Conchas. Veins of iron, cinnabar, lead, sulphur, coal, and nitre have been found and explored; but owing to the disturbed and insecure condition of the State, are altogether abandoned.

The chief mining districts and mineral deposits are at Allende or San Bartolomé; Santa Barbara; Chihuahua; Cosihuiriachi; Santa Eulalia; Jesus Maria; Loreto; Moris; Mulatos; Minas Nuevas; Parral; San Pedro; El Refugio; Santa Rita; Sierra Rica; Batopilas; Urique y Ximenes, or as it is at present called, Guajuquilla. A considerable portion of the product of these mines may have been extracted from the Mexican Republic, before they were coined, by the inland trade with the United States, which has been carried on extensively for many years. The gold dust, especially, both of Chihuahua and New Mexico, has formed the principal return for American merchandize; and thus the diminution of the Chihuahuan coinage may be partially accounted for. Nevertheless we are informed by the best authorities, as well as by the statistics of the mint, that the

mines of this State have been negligently wrought for some years past by the unsettled inhabitants of the frontier.

The chief towns in the State are the capital, Chihuahua, situated 4,640 feet above the level of the sea, in $28^{\circ} 38'$ north latitude and $106^{\circ} 30'$ west longitude from Greenwich, containing a population of from 12,000 to 15,000. It lies in a beautiful valley opening towards the north, and hemmed in, on the other sides, by the arms of the Sierra Madre. The city is regularly built, on wide, clean streets, with many handsome and convenient houses, plentifully supplied with water, which is brought to the town by an aqueduct extending 6,533 *varas*. The plaza, or public square, is quite imposing. Its spacious area is adorned with a fountain and walks, with benches and pillars of white porphyry. Three sides of this square are occupied with public edifices and stores, while on the fourth is the cathedral.

The other towns are San Pedro de Batopilas, a mining post on the western slope of the Cordillera, in a deep dell;—San José del Parral, at the eastern foot of the Sierra Madre on the southern limit of Chihuahua, about eighty leagues east of Batopilas, containing about 5,000 inhabitants; Valle de San Bartolomé, on the road from Chihuahua to Durango; Allende, with 11,000 inhabitants; Santa Rosa de Cosihuirachi, with 3,000; and various other villages and Presidios of lesser note.

One of the most important towns in the State of Chihuahua, since the annexation of a part of Mexico to the United States by the treaty of 1848, is El Paso del Norte. According to the observations of Dr. Wislizenus, it lies in $31^{\circ} 45' 50''$ north latitude, 3,814 feet above the level of the sea, on the Rio Grande, distant about 340 miles from Santa Fé, and about 240 from the town of Chihuahua. The Rio Grande or Rio del Norte, having escaped the mountain pass, runs here in an open fertile field, at the beginning of which El Paso is situated. The town is principally built on the right bank of the river while a few houses are on the left. Stretched out along the stream for many miles, all its dwellings are surrounded and embosomed in groves, gardens, orchards, vineyards and cultivated fields as far as the eye can reach. The position of this town is an important one, inasmuch as the road by it is the only practicable one for wagons leading from Santa Fé to Chihuahua. A circuitous road might, in case of necessity, be made from the right bank of the river, on the northern end of the Jornada del Muerto, to the copper mines near the sources of the Gila, and thence by Carmen to Chihuahua; but it is by far more mountainous, winding and difficult than the direct road through El Paso which has long been the only highway between New Mexico and Chihuahua. Besides these advantages of

commercial intercourse, the point is deemed of the greatest value as a military post, in which a well provided garrison could hold out against a ten-fold stronger force.^[69] The population of the town proper, and of the line of settlements extending about twenty miles down the river is estimated at from ten to twelve thousand.

Besides these important considerations, the valley of El Paso is probably the most fertile country along the river. In addition to maize and wheat the inhabitants raise a large quantity of fruits, such as apples, pears, figs, quinces, peaches, &c., but especially an excellent grape from which the celebrated El Paso wine is prepared, and a liquor is made called by the Americans "Pass Whiskey." The grape which is so extensively cultivated is of Spanish origin; it is blue, very rich and juicy, and produces a strong, sweet, southern, straw-colored wine. For want of barrels, the natives preserve the liquor in earthen jars or in ox skins. The wine has a strong body, and when mellowed by age, has the flavor of Malaga. Besides the blue grape, a white species is also raised, having the flavor of the Muscadine, but it is believed that it is not used for wine.

The mode of cultivating the vineyards in this region is simple. The vines are covered in winter with earth, are kept clear from weeds, hoed and pruned at the proper season, but they are not attached to stakes or espaliers. The soil and climate are so genial that less labor is required than in other countries; but a great deal of the fertility of the beautiful valley must be ascribed to the ingenious system of irrigation, which is produced by a dam constructed in the river above El Paso, which turns a large body of water into a canal. This canal, spreading into numerous branches and re-uniting again, provides all the cultivated land with a sufficiency of moisture.

Some remains of antiquity are found in the north-western part of the State, lying near the village and creek of the Casas Grandes, between Janos and Galeana. Ruins of large houses, known as "Casas Grandes" in the language of the country, exist in this neighborhood, built of sun-dried bricks, or *adobes*, and squared timber. They are three stories high with a gallery of wood and stairway from the exterior, with very small rooms and narrow doors in the upper stories but without means of entrance in the lower. Water was brought to the spot from a neighboring spring by a canal; and a watch-tower, commanding an extensive prospect, stands on an elevation two leagues south-west of it. A series of mounds, containing earthen vessels, weapons, instruments of stone, and fragments of white, blue and violet colored pottery, extends along the banks of the Casas Grandes and Janos creeks.

The State of Chihuahua has suffered and still suffers greatly and constantly from the incursions of the barbarians who ravage her frontiers and descend boldly into the very heart of the settlements. The uncertainty of life and insecurity of property have, of course, prevented the development of a region so valuable for its mineral and agricultural resources; nor is it likely that any sensible progress will be made until the four warring tribes of Gileños, Mesclaros, Mimbrenos and Lipanes, are destroyed by the advance of the civilized nations from the north as well as from the south.

A recent Mexican author, in describing the condition of Chihuahua, declares that at "present every hacienda must be converted into a castle of the middle ages, every shepherd into a soldier:—proprietors of estates enjoy no security of their possessions, and the common people gather themselves into villages to escape from the exposed country in which they must become the victims of the bloodthirsty savages and robbers from the wilderness."

There is a singular geological formation in the northern part of Mexico, lying on the road between the cities of Chihuahua and Monterey, and extending northwardly from the towns and haciendas of Mapimi, San Juan, San Lorenzo and San Sebastian towards the Rio Grande, called the Bolson de Mapimi, or Pouch of Mapimi. Leaving Mapimi, the road continues about three miles to the eastern mountain chain, and then winding nearly two miles through a cañon, or gorge, it leads to a very open level valley, which is the commencement of the Bolson. Towards the right of the road, eastwardly, at the distance of from three to five miles, a steep, high mountain chain of limestone, rises precipitously, while another chain towers up to the left, at the distance of about twelve miles. Both chains gradually diverge, but especially the eastern arm, which stretches north-eastwardly and then bends to the south-west, at an angle, leaving a deep *cul de sac* or depression in the middle from which the country has probably derived its name. All around is an immense chapparal plain, while in the distance the Rio Nasas runs towards the north into the immense basin, and forms the large Laguna de Tlagualila, usually set down on maps and mentioned in geographical works as Lake Cayman. The Nasas is said by Dr. Wislizenius to be the Nile of the Bolson. Coming about 150 leagues from the western part of Durango, from the Sianori mountains, it runs north-westwardly and northerly towards this Pouch, and the wide and level country along the river is yearly inundated by the floods, and owes its fertility to this circumstance. The limits of the Bolson de Mapimi have never been clearly defined either geographically or politically for its immense wilderness has been neither fully explored or occupied in consequence of the danger of encountering the robber hordes by whom its

recesses are infested. The northern portion is supposed to belong to the State of Chihuahua, and the southern to Durango. Nor are its general physical properties clearly known, though the common and perhaps erroneous impression in the country is that it is a low, flat, swampy country and a mere desert. The two terminating points of Dr. Wislizenius's transit through the Bolson are Mapimi, where he entered it, and El Paso, or a point between Paso and Parras, where he left it. At Mapimi, the elevation above the sea was 4,487 feet; in the valley of the Nasas, at San Sebastian, 3,785; at San Lorenzo, 3,815; at San Juan, 3,775; and towards the eastern edge of the Bolson, at El Paso, 3,990, and at Parras, 4,987. We perceive, therefore, that the valley of the Nasas, which may be called the vein and centre of the Bolson has a mean elevation of 3,800 feet; and though from 500 to 1,000 feet lower than the surrounding county, it nevertheless occupies a considerable elevation above the sea.

The soil in the Bolson is less sandy and of a better quality than in the higher country. Besides wheat and corn, a quantity of cotton is raised in the valley of the river, and wine has been successfully tried. The climate is represented to be so mild, that the root of the cotton plant is seldom destroyed in winter, and thrives for many years.

We have dwelt upon the character and qualities of this extraordinary depression among the mountain ridges of northern Mexico, because we believe that when it is finally explored, the savages exterminated, and the country opened to the advance of civilization, El Bolson de Mapimi may become one of the most important and perhaps fruitful basins among the temperate lands of Mexico.

C O N C L U S I O N .

We have completed the proposed task of sketching the history and geography of Mexico, accompanied by notices of its social and political condition, and of the remains of antiquity sprinkled over its territory. We acknowledge the imperfection of the work, and its unsatisfactoriness even to ourselves. But we have diligently searched the best authorities that could be obtained at home and abroad, and, while we have omitted nothing that might be relied on for the purpose of displaying the physical and intellectual character of the country and people, we have endeavored to indicate clearly those historical antecedents and geographical peculiarities upon which the future progress or decline of the nation is to be founded.

Perhaps no countries are more difficult for full and minute description, in their present social state, than Mexico and the South American nations. Mexico,

as we have seen, is a mountain country, with very few navigable streams opening the interior to travellers, and with badly constructed roads, which were scarcely adequate for the most needful transportation required for the subsistence of the people. As soon as the way-farer left the coasts of the Gulf or of the Pacific he penetrated the glens of lofty mountains, or slowly toiled along the inclined plains of their precipitous sides. Wide levels opened in the interior, at considerable distances, but these were separated by ridges of the Cordillera which were, in fact, ramparts capable of defending a warlike people almost without the aid of military improvement. Until within a few years, the back of a horse or of a mule; an old fashioned LITERA swung between two beasts

TRAVELLING IN A LITERA TRAVELLING IN A LITERA

of burthen, or an antiquated clumsy Mexican coach, were the only means of travelling. Of these, the litera, a species of palanquin in which the traveller reclined at ease upon his mattress and cushions, was by far the most comfortable, and the use of this convenient vehicle is still continued especially in the warmer parts of the country where exposure to the sun is dangerous, and into which the modern diligence or stage coach has not been introduced from the factories of the United States. In many portions of Mexico, where the transportation has been for centuries carried on by ARRIEROS with their mules and jackasses, scarcely any thing of the original road remains, while the path that has been so long trodden by the single file *Atajos* of these useful beasts has been worn so deeply by their feet in the yielding soil or rock, that the animals themselves are often concealed by the steep sides of the gully. Thousands of sturdy Mexicans have for years been employed as ARRIEROS in this business of mule-carriage. The "CONDUCTA" is recognized as one of the traditionary, time honored, and almost constitutional institutions of the Republic, and it may easily be conceived that with so powerful a body of honest, industrious men opposed to any new scheme of transportation, it will require a long time for the enlightened requirements of extended commerce to displace it. The fidelity of this class has been already, elsewhere, alluded to; and whilst it is personally reliable and responsible, its members are scarcely ever attacked by the bands of robbers infesting the recesses of the mountains, and laying in wait for less numerous, resolute or organized way-farers. Millions were, and still are, often entrusted to them with perfect confidence by the government and the people.

Nevertheless, within the last fifteen years the growing manufactures of Mexico required a stouter means of transportation of heavy machinery than the limbs of a mule, and the consequence was that intelligent foreigners availing themselves of this want in the first instance, gradually introduced heavy wagons like those of the European *roulage* system, into which, by degrees, they forced a large portion of the bulky commercial freight which was to be borne from the coast into the interior. Simultaneously with this encroachment on the mule, the arriero, and the litera, appeared the American stage coach, built in New York; and together with the coach and its spirited horses, came the "Yankee driver," whose accommodating and daring character soon made him a favorite with those whose trade he in some measure injured, though it did not serve to protect him or his passengers from the attacks of robbers. The line of diligences or coaches established from Vera Cruz to the capital, passing through Jalapa, Peroté and Puebla, was gradually extended northwards from the capital through the principal mining and commercial cities of the north, and thus the means of swift and comfortable travel was at length, though only recently, supplied to a small part of Mexico.

The danger of robbers, the wretchedness of the roads, the discomfort of inns and the old fashioned Mexican habit of staying at home, have, therefore, hitherto prevented the masses of the people from going abroad. A journey of two or three hundred miles, for any purpose but business or emigration, is still regarded as an important undertaking. When families depart on such an expedition the preparations embrace almost every comfort and luxury required at home, except a cow and a piano. Until very lately nothing but shelter or the commonest food was to be had at the miserable *mesones* or taverns along the roads. In most of the less frequented regions this is still the case. It was necessary therefore that travellers should be accompanied by a full complement of servants, that they should carry with them an ample supply of bedding and table furniture, that their long and numerous train should be fully armed and equipped to fight its way if necessary, and that they should be content to halt frequently, journey slowly, and linger on the road. Inconveniences like these necessarily localized and confined all classes of Mexicans except the very rich or those whose business imperatively required them to encounter a life of expensive adventure. Nor was Mexico a country of watering places and sea-side fashion, in which it was customary, at certain seasons, for all whose means permitted, to fly from the city to the fields or the shore for recreation and health. Invalids, occasionally, under the stringent orders of physicians, crawled to the warm baths or mineral waters which are abundant in a volcanic country, but they were not followed by the idle

crowds who frequent similar places in Europe and the United States. Tens of thousands are now living in the city of Mexico who have not even crossed the lake to Tezcoco; while the fashionable or the wealthy are perfectly satisfied if they make an annual peregrination in the month of May of twelve miles to San Agustin de las Cuevas, where they spend three days of frivolity, gambling, cockfighting, and dancing. The journeys of the rest of the year are confined, as they are elsewhere in the Republic, to an evening drive or ride on the Passeos and Alameda, or a more extended excursion of a few miles to Tacubaya or San Angel. It was not the usage, in the early days of Mexico or during the viceregal government, to travel for pleasure in a country conquered from the Indians, and still ravaged by them or made insecure. The custom of the Spaniard has become a habit of the Mexican. It may, in truth, be said that the spirit of travel does not rule in Mexico, and that her people are stationary. Railways do not traverse her valleys and plains, nor do electric telegraphs convey the thoughts of her people thousands of miles in a minute. Even the mail system is expensive, incomplete and inadequate. Neither a steamboat nor a locomotive belongs to the nation.

In addition to all these habitual, accidental and geographical difficulties of travelling over and exploring this mountain country, its constant revolutionary state since the rebellion against Spain has tended to retain people as much as possible either in the neighborhood of their families or of their business and interests. Nor has scientific education been extended sufficiently to form a large or enthusiastic class of engineers who would have traversed the land and combined the results of their observations. A few scattered students have, indeed, published detached essays upon portions of the Republic, and the *Comision de Estadistica Militar* is now engaged in gathering statistical and geographical reports of the several States. But the elements from which these bulletins are constructed do not seem to be collected upon any uniform system of very responsible scientific inquiry. The local authorities from whom much of the numerical information is necessarily obtained, if they are connected with any of the branches of taxation, or revenue collection, are generally unreliable or corrupt, for, in consequence of the system of speculation which has been carried on during the late disorganized epoch of Mexican history, it was their interest to conceal rather than to disclose facts, especially when those facts manifested the great value or production of the region over which they presided.

Nevertheless, amid all these sad excuses for insufficiency or inaccuracy, we may congratulate Mexico upon the effort which she is now making to redeem herself from the past opprobrium. The war with the United States has taught her many things, social as well as political. Education is beginning to be more

valued and extended. Periodicals and newspapers are more freely published and diffused. Their leading articles and scientific communications show that new classes of writers as well as politicians are coming readily into the field in a period of assured peace and order. These two elements of national progress will enable Mexico to become acquainted with herself, and when her students disclose the result of their discoveries, we shall be glad to see our imperfect but honest efforts superseded by a work that will confer honor upon Spanish science and literature.

APPENDIX NO. 1.

PROFILE OF THE PLATEAU—MEXICO TO SANTA FÉ—SANTA FÉ TO THE GULF.

IN order to afford the geographical student an idea of the central configuration of Mexico, we annex the following tables of the lines of levelling made by Baron Humboldt, Dr. Wislizenus, Oteiza, and Burkart, northwardly from the city of Mexico to Santa Fé; and eastwardly from Santa Fé to Reynosa near the Gulf of Mexico. From the first of these we learn that the *plateau* which forms the broad crest of the Mexican Cordillera by no means sinks down to an inconsiderable height as was long supposed to be the case but that it maintains, throughout, its majestic elevation.

1st. Elevation above the sea from the city of Mexico to Santa Fé.

Mexico	7,469	ft.	above	sea.
Tula	6,733	"	"	"
San Juan del Ri	6,490	"	"	"
Querétaro	6,362	"	"	"
Celaya	6,017	"	"	"
Salamanca	5,761	"	"	"
Guanajuato	6,836	"	"	"
Silao	5,911	"	"	"
Villa de Leon	6,133	"	"	"
Lagos	6,376	"	"	"
Aguas Calientes	6,261	"	"	"
San Luis Potosi	6,090	"	"	"
Zacatécas	8,038	"	"	"
Fresnillo	7,244	"	"	"

Durango	6,848	"	"	"
Parras	4,985	"	"	"
Saltillo,	5,240	"	"	"
El Bolson de Mapimi	3,785	"	"	"
Chihuahua	4,638	"	"	"
Cosihuiriachi	6,273	"	"	"
Paso del Norte on the Rio Grande	3,810	"	"	"
Santa Fé in New Mexico	7,047	"	"	"

2d. From Santa Fé in New Mexico to Reynosa on the Rio Grande.

Santa Fé	7,047	ft.	above	sea.
3 miles N. of Albuquerque near the Rio Grande	4,813	"	"	"
Jornado del Muerto	4,452	"	"	"
Brazito	3,918	"	"	"
Upon crossing of the Rio Grande	3,797	"	"	"
Paso del Norte	3,810	"	"	"
S. of Rio Carmen	4,219	"	"	"
S. of Gallego	5,317	"	"	"
Rio Sacramento	4,940	"	"	"
Chihuahua	4,638	"	"	"
Aguachi	5,952	"	"	"
Cosihuiriachi	6,273	"	"	"
Bachimba	3,956	"	"	"
El Saucillo	3,955	"	"	"
Cadena	5,056	"	"	"
Mapimi	4,487	"	"	"
El Bolson de Mapimi	3,785	"	"	"
Parras	4,985	"	"	"
La Encantada	6,104	"	"	"
Saltillo	5,240	"	"	"
Rinconada	3,381	"	"	"
Monterey	1,626	"	"	"
Marin	1,354	"	"	"

Ceralvo	1,006	"	"	"
Mier	417	"	"	"
Camargo	422	"	"	"
Reynosa ^[70]	104	"	"	"

"If we consider,"—says Humboldt in his Views of Nature,—"that in the north and south direction the difference of latitude between Santa Fé and the city of Mexico is more than sixteen degrees, and that consequently the distance in a meridian direction, independently of curvatures on the road is more than 960 miles, we are led to ask whether in the whole world, there exists any similar formation of equal extent and height, between 5,000 and 7,500 feet, above the level of the sea. Four-wheeled wagons can travel from Mexico to Santa Fé. The plateau whose levelling is here described is formed solely by the broad undulating flattened crest of the chain of the Mexican Andes; it is not the swelling of a valley between two mountain chains, such as the Great Basin between the Rocky Mountains and the Sierra Nevada of California in the Northern Hemisphere; or the elevated plateau of the Lake of Titicaca, between the eastern and northern chains of Bolivia; or the plateau of Thibet between the Himilaya and Quenlun, in the Southern Hemisphere."—Page 209, Humb. Views of Nature.

APPENDIX NO. 2.

MEXICAN COINS.

1 onza—gold, = 16 dollars.

1 peso—silver, = 1 dollar.

1 real—silver, = $12\frac{1}{2}$ cents.

1 medio real—silver, = $6\frac{1}{4}$ cents.

1 quartillo—copper, = $3\frac{1}{8}$ cents.

1 tlaco—copper, = $1\frac{9}{15}$ cents.

MEASURES.

1 foot = 0.928 feet English.

1 vara (three feet Mexican) = 2.784 feet English = 2 feet 9.3141 inches English.

1 legua (26.63 to 1 meridian) = 5000 varas = 2.636 miles English.

WEIGHTS.

- 1 onza—(8 ochavos)= 1 ounce.
 1 marco—(8 onzas)= $\frac{1}{2}$ pound.
 1 libra—(2 marcos)= 1 pound.
 1 arroba—(25 libras)= 25 pounds.
 1 quintal—(4 arrobas) = 100 pounds.
 1 carga—(3 quintals) = 300 pounds.
 1 fanega—(140 pounds) = 2 bushels nearly.
 1 almuer—(almuerza) = $\frac{1}{12}$ of a fanega.
 1 frasco = 5 pints nearly.^[71]

**TABLE OF LAND MEASURES ADOPTED IN THE
MEXICAN REPUBLIC.**

Names of measures.	Figures of measures.	Length of the fig. in measures.	Breadth in varas.	Areas in sq. varas.	Areas in Cabellerias.
Sitio de ganado mayor,	Square	5,000	5,000	25,000,000	41.023
Criadero de ganado mayor,	Square	2,500	2,500	6,250,000	10.255
Sitio de ganado menor,	Square	$3,333 \frac{1}{3}$	$3,333 \frac{1}{3}$	$11,111,111 \frac{1}{9}$	18.232
Criadero de ganado menor,	Square	$1,666 \frac{2}{3}$	$1,666 \frac{2}{3}$	$2,777,777 \frac{7}{9}$	4.558
Caballeria de tierra,	Right angled parallelogram	1,104	552	609,408	1
Media caballeria,	Square	552	552	304,704	$\frac{1}{2}$
Cuarto caballeria or suerte de tierra,	Right angled parallelogram	552	276	152,352	$\frac{1}{4}$
Fanega de sembradura de maiz,	Right angled parallelogram	376	184	56,784	$\frac{1}{12}$
Solar para casa,	Square	50	50	2,500	0.004
Fundo legal para pueblos,	Square	1,200	1,200	1,440,000	2.036

The Mexican *Vara* is the unit of all measure of length, the pattern and size of which are taken from the *Castilian Vara of the Mark of Burgos*, which is the legal vara used in the Republic. Fifty Mexican varas make a measure called *Cordel*, used in measuring lands.

The legal *league* contains 900 *cordels*, or 5000 *varas*. The league is divided into halves and quarters—this being the only division made of it. Anciently the Mexican league was divided into three miles, the mile into a thousand paces of Solomon, and one of these paces into five-thirds of a Mexican vara—consequently the league had 3000 paces of Solomon. This division is recognized in legal affairs, though it has been long in disuse. The *mark* was equivalent to two varas and seven-eighths, that is, 8 marks contained 22 varas, and was used in land measure.

See Appendix No. 9 to Captain Halleck's Report on Californian affairs,—pages 119 and 145 of Executive Document No. 17, 31st Congress, 1st Session.

BOOK VI.

**THE TERRITORY OF NEW MEXICO
AND
THE STATE OF CALIFORNIA;
AS PARTS OF THE UNITED STATES OF NORTH AMERICA.
THE TERRITORY OF NEW MEXICO.**

EXPLORATION OF THE FAR WEST—LONG, NICOLLET, FRÉMONT—SANTA FÉ TRADE—FIRST ADVENTURERS—CARAVANS—NEW MEXICO ERECTED BY CONGRESS INTO A TERRITORY—GEOLOGICAL STRUCTURE OF NEW MEXICO—THE RIO GRANDE—ITS VALUE—SOIL—PRODUCTS—IRRIGATION—CATTLE—INDIANS—MINES—GOLD—SILVER—COPPER—IRON—GYPSUM—SALT—CLIMATE—PUEBLO INDIANS—WILD INDIANS ENUMERATED—NUMBER OF PUEBLO INDIANS—CENSUS—PROXIMATE PRESENT POPULATION—CHARACTER OF PEOPLE AND GOVERNMENT—SANTA FÉ—ALBURQUERQUE—VALLEY OF TOAS—STATISTICS OF SANTA FÉ TRADE, ETC.—ITINERARY FROM FORT LEAVENWORTH TO SANTA FÉ AND EL PASO.

It was not until a few years ago that the people of the United States generally began to turn their attention to the development of those vast regions lying in the far west and along the shores of the Pacific Ocean. An occasional adventurer or foreign traveller returned from the Rocky Mountains after a pleasant but wild sojourn among the trappers and Indians, and told his romantic stories to eager listeners. At length, Major Long penetrated their recesses,—Nicollet sought the sources of the Mississippi,—and Frémont not only pushed his way beyond them, but traversed the majestic snow-buried summits of the Sierra Nevada and explored the genial lands lying at their feet in California.

Meanwhile a trade had grown up, midway from the Atlantic to the Pacific, between our western cities and the northern States of Mexico. But this, too, was an intercourse of mingled adventure, romance and commerce. Its objects and results were not generally known or recounted in the gazettes. Its hardy pursuers who were equally ready for a bargain or a battle, did not commonly amuse themselves either with correspondence or authorship, and accordingly, "The Santa Fé Trade" remained as much a matter of mystery to the mass of Americans as the marches of those great caravans which in the east annually traverse the desert towards the tomb of the Prophet.

The origin of this trade is not definitely known. A certain James Pursely, who wandered in the lonely regions west of the Mississippi about the year 1805, and learned something respecting the settlements in New Mexico from Indians near the sources of the Platte river, is supposed to have been the first *American* who visited Santa Fé in this direction; though, in the previous year, a *French Creole* named La Lande, had been despatched by Mr. Morrison, a merchant of Kaskaskia, with orders if possible to reach Santa Fé. It is known that this person arrived at his destination, but was so delighted with the country and so well entertained, that he never returned, and probably established himself in successful trade upon the capital of his confiding employer.

From this period, and after the Southern Expedition of Captain Pike, very

little is heard of this distant region until a caravan was fitted out under the auspices of Messrs. Knight, Beard, Chambers, and about eight other persons, in the year 1812. They reached Santa Fé in an unlucky hour. The revolutionary movements which had been disturbing Mexico were just then checked by the successes of the royalists, and the traders were siezed as spies, their goods confiscated, and themselves confined in the prisons of Chihuahua for nine years, when McKnight and his comrades were finally released. As soon as these luckless adventurers reached the United States, their return, their narratives and the probable settlement of the Mexican revolution by the successes of Iturbidé, induced others to fit out expeditions at once. A merchant of Ohio, named Glenn, and Captain Becknell, of Missouri, set out forthwith; and in 1824, about eighty traders, accompanied by several intelligent and cultivated Missourians, departed not only with pack-mules, which had hitherto served for the transportation of goods, but with twenty-five wheeled vehicles of which one or two were stout road *wagons*, the whole conveying a freight of near thirty thousand dollars in merchandise. The caravan crossed the desert-plains after an eventful journey; and some years after—as the early adventurers had experienced no serious molestations from the Indians,—a wealthier class of traders, availed themselves of the opened commerce of the Prairies and finally established the annual caravans which within recent years have departed from the neighborhood of Independence, laden with most valuable freights for the markets of Santa Fé, Chihuahua, and even the distant Fair of San Juan de los Lagos.

In time, however, the caravans, the period of their passage, and their value, became known to the savages through whose lonely territory they passed, and so many cruel attacks were made, that the United States resolved to protect them and established military convoys for the most dangerous part of the route. But these were not always of sufficient size, nor did they cover the road adequately; for the escort which accompanied the caravan of 1829, and another composed of sixty dragoons under Captain Wharton in 1834, constituted the only government protection until the year 1843, when large escorts under Captain Cook attended two different caravans as far as the Arkansas river. Since that period, the war has slightly interfered with the trade; but the Treaty of Guadalupe Hidalgo of 1848, having given New Mexico to the United States, and a territorial government having been formed for it during the first session of the thirty-first Congress, a new and progressive era is about to dawn upon the whole of the hitherto lonely waste between the western settlements of Texas and the shores of the Pacific.

By an act approved on the 9th of September, 1850, it is provided: "That all that portion of the territory of the United States bounded as follows: beginning at

a point in the Colorado river, where the boundary line with the Republic of Mexico crosses the same; thence eastwardly with the said boundary line to the Rio Grande; thence following the main channel of said river to the parallel of the thirty-second degree of north latitude; thence east with said degree to its intersection with the one hundred and third degree of longitude west of Greenwich; thence north with said degree of longitude to the parallel of the thirty-eighth degree of north latitude; thence west with said parallel to the summit of the Sierra Madre; thence south with the crest of said mountains to the thirty-seventh parallel of north latitude; thence west with said parallel to its intersection with the boundary line of the State of California; thence with said boundary line to the place of beginning,—be and the same is hereby erected into a temporary government, by the name of the TERRITORY OF NEW MEXICO: *Provided*, That nothing in this act contained shall be construed to inhibit the Government of the United States from dividing said Territory into two or more Territories, in such manner and at such times as Congress shall deem convenient and proper, or from attaching any portion thereof to any other Territory or State: *And provided, further*, That, when admitted as a State, the said Territory, or any portion of the same, shall be received into the Union with or without slavery, as their constitution may prescribe at the time of their admission."

Under the old Spanish and Mexican governments, the boundaries of New Mexico were exceedingly indefinite; but this act forever fixes the territorial limits, and also settles the long vexed question of the boundary of Texas.

"New Mexico," says Dr. Wislizenus, in his excellent memoir on the northern part of the Republic; "is a very mountainous country, with a large valley in the middle, running from north to south, and formed by the Rio del Norte or Rio Grande. The valley is generally about twenty miles wide, and bordered on the east and west by mountain chains, continuations of the Rocky Mountains, which have received different names, such as La Sierra Blanca; Los Organos, and Oscura, on the eastern side of the stream; and the Sierra de las Grullas, De Acha, and De los Mimbres, towards the west. The height of these mountains south of Santa Fé, may be averaged between six and eight thousand feet, while near Santa Fé and the more northern regions, some snow covered peaks are seen rising probably ten or twelve thousand feet above the sea. The mountains are principally composed of igneous rocks, as granite, sienite, diorite, and basalt. On the higher mountains excellent pine timber grows; on the lower, cedars and sometimes oak, and in the valley of the Rio Grande, principally mezquite.

The main artery of New Mexico is the Rio del Norte or Rio Grande, the longest and largest river ever possessed by Mexico. Its head waters were

explored in 1807 by Captain Pike, between 37° and 38° north latitude; but its highest sources are supposed to be about two degrees further north in the Rocky Mountains, near the head waters of the Arkansas and the Rio Grande or Colorado of the west. Following a general southern direction, it runs through New Mexico—where its principal affluent is the Rio Chamas from the west—and then winds its way in a south-eastern direction, through the States of Chihuahua, Coahuila, Tamaulipas, and Texas, to the Gulf of Mexico in 25° 56′ north latitude. Its tributaries in the latter States are the Pecos, from the north; the Conchos, Salado, Alamo, and San Juan, from the south. The whole course of the river, in a straight line, would be near twelve hundred miles; but from the meandering of its lower half, it runs at least about two thousand miles from the region of eternal snow to the almost tropical climate of the Gulf. The elevation of the stream above the sea at Albuquerque, in New Mexico, is about forty-eight hundred feet; at El Paso del Norte, about thirty-eight hundred; and at Reynosa,—between three and four hundred miles from its mouth—about one hundred and seventy feet. The fall of its water between Albuquerque and El Paso, appears to be from two to three feet in a mile, and below Reynosa, one foot in two miles. This fall of the river is seldom used as motive power, except for some flour mills, which are oftener worked by mules than water. The principal advantage at present derived from it is for agriculture, by a well conducted system of irrigation. As to its navigation, it is very doubtful if even canoes could be used *in New Mexico*, except, perhaps, during May and June, when the stream, from the melting of the snow in the mountains, is at its highest stage. It is entirely too shallow and interrupted by too many sand bars, to promise any thing for transportation; yet, on the southern portion, the recent exploration by Captain Sterling, in the United States steamer Major Brown, has proved that steamboats may ascend for a distance of seven hundred miles between the Gulf and Laredo. This steamer, however, did not draw over two feet of water, but the explorers are of opinion that by spending one hundred thousand dollars in a proper improvement of the Rio Grande above the town of Mier, boats drawing four feet could readily ply between the mouth of the river and Laredo.

The soil in the valley of the Rio Grande, in New Mexico, is generally sandy and appears to be poor; yet, by irrigation, it is made to produce abundant crops. Though agriculture has been hitherto carried on in a very primitive way, either with the hoe alone, or with a very rough plough made entirely of wood, nevertheless the inhabitants raise large quantities of the staple productions—such as Indian corn, wheat, beans, onions, red peppers, and some fruits. The most

fertile part of the valley, begins below Santa Fé along the river, and is called the 'Rio abajo,' or Country down the Stream. In that region it is not uncommon to gather two annual harvests. The general dryness of the climate and aridity of the soil will always confine agriculture to the valleys of water courses, which rarely contain running water during the whole year. But on several occasions it was remarked, in the high table land from Santa Fé south, that at a certain depth layers of clay are found, that may form reservoirs for the sunken water courses from the eastern and western mountain chain, and consequently, by the improved method of boring, or by Artesian wells, they might easily be made to yield their water to the surface. If experiments to that effect should prove successful, the progress of agriculture in New Mexico would be more rapid, and, even many of the dreaded 'Jornadas' might be changed from waterless deserts into cultivated plains.

The present system of irrigation is effected by damming the streams, and throwing the water into larger and smaller ditches or *acequias* surrounding and intersecting the whole cultivated land. The inhabitants of towns and villages locate their farms together, and allot to each the use of a part of the water at certain definite periods. These common fields are generally left without fences, for the grazing cattle are always guarded by *vaqueros* or herdsmen. The finest cultivated fields are generally seen on the *haciendas*, or large estates belonging to the rich proprietors. These *haciendas* are a remnant of the old Spanish system by which large tracts, with the appurtenances of Indian inhabitants or serfs were granted by the crown to its vassals. The great number of human beings attached to such estates, are, in fact, nothing more than slaves; they receive from their masters only food, lodging, and raiment, or, perhaps a mere nominal pay, and are kept constantly in debt and dependance on their landlords; so that if ancient custom and natural indolence did not compel them to remain permanently with their hereditary masters, the enforcement of Mexican laws against debtors would be sufficient to prolong their servitude from generation to generation.

Besides agriculture, the New Mexicans pay a great deal of attention to the raising of cattle. Their stock is all of a small size, raised from unimproved or exhausted breeds; but it increases rapidly, and as no stable feeding is needed in winter, it exacts but little care from its owners. There are large tracts of land in New Mexico, either too mountainous or too distant from water to be cultivated, which, nevertheless, afford excellent pasturage for innumerable herds during the whole year; but, unfortunately, here as well as in the State of Chihuahua, cattle raising has been crippled by the incursions of hostile Indians, who consider themselves 'secret partners' in the business, and annually carry off their share

from the unprotected *vaqueros*.

A third much neglected branch of industry in New Mexico, is that of mining. Numerous deserted mining places in this region prove that it was pursued with much greater zeal in Spanish times than at present. This may be accounted for by the actual want of capital and knowledge of mining, but, especially, by the unsettled state of the country and the arbitrary conduct of its rulers. The mountainous parts of New Mexico are considered extremely rich in gold, copper, iron, and some silver. Gold seems to be found to a large extent in all the mountains near Santa Fé; south of it, at a distance of about one hundred miles as far as "Gran Quivara," and north for about one hundred and twenty miles up to the river Sangre de Christo. Throughout the whole of this region gold dust has been abundantly found by the poorer classes of Mexicans, who occupy themselves with washing it from the mountain streams. At present the Old and New *Placeres*, or places where gold is obtained near Santa Fé, have attracted most attention, and not only *gold washes* but *gold mines*, also, are worked there. Yet they are probably the *only* gold mines at present wrought in the territory. The *wash gold* when examined was found to contain:

Native Gold,	92.5
Silver,	3.5
Iron and Silex,	4.0
	<hr/>
	100.0; —

while the total annual production of both *placeres* seems to have varied considerably;—in some years it was estimated at from thirty to forty thousand dollars, in others from sixty to eighty thousand, and in latter years, it is reputed to have ascended to even two hundred and fifty thousand.

Several rich silver mines were, in Spanish times, worked at Avo, at Cerillos, and in the Nambe mountains, but none are in operation at present. Copper is found in *abundance* throughout the country, but principally at Las Tijeras, Jemas, Abiquia, and Guadalupita de Mora, but until a recent period only one copper mine was wrought south of the *placeres*. Iron, though also existing in very large quantities, has been entirely overlooked. Coal is found in different localities—as in the Raton mountains; in the vicinity of the village of Jimez, south-west of Santa Fé; and in spots south of the *placeres*. Gypsum, common and selenite, are discovered abundantly, and it is said that most extensive layers exist in the mountains near Algodon, on the Rio Grande, and in the neighborhood of the celebrated *Salinas*. It is used as common lime for white-

washing, while the crystalline or selenite is employed instead of window glass. About one hundred miles, south south-east of Santa Fé, on the high table land between the Rio Grande and Pecos, are some extensive *salinas* or salt lakes, from which all the salt used in New Mexico is procured. Large caravans from Santa Fé visit this place every year during the dry season, and return heavily laden with the precious deposits. They either sell it for one and sometimes two dollars per bushel, or exchange a bushel of salt for a bushel of Indian corn.

The climate of New Mexico differs of course in the higher mountainous parts from the lower valley of the Rio Grande; but, generally, it is temperate, constant and healthy. The summer heat in the valley of the river sometimes rises to near 100° Fahrenheit; yet the nights are always cool, pleasant, and refreshing. The winters are longer and severer than in Chihuahua, for the higher mountains are always covered with snow, while ice and snow are common in Santa Fé, though the Rio Grande is never sufficiently frozen to admit the passage of horses and vehicles. The sky is generally clear and the atmosphere dry. Between July and October rain falls; but the wet season is not so constant or regular as in the Southern States of the Mexican Republic. Disease seems to be very little known except in the form of inflammations and typhoidal fevers during the winter.

INDIAN PUEBLO, OR VILLAGE. INDIAN PUEBLO, OR VILLAGE.

Between the Indians and the whites,—except perhaps on the haciendas—there still continues the same old rancorous feeling which generated the general insurrection narrated in the historical part of this work. The PUEBLO Indians live always isolated in their villages, cultivate the soil, raise some stock, and are generally poor, frugal, and sober. These various tribes, of which a large number still exist, are reduced to probably about seven thousand souls. They speak different dialects and sometimes broken Spanish. For the government of their communities they select a *Cacique* and a council, and in war are led by a Capitan. In religious rites they mingle Catholicism and Paganism. Their villages are very regularly built; though sometimes, there is but one large house of several stories, with a vast number of small rooms, in which all the inhabitants of the *pueblo* are quartered! Instead of doors in front, traps are made on the roofs of their dwellings to which they ascend by a ladder that is withdrawn during the night so as to secure them, from surprise or attack. Their dress consists of moccasins, short breeches and a woollen jacket or blanket; their black hair is

usually worn long, while bows and arrows together with a lance and sometimes a gun compose their weapons.^[72]

The late Governor, Charles Bent, in a report to the United States Government from Santa Fé in 1846, presents the following statement of the tribes and numbers of the WILD INDIANS, who reside or roam in the regions which were then supposed to be comprised in New Mexico. Bent's perfect familiarity with a district in which he had so long dwelt or traded, renders his enumeration of these savages an important historical fact in the history of the newly acquired Territory.

Apaches or Jicarillas,	100	lodges comprising	500	souls.
Apaches proper,	800 or 900	"	"	5,500 "
Utahs, Grande Unita rivers,	600	"	"	3,000 "
Utahs, Southern,	200	"	"	1,400 "
Navajos,	1,000	families	"	7,000 "
Moques,	350	"	"	2,450 "
Comanches,	2,500	lodges	"	12,000 "
Cayugas,	400	"	"	2,000 "
Cheyennes,	300	"	"	1,500 "
Arapahoes,	400	"	"	1,600 "
TOTAL,				36,950 "

According to a report made in October, 1849, by Mr. James S. Calhoun, Indian Agent at Santa Fé, the following summary of the *Pueblos*, and *Pueblo Indians* of New Mexico, is based on a census ordered by the legislature of New Mexico, convened in December, 1847; but it includes only individuals five years of age and upwards.

PUEBLOS AND PUEBLO INDIANS OF NEW MEXICO.

COUNTIES.	PUEBLOS.	PUEBLO INDIANS OVER 5 YEARS
County of Taos,	Taos, Picoris	283
" Rio Arriva,	San Juan, Santa Clara	500
" Santa Fé,	San Ildefonso, Namba, Pojoaque, Tezuque	590

" Santa Anna,	Cochiti, Santo Domingo, San Félipé, Santa Anna, Ziá, Jemez,	1,918
" Bernalillo,	Sandia, Gleta,	833
" Valencia,	Laguna, Acoma, Zunia,	1,800
Opposite El Paso,	Socoro, Islettas,	600
Total of PUEBLOS 21.	Total of Pueblo Indians	6,524

These calculations will serve to aid in the estimates of present population, for no accurate census has been prepared officially for many years.

In 1793, according to an enumeration then made, the *whole* population amounted to 30,953:—in 1833 it is estimated, in the statistics of Galvan's Calendar, at 52,300 individuals, who were divided by Mühlenpfordt and Dr. Wislizenius into $\frac{1}{20}$ pure Spanish blood, $\frac{4}{20}$ Creoles, $\frac{5}{20}$ Mestizos, and $\frac{10}{20}$ Pueblo Indians. These calculations, according to the above census of *Pueblo Indians*, would make the whole present population not more than thirteen or fourteen thousand, which is obviously incorrect unless the census of 1847 was most inaccurately made.

In a letter from the Hon. Hugh N. Smith, delegate from New Mexico, addressed to the National Intelligencer, Washington, and published on the 25th of June, 1850, he desires to correct the mistakes which have been made in regard to the number and character of the inhabitants of New Mexico. The number, he says, has been variously stated in the Congressional debates at from ten to seventy thousand; and generally *one half*, and sometimes *all* of them, are said to be *Indians*. "This is a great error," continues the delegate, "we have a population of at least ninety thousand, of whom from ten to twelve thousand only are Pueblo Indians, and we do not estimate in our population any other kind of Indians except Pueblos. They are a quiet, inoffensive, honest, and industrious people; they own the best farming lands in the Territory, and are engaged entirely in agricultural pursuits, and, as tax-paying Indians, would be entitled to the privileges of citizens, and of the elective franchise in Texas.

"The census taken in New Mexico the year before the entrance of General Kearney into that Territory, showed the population to be one hundred thousand and two or three hundred over. This may not have been taken with great accuracy, but the best informed persons, and those who have lived there longest agree with me that we have not less than ninety thousand. Dr. Wislizenius, who is generally correct in his accounts of travel, and who is relied upon as good authority, in his statistics of that country, is certainly mistaken in saying that ten-

twentieths, or one-half of the population, are Pueblo Indians. I have travelled through the settled parts of that country two or three times a year for the last three years, and I know that not a fifth, or even one-sixth are Indians.

"There are in New Mexico from twelve to fifteen hundred resident *American voters*, emigrants from the different States, principally from the State of Missouri; the rest of the population is Mexican and Spanish."

Upon these estimates and calculations it would perhaps be fair, in arriving at a proximate enumeration of inhabitants, to give the following ratios:—

WILD INDIANS, according to Governor Charles Bent,	36,950
PUEBLO INDIANS, according to enumeration,	6,524
WHITE CREOLES, according to Dr. Gregg,	1,000
MESTIZOS, " " "	59,000
AMERICANS, according to Hon. Hugh N. Smith,	1,500
	<hr/>
	104,974
<i>Deduct from this for Wild Indians,</i>	36,950
	<hr/>
	68,024
<i>Deduct from this for Pueblo Indians,</i>	6,524
	<hr/>
PROXIMATE TOTAL OF PURE WHITES AND MIXED RACES, ^[73]	61,500

The more civilized inhabitants of New Mexico resemble their parent stock in character and manners, save that they are somewhat tinctured with the habits of the Indian race, whose blood is mingled more or less in the veins of all classes. The men are homely, the women pretty, and while the former are generally condemned for their indolence, insincerity and treacherousness, the latter are praised by all travellers for their frank, affectionate and gentle demeanor. Very little was ever done for education in this remote Territory, which was almost cut-off from the civilizing influences of the rest of the world. Its governors,—either sent by the central authorities of the Mexican Republic, or chosen by the people themselves,—were often overthrown by bloody revolutions; but, while in power, they used their offices as a prolific means of enriching themselves. Their intercourse with strangers from the north, and their facilities in fraudulently collecting or compromising duties upon the trade of the caravans, were constantly taken advantage of by the rapacious chiefs; nor could the national authorities attempt to control them, for the distance of Santa Fé from the capital always made the loyalty of New Mexico loose and insecure.^[74] The governors, judiciary, and clergy of the Territory, naturally fostered this feeling among the

people, and in many instances it was beneficial to the north of the Republic, especially in opposing the establishment of the tobacco monopoly and in resisting the introduction of the copper currency which elsewhere caused so much distress and ruin.

The principal town in New Mexico is Santa Fé, or, as it is often written by Spaniards and Mexicans, Santa Fé de San Francisco. It is one of the oldest Spanish settlements in the north, and lies at an elevation of 7047 feet above the sea, in $35^{\circ} 41' 6''$, north latitude, and $106^{\circ} 2' 30''$, longitude west from Greenwich, according to the observations of Lieutenant Colonel Emory of the United States Topographical Engineers, and of Doctors Gregg and Wislizenius. The town is situated in a wide plain surrounded by mountains, about fifteen miles east of the Rio Grande del Norte. Immediately west of the town a snow-capped mountain rises up to a lofty height, and a beautiful stream of small mill power size, ripples down its sides and joins the river about twenty miles to the south-westward.

Santa Fé is an irregular, scattered town, built of *adobes* or sun dried bricks, while most of its streets are common highways traversing settlements interspersed with extensive cornfields. The only attempt at any thing like architectural compactness and precision, says Dr. Gregg, consists in four tiers of buildings, whose fronts are shaded with a fringe of rude *portales* or corridors. They stand around the public square, and comprise the *Palacio* or Governor's house, the custom house, barracks, calabozo, casa consistorial, the military chapel, besides several private residences, as well as most of the shops of the American traders.

PARROQUIA DE SANTA FÉ. PARROQUIA DE SANTA FÉ.

ALBURQUERQUE is a town as large as Santa Fé, stretched for several miles along the left bank of the Rio Grande, and if not a handsomer, is at least not a worse looking place than the capital.

The population of New Mexico, owing to the insecure tenure of life on a frontier which is constantly liable to the ravages of wild Indians, has always clustered together in towns and villages. These are scattered along the valley of the rivers, and are commonly known as the "rio arriba" and "rio abajo" or "up stream" and "down stream" settlements. Even individual *ranchos* and *haciendas*

serve as the *nucleii* of large neighborhoods, and finally become important villages. All the principal locations of this character lie in the valley between one hundred miles north and one hundred and forty south of the capital. The most important of these next to the capital, is EL VALLE DE TAOS, whose name is derived from the Taosa tribe, a remnant of which still forms a Pueblo in the north of the district. No part of New Mexico equals this spot in productiveness; and although the bottom lands of the valleys where irrigation may be easily obtained have often produced over a hundred fold, yet the uplands throughout all these elevated plains about the Rocky Mountains, must, in all probability, remain sterile in consequence of the extraordinary dryness of the atmosphere. Indeed, New Mexico possesses but few of those natural advantages which are necessary to a rapid progress of civilization. It is a region without a single communication by water with any other part of the world, and is imprisoned by chains of mountains extending for more than five hundred miles, except in the direction of Chihuahua from which, however, its settlements are separated by a dreary desert of nearly two hundred miles.^[75]

"Some general statistics of the Santa Fé trade," says Dr. Gregg, "may prove not wholly without interest to the mercantile reader. With this view I have prepared the following table of the probable amount of merchandise invested in the Santa Fé trade, from 1822 to 1843 inclusive, and about the portion of the same transferred to the Southern markets (chiefly Chihuahua) during the same period; together with the approximate number of wagons, men and proprietors engaged each year:

Years.	Amount Mdse.	Wagons.	Men.	Prop'ietors	Train to Chihuahua	Remarks.
1822	15,000		70	60		Pack-animals only used.
1823	12,000		50	30		do. do.
1824	35,000	26	100	80	3,000	do. and wagons.
1825	65,000	37	130	90	5,000	do. do.
1826	90,000	60	100	70	7,000	Wagons only henceforth.
1827	85,000	55	90	50	8,000	
1828	150,000	100	200	80	20,000	Three men killed, being the first.
1829	60,000	30	50	20	5,000	1st U. S. Escort—one trader killed.
1830	120,000	70	140	60	20,000	First oxen used by traders.
1831	250,000	130	320	80	80,000	Two men killed.

1832	140,000	70	150	40	50,000	Party defeated on Canadian 2 men killed, 3 perished.
1833	180,000	105	185	60	80,000	
1834	150,000	80	160	50	70,000	2d U. S. Escort
1835	140,000	75	140	40	70,000	
1836	130,000	70	135	35	60,000	
1837	150,000	80	160	35	80,000	
1838	90,000	50	100	20	40,000	
1839	250,000	130	250	40	100,000	Arkansas Expedition.
1840	50,000	30	60	5	10,000	Chihuahua Expedition.
1841	150,000	60	100	12	80,000	Texan Santa Fé Expedition.
1842	160,000	70	120	15	90,000	
1843	450,000	230	350	30	300,000	3d U. S. Escort—Ports closed." ^[76]

The following valuable geographical information is derived from a statement published by Major James Henry Carleton, United States Army, in the National Intelligencer, and is founded on the measurements made by Captain Alexander H. Dyer, with a viameter, during the march of General Kearney against New Mexico.

SANTA FE.
SANTA FE.

FORT LEAVENWORTH TO EL PASO, VIA SANTA FE.

Points.	Distance from place to place.	Distance from Fort Leavenworth.
	<i>Miles.</i>	<i>Miles.</i>
Fort Leavenworth to—		
Upper Ferry, Kansas river,	35	35
Willow Spring,	17	52
110 Creek,	24	76
Beaver Creek,	12	88
Dragoon Creek,	8	96

Bluff Creek,	13	109
Council Grove,	12	121
Diamond Spring,	15	136
Lost Spring,	14	150
Cotton Wood,	15	165
Main Turkey Creek,	18	183
Little Arkansas,	26	209
Big Cow Creek,	21	230
Walnut Creek,	25	255
Pawnee Fork,	25	280
Cow Creek,	12	292
Fort Mann,	55	347
Crossing of Arkansas,	26	373
Sand Creek,	50	423
Lower Spring on Cimerone,	8	431
Middle Spring,	34	465
Crossing of Cimerone,	27	492
Cold Spring,	18	510
Cedar Spring,	14	524
McNee's Creek,	10	534
Cotton Wood,	10	544
Rabbit-ear Spring,	14	558
Whetstone,	24	582
Point-of-Rocks,	15	597
Red River,	21	618
Ocate,	5	623
Wagon Mound,	20	643
Rock Creek,	16	659
Mora River,	8	667
Las Vegas,	19	686
St. Miguel,	23	709
Old Peco Church,	24	733

Points.	Distance from place to place.	Distance from Fort Leavenworth.
	<i>Miles.</i>	<i>Miles.</i>
Old Pecos Church to—		
Santa Fé,	24	757
Albuquerque,	65	822
Peralto (The Oteros),	45	887
La Joya,		
Socorro,	18	905
Ford of Del Norte, above the ruins of Valverde, [77]	25	930
Fra Christoval, entrance of Jornada de los Muertos,	16	946
Doña Anna (Mexican town),	95	1,041
Grove on river,	15	1,056
Brazito,	16	1,072
El Paso,	32	1,104

NOTE.—The boundary line between the United States and Mexico, leaves the Del Norte a few miles above the town of El Paso, running west towards the Gila.

THE STATE OF CALIFORNIA.

TITLE TO THE REGION—MISSIONARY SETTLEMENT, ITS PURPOSES—CHARACTER OF CALIFORNIA—SECULARIZATION OF MISSIONS—POPULATION IN MISSIONS—AGRICULTURAL STATISTICS—CATTLE—HIDES—TALLOW—HERDSMEN—TRADE—THE WAR—CONDITION OF CALIFORNIA AT ITS CLOSE—PROGRESS OF SETTLEMENT AND LAW—CONSTITUTION ADOPTED—ADMISSION AS A STATE—FORMER BOUNDARIES—THE GREAT BASIN—UTAH—GREAT SALT LAKE—PYRAMID LAKE—RIVERS—PRESENT STATE BOUNDARIES—AREA—GEOGRAPHY—SACRAMENTO—SAN JOAQUIN—SHASTL PEAK.

THE Treaty of Guadalupe Hidalgo confirmed the title to Upper California which the United States had gained by war. Although the geographical position of that region, the security of its harbors, and the supposed value of its soil, had attracted the attention of our people at an early day, it was not imagined, at the period of the cession, that the new territory would so soon become the nucleus of the first Anglo-Saxon empire on the shores of the Pacific. Its rapid development was owing rather to circumstances of an extraordinary character, than to the commercial and progressive spirit of our citizens; but the national energy which is always alive to individual interests, was never more completely illustrated than by the alacrity with which all classes rushed to the new scenes of labor, and turned to gold the soils that Indians and Mexicans had trodden for centuries as worthless sand.

Lower California was discovered, visited, and partly settled by the Spanish adventurers soon after the Mexican conquest, and although the coasts of Upper California had been explored in 1542, it was not until the eighteenth century that the "spiritual conquest" of that distant region was undertaken by the Roman clergy, under whose directions the missions were founded upon a "pious fund," created by the zealous Catholics of Mexico. At that time it was supposed that the civilizing influences of religion would not only win thousands of savages to the worship of God, but that by blending agriculture and trade under the tutelage of the church, the Indians might be rendered valuable subjects of the Spanish crown. The government well knew that the Spaniards were neither sufficiently numerous nor adventurous in Mexico to throw large bodies of hardy men into so remote a province on the shores of the Pacific, and it was, therefore, imagined that the actual native population of the district might be tamed by religion to supply the place of Christian immigration.

All the explorers who visited Upper California reported favorably on the character of the country. It was known to possess inducements to a profitable trade. The golden east opened its gates in front of it; and the country was supposed to contain valuable metallic deposits which might be slowly and surely developed. But the labors of the clergy did not respond to the expectations of the

government. The priests were contented with present comfort rather than anxious for future success. The mass of the Indians were brought into a state of comparative vassalage, as we have seen in the chapter on the church of Mexico, and all the most valuable or accessible lands were rapidly absorbed, to the exclusion of hardy, persevering, and thrifty white men.^[78]

Although the clergy were the virtual proprietors of the agricultural and cattle raising districts, the viceregal government contrived to retain a loose and limited control over this district, until the period of the revolution. In 1824, on the adoption of the federal constitution, as the Californias did not possess sufficient population to become States of the federation, they were erected into Territories, with a right to send a member to the general congress, who, though suffered to participate in debate, was not allowed to vote in its decisions. As Territories they were under the government of an agent styled the Commandant-General, whose powers were very extensive.

After the revolution the first progressive step was made by the secularization of the missions. In 1833, under the vigorous lead of Gomez Farias, the salaries of the monks were suspended, the Indians were released from servitude, the pious fund was confiscated, the division of property among natives and settlers decreed, and an extensive plan proposed to fill the country by immigration. These blows fell heavily upon the monastic farmers and herdsmen of those trading churches. The missions were speedily deserted, their edifices and establishments decayed, and, near the period of their close, the whole result of this abortive ecclesiastical civilization, was summed up in the paltry numbers exhibited in the following statement:

MISSIONS AND THEIR POPULATION IN UPPER CALIFORNIA IN 1831.

Names of the Jurisdictions,
Missions, and Towns.

PEOPLE OF ALL CLASSES AND AGES.

Men. Women. Boys. Girls. Total.

JURISDICTION OF S. FRANCISCO

PRESIDIO OF S. FRANCISCO	124	85	89	73	371
Town of San José de Guadalupe	166	145	103	110	524
Mission of S. Francisco Solano	285	242	88	90	705
id. of S. Rafael	406	410	105	106	1027
id. of S. Francisco	146	65	13	13	237
id. of Santa Clara	752	491	68	60	1371

id. of S. José	823	659	100	145	1727
id. of Santa Cruz	222	94	30	20	366

JURISDICTION OF MONTEREY

PRESIDIO OF MONTEREY	311	190	110	97	708
Village of Branciforte	52	34	27	17	130
Mission of S. Juan Bautista	480	351	85	71	987
id. of S. Carlos	102	79	34	21	236
id. of Na. sa. de la Soledad	210	81	23	20	334
id. of S. Antonio	394	209	51	17	671
id. of S. Miguel	349	292	46	61	748
id. of S. Luis Obispo	211	103	8	7	329

JURISDICTION ON STA. BARBARA

PRESIDIO OF STA. BARBARA	167	120	162	164	613
Mission of La Purissima	151	218	47	34	450
id. of Sta. Ines	142	136	82	96	456
id. of Sta. Barbara	374	267	51	70	762
id. of Buenaventura	383	283	66	59	791
id. of S. Fernando	249	226	177	181	833
Town of la Reyna de los Angelos	552	421	213	202	1388

JURISDICTION OF S. DIEGO

PRESIDIO OF S. DIEGO	295				
Mission of S. Gabriel	574				
id. of S. Juan Capistrano	464	—1911	683	621	5686
id. of S. Luis Rey	1138				
id. of S. Diego	750	520	162	146	1575

Totals^[79] 10,272 7632 2623 2498 23,025

Agriculture had always been most carelessly conducted. The implements used in the fields were nearly the same as those introduced by the earliest settlers. The mills were few and primitive; and although the same extent of ground yielded nearly three times as much wheat as in England, and returned corn at the rate of one hundred and fifty fold, yet nothing was cultivated that was

not absolutely needed for the maintenance of the missions and their immediate neighborhoods. There was no commerce to carry off the excess of production, and no enterprise to create a surplus for the purposes of trade.

At this epoch the whole cereal production of Upper California did not exceed

63,000	bushels of wheat.
28,000	" of corn.
4,200	" of frijoles or brown beans.
2,800	" of garabanzos or peas.
18,500	" barley.

The Californians, of that period, seem however, to have particularly delighted in the care of cattle. The idle, roving life of herdsmen, who might wander over the plains and mountains in search of their flocks, was peculiarly suited to a population emerging from the nomadic state; and accordingly we find that the region was well stocked, whilst the missions and their dependencies flourished. In 1831, Mr. Forbes tells us, that there were in this province,—

216,727	Horned Cattle,
32,100	Horses,
2,844	Mules,
177	Asses,
153,455	Sheep,
1,873	Goats,
839	Swine.

In addition to these there were vast numbers, roaming at large, which were not marked or *branded*, according to California laws, as belonging to any of the jurisdictions, missions, haciendas or towns. These were hunted and slain to prevent their interference with the pasturage of the more useful and appropriated cattle; yet from all this multitude but little profit was gained except for hides and tallow. Beef was not salted and prepared for foreign markets, the dairy was altogether neglected, and butter and cheese almost unknown. In the earlier days of the settlement, many thousand cattle were annually driven either to the city of Mexico or to the interior provinces from the large estates on the Pacific; but that traffic was gradually abandoned under the habitual sloth of the people, nor was it until many years after the trade of the ports was opened by the war of

independence, that a comparatively brisk intercourse opened with the Sandwich Islands and our own people, who were willing to exchange their manufactures for the hides and tallow of the Californians.

Such was the condition of affairs in this primitive pastoral region when the war between Mexico and the United States broke out. For a long time the natives and settlers had been discontented with their national government that usurped the milder sway of the clergy; yet it is probable that most of the revolutionary movements were founded on personal ambition and avarice rather than patriotic impulses, nor is it likely that the territory would have secured its independence without the aid of a foreign power. British interests had undoubtedly counselled the acquisition of California; but the fate of war suddenly threw it into our hands, and probably at the very moment when English subjects and the Mexican government were combining to exclude us from the positions on the Pacific which were so necessary for our mercantile progress as well as political and maritime convenience.

As soon as the country was quieted by the arrangement which Colonel Frémont made with the Californian leaders at Couenga, the people who had been engaged in the brief local war returned to their peaceful avocations. Our forces were stationed in small detachments, from Sutter's fort to San Diego, while our national vessels were anchored in the different harbors throughout the whole coast. In the maritime towns the supreme authorities collected a revenue from imports under the Contribution tariff. Order was promptly restored every where; but the only recognized control was that of the military government, which had devolved upon Colonel Mason at the departure of General Kearney.

Meanwhile the emigration from the United States, which, amounted to about five hundred individuals during the summer and fall of 1845, had been considerably augmented by recruits and adventurers during the continuance of the war. These men, as soon as hostilities ceased, naturally turned their attention to the two most important subjects that engage an American's attention wherever fortune may cast his lot. Their future prospects of wealth, and the character of their government, demanded immediate care; yet while they relied upon Congress for the security of their political rights, they found, in spite of California's renown for agricultural riches, that they could only establish themselves successfully on the Pacific, or return with fortunes from its shores, by a steady and thrifty devotion to labor.

Such was the condition of California in the spring of 1848, when the accidental discovery of gold which might be rapidly and easily gathered in

apparently inexhaustible quantities, changed not only the condition of the inhabitants, but affected the whole commerce of the world. "The towns were forthwith deserted by their male population, and a complete cessation of the whole industrial pursuits of the country was the consequence. Commerce, agriculture, mechanical pursuits, professions,—all were abandoned for the purpose of gathering the glittering treasures which lay buried in the ravines, gorges and rivers of the Sierra Nevada. The productive industry of the country was annihilated in a day. In some instances the moral perceptions were blunted, and men left their families unprovided, and soldiers deserted their posts."^[80]

But the greediness of the adventurers soon taught them that they could not subsist on gold, and that after the first deposits were gathered in the most accessible regions, it was necessary for them to wander farther and farther from the coast settlements, until they were lost in the lonely and barren glens of the mountains. There, at the approach of winter, they found themselves without the means of comfort or support. In the meanwhile, however, the news of the discovered El Dorado crossed the continent, and although its marvels were regarded by many as fabulous, there were others who resolved at once either to abandon their homes for the wilderness or to despatch valuable cargoes whose enormous profits would absorb the miner's wealth.

Under these mingled temptations of trade and discovery, an immense immigration, chiefly of males, poured into California, not only from the United States but from Oregon, Mexico, Chili, Peru, China and the Sandwich Islands, all of whom soon saw the necessity of once more subdividing human labors into their ordinary channels as well as proportions; and thus, while commerce took the lead in the ports and warehouses, mechanical and professional pursuits equally assumed their relative importance, and partly restored the endangered balance of society.

Within a year after this wonderful discovery, the Californians felt that they were no longer outlying colonists of the American Union, requiring pecuniary support from the mother State and military protection against savages. Their lot was strangely reversed in the history of distant settlements, for wealth had been secured *in advance* of inhabitants and trade. Gold, a large population, and reconstructed social relations, brought with them the necessity for firm, fixed constitutional government. The fermenting elements of a motly society were effervescing, and the substratum of order and civilization was rapidly chrystallizing. The dollar dulled the bowie knife. Immense fleets, arriving from all parts of the world, poured large revenues into the national coffers. Intelligent

and industrious men thronged the towns that sprang up, as if by enchantment, at every advantageous point. All the great mercantile interests were rapidly developed. Property in land and moveables become suddenly valuable beyond the hopes or dreams of the early settlers. Discussions arose as to titles and rights. Spanish laws, uncertain in their character or sanction, and American laws of doubtful application, were hastily enforced by judges whom the wants of time summoned to the bench from uncongenial pursuits to administer justice in courts which were quite us incongruously constructed.

In such a state of society, men were naturally anxious to know their relations to the Federal Government whose Congress adjourned two sessions after the treaty of Guadalupe Hidalgo without legislating for the ceded territories. It might almost have been pardoned, had California, feeling her power, position and self-reliant resources, asserted her independence after so much neglect. Yet, in the midst of all these temptations, and in spite of our people's abhorrence of a military government, there never was a more beautiful demonstration of national loyalty and affinity than in the regular assemblage, in that remote quarter of the world, of citizens from all our States, and of all classes, characters, tempers, professions and avocations, to form a republican constitution which would ensure admission into our Union. Their military governor, it is true, had set the example of submission to the civil power, by directing the election of delegates; but *the people* asserted their inherent right, independently of the military authority; and, although they acted in harmony with their estimable ruler, the constitution was emphatically the result of popular impulse and judgment alone. The convention, thus assembled, met at Monterey on the 1st of September, 1849, and closed its work on the 13th of October by submitting an excellent constitution to the people for their adoption. The document was forthwith disseminated in Spanish and English, and no attempt was made to mislead or control public opinion in relation to it. The people gave it their sanction by an overwhelming majority, and the legislature which was elected under it, assembled at San José, the capital of the State, on the 15th of December, 1849. Peter H. Burnett, who had been chosen first governor of the Pacific Empire State, was duly inaugurated, and on the 20th of the same month, the military governor, General Riley, resigned his power into the hands of the civil agents of the organized State. After a warm and embittered discussion in Congress at Washington, California, with all her sovereign rights, was finally admitted into the North American Union, on the 9th day of September, 1850.

The treaty of Guadalupe Hidalgo, by the transfer of Upper California as it existed and was bounded in May 1848, conferred a magnificent domain upon the

United States. This, however, has been subdivided by the action of Congress and the California Convention, and the new Territory or Utah formed out of a portion of it. The original grant comprises the region between the parallels of 32° 50' and 40° of north latitude, and 106° and 124° west longitude, containing an area of four hundred and forty-eight thousand six hundred and ninety one square miles, or, two hundred and eighty seven million, one hundred and sixty two thousand two hundred and forty acres of land. "In other words, our *original* territory of Upper California, embraced twelve hundred and two square miles more than the States of Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, Ohio, Indiana, Illinois, Michigan, Iowa and Wisconsin, combined!"^[81]

The California Convention, in shaping their new State, thought it advisable to diminish this unwieldy empire, a large portion of which was, in truth, divided by the evident decree of nature from the Pacific region. Between the Rocky Mountains and the Sierra Nevada, at an elevation of between four thousand and five thousand feet above the sea lies that singular geographical formation which was first explored by Colonel Frémont, and is known as the Great Basin. This is now comprehended in the Territory of Utah. It is about five-hundred miles in diameter, counting either from north to south or east to west; and, imprisoned on all sides by mountains, it has its own complete system of rivers and lakes, all of which *have no outlet to the Oceans* on either side of the continent. Its steep interior hills and mountains are covered with forests, and rise abruptly from a base of ten or twenty miles to a height of seven or ten thousand feet above the level of the sea. Many large bodies of water are confined in its capacious bosom, and among them are the Utah and Great Salt Lakes. The shores of the latter, extending in length about seventy miles, have been seized and occupied by the Mormons as the seat and centre of their future State. Immense quantities of salt are gathered from its banks when the waters of this inland sea recede during the dry seasons of these lofty plains and table lands. The waters of the Utah, however, are perfectly fresh; and, near the western edge of the Basin, is found the picturesque Pyramid Lake which is also shut in by mountains, and is remarkable for its depth and transparent purity.

To the southward of this, bordering the base of the Sierra Nevada, within the Basin, is a long range of lakes; while many copious rivers disperse their water throughout its ungenial expanse. The chief of these streams is Humboldt River, which rises in the mountains west of the Great Salt Lake, and runs westwardly along the northern side of the Basin towards the Sierra Nevada of California. It courses onward for three hundred miles, without affluents, through a sterile

plain, though the valley of its own creation is richly covered with grasses and bordered with willows and cotton wood. This remarkable stream will become of vast importance in the travel towards California, for, rising towards the Salt Lake, it pursues nearly the direct route towards the Pass of the Salmon Trout river through the gorges of the Sierra Nevada, where at an elevation of less than three thousand six hundred feet above the level of the Basin, the pathway descends into the Valley of the Sacramento, and penetrates the State of California only forty miles north of Sutler's original settlement.

The other known rivers of this strange and partially explored region, are the Carson, Bear, Utah, Nicollet and Salmon Trout, most of whose streams, furnished by the snowy peaks of the Sierra, are absorbed in marshes and lakes, or return by evaporation to the icy sources whence they sprang.

PYRAMID LAKE. PYRAMID LAKE.

Such are the prominent features of this vast Basin or Table-land, in the interior of our continent, but as it is now separated by legislation from its former territorial adjunct, we shall pass at once to the consideration of the present boundary of California. This, according to the XIIth article of the State Constitution, sanctioned by the act of Congress, commences at the point of intersection of the 42nd degree of north latitude with the 120th degree of longitude west from Greenwich, and runs south, on the line of the 120th degree of longitude until it intersects the 39th degree of north latitude; thence a straight line pursues a south-easterly direction to the River Colorado, at a point where it intersects the 35th degree of north latitude; thence, the boundary runs down the middle of the channel of that river, to the boundary line between the United States and Mexico, as established by the Treaty of Guadalupe Hidalgo; thence, west and along said boundary line to the Pacific Ocean and extending therein three miles; thence, north-westwardly, following the direction of the Pacific coast, to the 42nd degree of north latitude; thence, on the line of the 42nd degree to the place of begining,—including all the islands, harbors, and bays along and adjacent to the Pacific coast.

The superficial area of the State is reduced, according to these boundaries, from the former enormous size, to one hundred and fifty-five thousand five hundred and fifty square miles, or ninety-nine millions five hundred and fifty-two thousand square acres, exclusive of the islands adjacent to the coast.

The noble Empire State thus constructed lies west of the Sierra Nevada, and was wisely fashioned to avoid jurisdiction beyond the mountains. It is strongly contrasted in appearance with the sterility of the Great Basin. Crossing the SIERRA NEVADA at the PASS traversed by Frémont in February 1844, the traveller finds himself about four degrees south of the northern boundary of the State, and, as he looks westward down the slope of the mountains, the whole of California lies at his feet. The declivities of the Sierra, with a breadth of from forty to seventy miles, and a length from north to south of about five hundred, are heavily wooded with oak, pine, cypress and cedar, while innumerable small streams, rising in the melted snows of the lofty peaks, traverse their rugged sides. These rivulets descend through glens and gorges,—sometimes barren, sometimes luxuriant,—until they disgorge themselves into the Sacramento and San Joaquin. The first of these,—rising in the north at the base of the gigantic Shastl which lifts its snowy diadem fourteen thousand feet above the sea,—sweeps southward towards the thirty-eighth degree of latitude; while the second, oozing from the fens and marshes of lake Tulares, runs northward until it mingles with the Sacramento,—when both, swollen by their tributaries from

SIERRA NEVADA PASS.
SIERRA NEVADA PASS.

the Sierra Nevada, are finally discharged into the Pacific by the bay of San Francisco which bursts through a gap in a lower chain of mountains bordering the coast. This western Coast Range, averaging about two thousand feet in height, forms, with the Eastern Sierra Nevada, the intermediate sloping plain or valley which is completely drained by the Sacramento and San Joaquin.

SHASTL PEAK.
SHASTL PEAK.

THE STATE OF CALIFORNIA.

CONTINUED.

CONFIGURATION OF THE STATE—BAY OF SAN FRANCISCO AND CITY—RIVERS OF CALIFORNIA—CHARACTER OF SOIL, ETC.—RELATIVE STERILITY AND

PRODUCTIVENESS—CLIMATE—DRY AND WET SEASONS—CAUSES OF CHANGE—CLIMATE IN SAN FRANCISCO, COAST RANGE VALLEYS AND INTERIOR VALLEY—AREA OF ARABLE AND GRAZING LAND—PRODUCTIONS—DISCOVERY OF GOLD—ITS POSITION—THE PLACERES—WASHING—DIGGING—THE MINES—CALCULATIONS AS TO THE YIELD OF THE MINES—GOLD YIELDED BY CALIFORNIA—ITS QUALITY—QUICKSILVER MINES—COMMERCE—POPULATION—GROWTH OF CITIES—OLD PRESIDIOS—TOWNS—LAND TITLES—MISSION LANDS—CONCLUSION.

THE State of California, as at present formed by its constitution, lies chiefly between the Sierra Nevada and the sea. North and south, it embraces about ten degrees of latitude, from 32°, where it touches the peninsula of Lower California, to 42°, where it bounds on Oregon. East and west, from the Sierra Nevada to the sea, it will average, in the central parts, one hundred and fifty miles, and in the northern, two hundred. The whole State is thus, in truth, a single geographical formation or great valley, though commonly divided into the valleys of San Joaquin and Sacramento—the two great streams which flow from the north and south until they meet near the centre of the State and wend their way to the ocean through the bay of San Francisco.

This beautiful arm of the ocean, which is pronounced by all geographers to be one of the most wonderful harbors in the world, was discovered about 1768 by a party of Franciscan friars, who bestowed upon it the name of their patron Saint. Completely land-locked, it is capable of sheltering the most extended commerce. Approached from the sea, a bold outline of coast scenery is presented to the observer. On the south, the bordering mountains descend in narrow ranges, lashed by the surf of the Pacific. On the north, a bluff promontory rises full three thousand feet above the sea, while, betwixt these points, walled in by lofty cliffs on either side, a narrow strait, about a mile in width and five in length, with a depth in mid channel of forty and forty-five fathoms, forms the Chrysopolæ or Golden Gate. Beyond this, the wonderful bay of San Francisco opens like an inland sea to the right and left, extending in each direction about thirty-four miles, with a length of more than seventy and a coast of two hundred and seventy-five. The interior view of this lake-like estuary is broken in parts by islands, some of which are mere rocky masses, while others, green with vegetation, protrude from the water for three hundred or four hundred feet. The bay is divided by promontories and straits into three portions. At its northern extremity is Whaler's harbor, which communicates by a strait two miles long with San Pablo bay, a circular basin ten miles in diameter; at the northern extremity of this a strait of greater length, called Carquinez, connects with Suissun bay, which is nearly equal in size and shape to San Pablo, and into this bay the confluent waters of the Sacramento and San Joaquin are emptied. A *delta* of twenty-five miles in length, divided into islands by deep channels, connects

the Suissun bay with the valley of these rivers, into whose mouths the tide flows regularly.

On the bay of San Francisco is situated the marvellous city of the same name, which sprang up, almost "in a night," and was constructed of materials quite as frail as those of "the gourd." The town lies about four miles from the narrows or straits by which the bay is entered, on its west side, and on the northern point of the peninsula between the southern portion of the estuary and the Pacific. Its site is in a cove, faced and protected at the distance of two miles by the large island of Yerba Buena. The land rises gradually for more than half a mile from the water's edge, towards the west and south-west, until it terminates in a range of hills five hundred feet above the sea. North of the town is a large bluff, plunging precipitously into the bay, in front of which is the best anchorage.

The most important rivers of California are, of course, the San Joaquin and Sacramento. The San Joaquin, running from south to north, is represented to be navigable in some seasons for a greater part of its length, during eight months of the year. Its chief affluents, lying altogether on its eastern side, and pouring down from the Sierra Nevada, are the Lake Fork, Acumnes, Tuolumne, Stanislaus, Calaveras, Mukelumne, Mariposa and Cosumnes. The Rio Colorado of the West forms part of the eastern State boundary, from the 35th degree of north latitude to the Mexican line, but it flows through a region at present very little known or valued, yet future explorations may show it to be valuable. Its deep colored waters, similar to those of the Missouri and Red rivers east of the mountains, indicate that it probably has not passed through an entirely ungenerous soil. The valley of the Gila, whose waters are clear, is known to be barren.

SCENERY ON THE GILA. SCENERY ON THE GILA.

The Sacramento runs from north to south through an inclined alluvial prairie, and is described as a deep, broad and beautiful stream. It flows through a fine region, and is navigable for vessels of considerable draught as high as the settlements in the neighborhood of Sutter's original location. The principal tributaries of this river, also, originate in the melting snows of the Eastern Sierra, and are known as the Antelope, Deer, Mill and Chico creeks, and the Butte, Dorado, Plumas or Feather, Yuba, Bear and American rivers. Cottonwood creek and some other smaller streams are disgorged into it from the slopes of the

Western or Coast Range. The Trinity and a few at the north, run into the Pacific.

In order to comprehend the agricultural and mineral value of California, it is necessary to glance at the structure of the region. Upon the forty-first parallel of latitude, in a fork of the Sierra

BAY OF SAN FRANCISCO. BAY OF SAN FRANCISCO.

Nevada, is a tract of high table land, about one hundred miles in length, surrounded on all sides by mountains, and called by Frémont the UPPER VALLEY of the Sacramento. Here the growth of timber is vigorous and immense, for the climate and productions are modified by altitude as well as latitude. The Sacramento river, rising in the mountains at its northern extremity, reaches the Lower Valley through a gorge or cañon on the line of Shastl Peak, falling two thousand feet in twenty miles.

The LOWER VALLEY is subdivided, as we have stated, into the valleys of the two great rivers, both of which are, at most, only a few hundred feet above the level of the sea, and gradually slope towards the bay. The *foot hills* of the Sierra Nevada limiting the valleys, make a woodland country diversified with undulating grounds and pretty vales or glens watered by numerous small streams. These afford many advantageous spots for farms, occasionally forming large bottoms of rich, moist land. Below 39° of latitude, and *west* of the *foot hills*, the forests are limited to scattering groves of *oak* in the valleys and on the borders of streams; or, of *red wood* on the ridges and in the gorges. With these exceptions, the whole region presents a surface without shrubbery or trees, though a few hills are shaded by dwarfed and stunted groves which may be used as fuel. California is covered, however, with various kinds of grasses and with wild oats, which grow luxuriantly in the valleys for many miles from the coast, but, ripening early in the season, they soon cease to protect the soil from the sun's scorching rays. As summer advances, the moisture in the atmosphere, and to a considerable depth in the earth, is completely exhausted, and the radiation of heat from the parched plains and naked hill sides becomes insufferable. North of the Bay of San Francisco, between the Sacramento and Joaquin valley and the coast, the country is cut up by mountain ridges and rolling hills, with many fertile, watered valleys. Immediately along the coast, lie open prairies, belted or broken by occasional forests, and interspersed with extensive fields of wild grain. Around the southern arm of the bay, a low, alluvial bottom land,

sometimes overgrown by oaks, borders the western foot of the Coast Range, terminating, on a breadth of thirty miles, in the valley of San José. In this neighborhood, too, is the lovely valley of San Juan, which is probably the garden of the new State. These two valleys form a continuous plain of fifty-five miles in length, and from one to twenty miles in breadth, opening with smaller valleys among the hills. The balmy region, enclosed between the coast range and the lower hills upon the ocean, is blessed with a soil of singular fertility, a fine, dry atmosphere, and a soft, delicious climate. It is wooded with majestic trees, covered with rich grasses, brilliant with an endless variety of flowers, and produces profusely the fruits of the temperate and tropical zones.

South of Point Concepcion the climate and general appearance of the country are changed. From that point the coast bends almost directly east; the face of the country obtains a more southern exposure, and is sheltered by ranges of low mountains or hills from the bleak violence of north-west storms. The climate accordingly is more genial, and fosters a richer variety of productions than is found on the northern coasts.

The valleys parallel with the coast range, as well as those which extend eastwardly in all directions among the hills towards the great plain of the Sacramento, are of unsurpassed fertility. Their soil is a deep, black alluvian, and so porous that it remains perfectly unbroken by gullies, notwithstanding the great quantity of water which falls into it during the wet season. The productiveness of "California," says Frémont in his Memoir on that region, published in 1848, "is greatly modified by the structure of the country, and under this aspect may be considered in three divisions—the *southern*, below Point Concepcion and the Santa Barbara mountain, about latitude 35°; the *northern*, from Cape Mendocino, latitude 41°, to the Oregon boundary; and the *middle*, including the bay and basin of San Francisco and the coast between Point Concepcion and Cape Mendocino. Of these three divisions the rainy season is longest and heaviest in the north, and lightest in the south. Vegetation is governed accordingly—coming with the rains—decaying where they fail. Summer and winter, in our sense of the terms, are not applicable to this part of the country. It is not heat and cold, but wet and dry, which mark the seasons, and the winter months, instead of killing vegetation, revive it. The dry season makes a period of consecutive drought, the only winter in the vegetation of this country, which can hardly be said at any time to cease. In forests, where the soil is sheltered, in low lands of streams and hilly country, where the ground remains moist, grass continues constantly green and flowers bloom in all months of the year.

"In the southern half of the country the long summer drought has rendered

irrigation necessary, and the experience of the missions, in their prosperous day, has shown that, in California, as elsewhere, the dryest plains are made productive, and the heaviest crops yielded by that mode of cultivation. With irrigation a succession of crops may be produced throughout the year."

The peculiarities of the climate of California are so well explained in a letter from the Honorable T. Butler King, that we extract his observations thereon as the most valuable portion of the report made by him to the United States Government in March, 1850.^[82]

"The north-east winds, in their progress across the continent, towards the Pacific ocean, pass over the snow-capped ridges of the Rocky Mountains and the Sierra Nevada, and are of course deprived of all the moisture which can be extracted from them by the low temperature of that region of eternal snow; consequently no moisture can be precipitated from them, in the form of dew or rain, in a higher temperature than that to which they have been subjected. They pass therefore over the hills and plains of California, where the temperature is very high in summer, in a very dry state; and so far from being charged with moisture, they absorb, like a sponge, all that the atmosphere and surface of the earth can yield, until both become, apparently, perfectly dry.

"This process commences when the line of the sun's greatest attraction comes north in summer, bringing with it vast atmospheric movements. Their approach produces the dry season in California, which, governed by these laws, continues until some time after the sun repasses the equator in September, when, about the middle of November, the climate being relieved from these north-east currents of air, the south-west winds set in from the ocean, charged with moisture—the rains commence, and continue to fall, not constantly, as some persons have represented, but with sufficient frequency to designate the period of their continuance, as the *wet season*, from about the middle of November until the middle of May, in the latitude of San Francisco.

"It follows, as a matter of course, that the *dry season* commences first, and continues longest in the southern portions of the Territory, and that the climate of the northern part is influenced in a much less degree by the causes which I have mentioned than any other section of the country. Consequently, we find that as low down as latitude 39° rains are sufficiently frequent in summer to render irrigation quite unnecessary to the perfect maturity of any crop which is suited to the soil and climate.

"There is an extensive ocean current of cold water, which coming from the northern regions of the Pacific, or, perhaps, from the Arctic, flows along the coast of California. It arrives charged with, and in its progress, emits air, which appears in the form of fog when it comes in contact with a higher temperature of the American coast, as the Gulf-stream of the Atlantic exhales vapor when it meets, in any part of its progress, a lower temperature. This current has not been surveyed, and, therefore, its source, temperature, velocity, width, and course, have not been accurately ascertained.

"It is believed by Lieut. Maury, on what he considers sufficient evidence—and no higher authority can be cited—that this current comes from the coasts of China and Japan, flows northwardly to the peninsula of Kamptschatka, and, making a circuit to the eastward, strikes the American coast in about latitude 41° or 42°. It passes thence, southwardly, and finally loses itself in the tropics. * *

"As the summer advances in California, the moisture in the atmosphere and the earth, to a considerable depth, soon becomes exhausted; and the radiation of heat, from the extensive naked plains and hill-sides, is very great.

"The cold, dry currents of air from the north-east, after passing the Rocky Mountains and the Sierra Nevada, descend to the Pacific and absorb the moisture of the atmosphere to a great distance from the land. The cold air from the mountains, and that which accompanies the great ocean current from the north-west, thus become united, and vast banks of fog are generated, which, when driven by the wind, has a penetrating or *cutting* effect on the human skin, much more uncomfortable than would be felt in the humid atmosphere of the Atlantic at a much lower temperature.

"As the sun rises from day to day, week after week, and month after month, in unclouded brightness during the dry season, and pours down his unbroken rays on the dry, unprotected surface of the country, the heat becomes so much greater inland than it is on the ocean, that an under-current of cold air, bringing the fog with it, rushes over the coast-range of hills, and through their numerous passes, towards the interior.

"Every day as the heat, inland, attains a sufficient temperature, the cold, dry wind from the ocean commences to blow. This is usually from eleven to one o'clock; and as the day advances the wind increases and continues to blow till late at night. When the vacuum is filled, or the equilibrium of the atmosphere restored, the wind ceases: a perfect calm prevails until about the same hour the following day, when the process re-commences and progresses as before, and these phenomena are of daily occurrence, with few exceptions, throughout the dry season.

"The cold winds and fogs render the climate at San Francisco, and all along the coast of California, except the extreme southern portion of it, probably more uncomfortable, to those not accustomed to it, in summer than in winter.

"A few miles inland, where the heat of the sun modifies and softens the wind from the ocean, the climate is moderate and delightful. The heat in the middle of the day is not so great as to retard labor, or to render exercise in the open air uncomfortable. The nights are cool and pleasant. This description of climate prevails in all the valleys along the coast-range, and extends throughout the country, north and south, as far eastward as the valley of the Sacramento and San Joaquin. In this vast plain the sea breeze loses its influence, and the degree of heat in the middle of the day, during the summer months, is much greater than is known on the Atlantic coast in the same latitudes. It is dry, however, and probably not more oppressive. On the foot-hills of the Sierra Nevada, and especially in the deep ravines of the streams, the thermometer frequently ranges from 110° to 115° in the shade, during three or four hours of the day, from eleven until three o'clock. In the evening, as the sun declines, the radiation of heat ceases. The cool, dry atmosphere from the mountains spreads over the whole country, and renders the nights fresh and invigorating. * * * * *

"These variations in the climate of California account for the different conflicting opinions and statements respecting it. A stranger arriving at San Francisco in summer, is annoyed by the cold winds and fogs, and pronounces the climate intolerable. A few months will modify if not banish his dislike, and he will not fail to appreciate the beneficial effects of a cool, bracing atmosphere. Those who approach California overland, through the passes of the mountains, find the heat of summer, in the middle of the day, greater than they have been accustomed to, and therefore many complain of it.

"Those who take up their residence in the valleys which are situated between the great plain of the Sacramento and San Joaquin and the coast range of hills, find the climate, especially in the dry season, as healthful and pleasant as it is possible for any climate to be which possesses sufficient heat to mature the cereal grains and edible roots of the temperate zone."^[83]

We have thus obtained from reliable sources, a fair account of the soil, situation and climate of California, with the exception of that portion of the new State lying to the southward and eastward of the Sierra Nevada and the Coast Range, and between those mountains and the Colorado. This district is believed by experienced Californians to be mostly desert; at least, so much of it as lies upon the usual emigrant trail from the Colorado to San Diego, and that which is

further north, in the neighborhood of Frémont's explorations, is known to be of such a character. Elsewhere, however, in the large valley between the two great ranges of the coast and the Sierra Nevada, and in the small lateral valleys that pierce their rugged sides in every direction, are the *arable* lands of California. In a previous part of this notice we have shown that the present boundaries of the State give to her 155,550 square miles of superficial area, or 99,552,000 square acres, exclusive of islands adjacent to the coast. If it be granted that one half of California is covered with mountains and that one fourth is a desert waste, we have still one fourth, or 24,888,000 square acres of arable land left for productive purposes. Messieurs Gwin, Frémont, Wright and Gilbert, in their Memorial already cited, do not hesitate to assert, that, after all due allowances, *three-fifths* of the whole territory, embraced in the State of California, will never be susceptible of cultivation or useful to man. This would leave, as the remaining two-fifths, 62,220 square miles, or 39,820,000 square acres, constituting the total valuable *agricultural and grazing* district, and distributed at intervals over the whole surface within the actual boundaries.^[84]

Such are some of the substantial elements of self-reliance and independence possessed by the new State, exclusive of her precious metallic deposits. The genial soil is well adapted for the growth of those grains which are suitable for European or North American emigrants. Wheat, barley, rye and oats grow abundantly, as well as potatoes, turnips, onions, and all the roots known to our gardeners and farmers. Oats, of the species cultivated in the Atlantic States, are annually *self-sown* on all the plains and hills along the coast, and as far inland as the sea-breeze has a marked influence on the climate. This fact indicates that similar grains may be raised in the same region without resorting to *irrigation*. Apples, pears and peaches may be brought to great perfection under skilful culture. The grape, too, received much attention in former days at the missions and among the villagers, who produced an excellent fruit, the wine of which was abundant and delicious. The fine natural grasses and oats of California, aided greatly in satisfying and perpetuating the nomadic *vaquero* or herdsman, who was the type of the region before the cession to the United States; and it is calculated that the *grazing* grounds in the State are extensive enough to produce many thousand more cattle than will be required annually, for the vast increase of population.

Notwithstanding the union of California with her sister States, and her favorable position for commercial purposes, it is scarcely probable that she

would so soon have assumed almost a national rank, had not a mechanic, named James W. Marshall, who was employed during the latter part of February, 1848, in building a saw mill for Captain John A. Sutter on the south branch of the American Fork or Rio de los Americanos, discovered certain pieces of gold glistening at the bottom of the sluice. In a few days fragments to the amount of one hundred and fifty dollars were removed from the water; and as the news spread among the settlers all over the region, farms, workshops, professions and homes were deserted to explore the promised Dorado.

The results of this accidental discovery are already known all over the world. California has become a centre of attraction for population, wealth and trade. The grand auriferous region which has thus far been examined and partially drained of its deposits, is between four and five hundred miles long, and from forty to fifty broad, following the windings of the Sierra Nevada. New discoveries will doubtless enlarge this area, but the present recognized limits are the hills and lesser ranges rising from the eastern border of the Sacramento and San Joaquin plain, and extending fifty or sixty miles eastward, until they reach an elevation of nearly four thousand feet, where they mingle with the main ridge of the Sierra Nevada. The numerous springs, originating in the snows and rains of the mountain summits, pour down their rugged sides, cutting deep channels or *barrancas* through the *talcose slate*, and even down to the *quartz* of which the *foot hills* are formed. The streams, in creating these gorge-like channels, have come in contact with the quartz containing gold, and, by constant attrition, have cut or ground the metal into fine flakes, scales and dust. The precious deposit is, accordingly, found among the sand and gravel of the river beds at those places where the swiftness of the current reduces it in the dry season to narrow limits, or when the streams may be damed and turned. In other places auriferous quartz has cropped out on the surface of the hills, mountains or gorges, and been worn and smoothed by the action of water. In these positions the gold still remains entire in pieces of all shapes and sizes, from a single grain to lumps weighing several pounds. *Placeres*, or gold locations of this latter character, are styled "the dry diggings," in contradistinction to the "washings" of the streams, and are spread over large valleys which appear to have been subjected to the violent action of water. In the dry diggings the operation of extracting metal is performed by the hand alone or with a pick-axe, hammer and knife; but the fine dust or scale-gold of the river bottoms is rescued from the earth by washing the whole mass in common tin pans, or vessels of every kind that can be substituted. The gyratory motion given to these primitive implements, removes the finest portions of soil; gravel is taken out by the hand, and the gold is left in the vessel

united with a black ferruginous sand not unlike that used at the writing desk. This residuum is left on a board or cloth to dry, when the sand is blown off either by the mouth or a common bellows, leaving the gold whose gravity retains it on the board. Much of the very finest gold is, however, lost with the sand in this rude process. Vast numbers of rough machines resembling cradles, are also used in the business. The rocking of the cradle answers to the gyration of the pan, and as the mud, water and sand escape from one end of the machine through a series of small cross-bars, the coarser particles of gold are retained in the instrument. On the head of the cradle is a common sieve, upon which the auriferous earth is placed; water is then poured on it, and as soon as the machine is set in motion, the gold, sand and dust are carried into the body of the cradle, while the gravel is rejected.

But many experienced Californians do not look to the *placeres* or common gold diggings and washings for the continuation of that prosperity to which they gave birth. For its permanence they rely on the *mines*, whose development has but just commenced. This species of mineral riches lies in that region where the *auriferous quartz* has been discovered of nearly uniform richness, from the 40th to the 35th degree of latitude, upon the waters of the Feather river, and on the American, the Mokelumne, the Mariposa, and the desert upon the south-eastern borders of California, *east* of the Sierra Nevada. In all these localities, within a range of three hundred and fifty miles, it is already known to exist, and the strongest analogy would carry it through the remaining distance. An assay of the *ore* of the Mariposa *mines*, now worked with a Chilian mill, afforded an average yield from washing, of forty cents per pound avoirdupois; and afterwards, by the fine process, produced eighty cents to the pound additional; making one dollar and twenty cents per pound as the average. Other assays exhibit results from *ores* in various sections of California, ranging from twenty-five cents to five dollars per pound, and that, too, in specimens where no gold is visible to the naked eye. Rocks examined even within two miles of San Francisco, have yielded gold to the amount of ten cents per pound. The result at the Mariposa mine has been at the rate of two thousand five hundred dollars for every ton!

These facts, stated upon grave authority, may be regarded as positive information applicable to the whole extent of the *gold producing quartz*. If we apply the results of the working of a British mining company,—The San Juan del Rey,—in Brazil, to these assays and conclusions, we may estimate the consequences upon the destiny of California and of the world. The work of this British company has increased annually for twenty years, and its last report dates on the 1st of March, 1850. In this it is stated that 69,000 tons of *ore* were

crushed and the gold extracted therefrom;—applying this to the average yield of the *mines* in California, the result would be *over one hundred and seventy millions of dollars!*^[85]

Various speculations have been made as to the gross numerical summary of all these discoveries and labors in a broiling sun, in icy streams and under all kinds of privations; yet no definite accuracy can be attained. During the earlier enterprises, California was a country without law or restraint, for, all men, bent upon the single selfish task of greedily gathering gold, resolved society completely into its original elements. Out of the municipalities and villages there were no associations except in small bodies for mutual labor and protection. Severe and certain punishment secured the latter; but it may be reasonably supposed that the collection of statistics was not a duty willingly undertaken by such absorbed individuals. Accordingly, we are not enabled to present more than proximate calculations of the wealth given and promised by California to the human race.

Mr. King supposes, in his report, that during the first season there were not more than 5,000 employed in collecting gold, and that their average gain was one thousand dollars each, or an aggregate of five millions. But, in the season of 1849, the number of explorers increased by the vast influx from every quarter of the world. In July, it was judged that 15,000 foreigners were in the *placers*; and, by the labors of all classes united, the report calculates that the round sum of forty millions was realized during 1848 and 1849, of which *one-half* was *probably taken from the country by foreign adventurers*. Of the forty millions, twenty are estimated to have been gathered from the northern rivers principally, or from those emptying into the Sacramento. The southern rivers, or those voided into the San Joaquin, were, up to that period, comparatively unvisited, and continued so until towards the season's close. There is one river which, from reported discoveries, though not flowing into the great valley west of the Sierra Nevada, is as rich in gold as any other. This is the Trinity, which rises west of the Sacramento's sources, and discharges into the Pacific not far from the fortieth degree of latitude.

As commerce began to reassert her orderly sway in the ports of California, and as gold became again subservient to the true wants of man, more attention was paid to the collection of statistics relative to production and export. The mint of the United States has also enabled us to reach accurate partial results within a more recent period. By a table furnished to Mr. Hunt for publication in his *Merchants' Magazine*, of November, 1850, it appears that the gold dust shipped

on the Pacific Mail Steamers, from 11th April, 1849, to June 1st, 1850, was \$13,329,388; while the following were the receipts at our mints:

RECEIPTS OF CALIFORNIA GOLD AT THE N. ORLEANS AND PHILADELPHIA MINTS.

Year, &c.	At N. Orleans.	At Philadelphia.	Total.
In 1848		\$44,177	\$44,177
Jan. 1st to Aug. 31st 1849	175,918	1,740,620	1,916,538
Aug. 31st to Jan. 1st 1850	489,162	3,740,810	4,229,972
Jan. 1st to Feb. 28th "	938,050	2,974,393	3,912,443
To March 31st "	365,869	1,296,321	1,662,190
March 31st to May 1st "	298,130	1,813,002	2,111,132
May 1st to July 31st "	317,181	6,740,677	7,157,858
Total,	<u>\$2,584,310</u>	<u>\$18,350,000</u>	<u>\$20,934,310</u>

Of this vast total receipt at the two great mints of the country \$17,000,000 were delivered in ten months, being at the rate of more than \$20,000,000 yearly. Since January last, the receipts have been at the rate of \$26,000,000, per annum, and for the last quarter, at the rate of \$32,000,000 per annum, showing a constantly augmenting ratio. Mr. Edelman, accountant of the Philadelphia mint, has prepared an essay to answer the repeated enquiries respecting the general character of California gold and its value by the ounce troy. It appears from his calculations that seven-eighths of all the deposits made at his mint from the commencement of the business until April 1850, exhibit a variation in quality of only fifty-cents per ounce troy, the fineness averaging between 873 $\frac{1}{2}$ thousandths and 898 $\frac{1}{2}$ thousandths. The general fineness of nearly all the gold brought to the mint is 886 thousandths; the flat spangles of the rivers, which bear a small proportion to the mass, averaging 895 thousandths. The alloy detected in this gold is wholly silver tinged with a small quantity of iron, and the removal of the iron, dirt or sand in melting occasions usually a loss in weight of about 3 $\frac{1}{4}$ per cent. If the grains have been cleansed by the magnet the loss is reduced to about 2 $\frac{1}{2}$ per cent., but if they are wet or dampened the loss may raise to even higher than 4 per cent. California gold is regarded as consisting of 995 parts gold and silver in every 1000 parts by weight, which renders it necessary to separate these metals before converting them into coin, for, according to law, the standard national gold is so constituted, that, in 1000 parts by weight, 900 shall be pure gold, and 100 an alloy, compounded of copper and silver.

If the confident representations of travellers, miners, laborers and scientific

men are to be heeded, the California *placers* and mines will continue to yield an increasing ratio of precious metal; but time alone can disclose the degree in which their products will be multiplied. Should they reach \$100,000,000 annually—and they may surpass that amount—the yearly addition to the gold of Europe and America, will be $6\frac{2}{3}$ per cent. on \$1,800,000,000, which is the estimated amount of that metal in those two quarters of the globe. This vast sum more than doubles the past contributions of American mines during the period of their greatest productiveness.^[86]

Gold, however, is not the only important mineral element of California's wealth. Her *quicksilver* mines are believed to be numerous, extensive and valuable. The *cinnabar ore* which produces the quicksilver, lies near the surface, is easily procured and is represented to be remarkably productive. The mine of New Almaden is a few miles from the coast, midway between San Francisco and Monterey, and in one of the ridges of the Sierra Azul. The mouth of this mine is a few yards from the summit of the highest hill that has been found to contain quicksilver, and is about 1,200 feet above the neighboring plain and not much more above the ocean. Its ore-bed seems to be embraced in a greenish talcose rock. By a very rude apparatus the yield on the spot was found to be over fifty per cent. Mr. Charles M. Wetherill of Philadelphia, an accomplished chemist, found the percentage of mercury to be 60, in 123 grains which were submitted to him; and 45 in another parcel containing $61\frac{1}{2}$ grains. Cinnabar ore has been found in about twenty other places within a few miles of this valuable location.

It is asserted that there are extensive veins of silver, iron and copper in California; but there is no information sufficiently accurate to justify a statement of their existence or value.

The commerce of California has of course flourished in proportion to her population and wealth. The aggregate of duties paid on foreign merchandize at San Francisco from the 12th of November 1849 to the 31st of May 1850, was \$755,974. At the date of the information there were in the harbor 623 sailing vessels, 12 steamers; and 140 sail vessels and 8 steamers at Sacramento City, Stockton and other places up the rivers. Of this total of 783 vessels, 120 were foreign and 663 American. The amount of tonnage at San Francisco, was 1,020,476, and 100,000 in towns and cities on the Sacramento and San Joaquin; but of this large sum 800,000 tons at least were unemployed.

The singular history of the unprecedented rise in the value of merchandize or the necessaries of life in California after the discovery of gold, is a chapter full of surprising and fantastical incidents, but our narrowing space denies us the

tempting privilege of recounting it in this volume.

In all these calculations and estimates we must occasionally approach the dangerous domain of speculation, and in this category must we also place most of our information respecting the population and towns of California. Population is of course constantly augmenting under these great temptations for the rapid accumulation of fortune; yet with society in such a transition state, the true ratios or numbers of actual increase cannot be accurately obtained.

According to Baron Humboldt the population of Upper California consisted in 1802, of 7,945 males and 7,617 females, or, 15,562 individuals attached to the eighteen missions. All other classes whether whites, mestizos, or mixed castes, either in the Presidios or in the service of the Monks, were estimated at 1,300. This calculation would make the whole population, at that time, exclusive of wild Indians, 16,862. In 1831, the number of missions had increased to twenty-one, and their Indian neophytes were 18,683; all other classes in the garrisons and among the free settlers amounted to 4,342, making a total of 23,045; nor is it probable that this number was much augmented until after the cession and subsequent discoveries. At present it is quite impossible to calculate closely the wild Indians of miserable, debased tribes found in the mountains, whose numbers are variously stated by travellers and writers at 100,000, and 300,000. In the memorial of the California Representatives, already cited, the population on the 1st of January, 1849 is stated at 13,000 Californians, (which is probably too low a number,) 8,000 Americans, and 5,000 foreigners, or 26,000, in all. From that date to the 11th April, the arrivals from sea and by land were judged to be 8,000, while, according to the Harbor Masters' Record at San Francisco, 22,069 Americans and 7,000 foreigners arrived there from sea, between the 12th of April and the 31st of December 1849. Of these 28,269 were males, and only 800 *women*! In addition to the immigration by sea at this single port, it may be presumed that not less than 1,000 individuals landed elsewhere in California during the same period. By Santa Fé and the Gila nearly 8,000 entered the country. From Mexico 6,000 or 8,000 were supposed to have come, though only about 2,000 remained in the territory. Adding to these amounts 3,000 deserting sailors, and computing the overland immigration at 25,000, we have 107,000 inhabitants in California on the 1st of January 1850. It would probably not be unsafe to add fifty thousand for the immigration of the current year, so as to give the new State at least 150,000 citizens in January 1851.

As gold and people increased so miraculously, the tents and encampments of the adventurers gave place to houses and towns whose materials and

construction were almost as frail. When the precious metal became abundant, *land* of course quickly grew into speculative importance and value. Men who disliked the toil of draining gold from the rivers or digging it among rocks, resorted to the *easier mines* of their own ingenuity, and, obtaining titles to advantageous locations near the great rivers, or, on important bays and straits, laid out magnificent plans for the gorgeous cities of the Pacific Empire. The list of some of these "Cities," given in a note at the bottom of the page, comprises the leading locations north of San Francisco and on the routes to the principal *placers*.^[87] Some of these towns, and probably many more, will prosper permanently because they are admirably situated to aid in the development of the interior of the great valley of the Sacramento and San Joaquin. If this valley is to be annually deluged and converted into a lake, as it was last year during the rainy season, the *agricultural* prosperity of California must be seriously affected, and the rising cities will probably suffer with it, unless the *placers* and the *mines* shall continue to pour their bountiful supplies into the hands of all who seek them.

The old Spanish and Mexican towns and villages, will in all likelihood continue to assert their importance. The chief of these are the ancient Presidences or Presidios of San Francisco, Monterey, Santa Barbara and San Diego. In all of these, Europeans and Americans are already establishing themselves as residents who desire to make California their permanent home. The old *pueblos* of Los Angeles, situated about eight miles from the mission site of San Gabriel;—of San José about fifteen or twenty leagues from the bay of San Francisco, near Santa Clara;—and of Branciforte about a mile from the mission of Santa Cruz, and a mile and a half from the bay of Monterey,—are still in existence, and having been built on well selected sites, may flourish long after the fragile castles erected in the golden region have passed away like the scenery of a drama. The Monks, every where, possessed an instinctive sagacity for nestling in the best locations, and time will doubtless do justice to their discretion in California.

The increased value of land of course indicated to our government the necessity of promptly examining the titles of property in California; and accordingly, Mr. W. Carey Jones, a lawyer accomplished in the Civil and Spanish laws, was despatched thither by the authorities in Washington, to examine the grants from the Spanish and Mexican governments. His full, learned, and satisfactory report has been published by congress, and declares that these grants are mostly perfect titles, or have unquestionably the same *equity* as those that are perfect.^[88]

All the grants of land in California, except *pueblo* or village lots and some grants north of the bay of San Francisco, subsequent to the independence of Mexico, and after the establishment of that government in California, were made by the different political governors. These personages possessed the exclusive faculty of making grants of eleven leagues or *sitios* to *individuals*, which were valid when sanctioned by the Territorial Deputation; but colonization grants to *Empresarios* or contractors, required the sanction of the Supreme National Authorities.

The supposition, usually entertained, that the mission lands were grants held as the actual fee-simple property of the church, or of the mission establishments as corporations, is entirely erroneous. All the missions in Upper California, established under the direction of the Spanish Viceroyal Government and partly at its expense, never had any other right than that of occupation and use, the whole property being either resumable or otherwise disposable, at the will of the crown or its representatives. The right of the Supreme Powers to remodel these establishments at pleasure, and convert them into towns and villages, subject to the known policy and law which governed settlements of that kind, was a fundamental principle controlling them from the beginning.

After the secularization of the missions the principal part of the church lands were cut off by private grants. Some of them still retain a portion of their original territory, but others have been converted either into villages and subsequently granted in the usual form in lots to individuals and heads of families, or have become private property. A few are either absolutely at our government's disposal now, or, being rented at present for a term of years, will become so when the tenant's contracts expire.

The gold of California is a modern disclosure, though, probably, it is not altogether a modern discovery. There are documents in existence which show

that it was known to the Mexican government; and, as far back as 1790, a certain Captain Shelvocke obtained in one of the ports, a black mould which appeared to be mingled with golden dust. Specimens of California gold were exhibited privately by the authorities in the city of Mexico not long before the late war; and a memoir prepared by the congressional representative, imparts the fact that it had been taken in considerable quantities from *placeras* in the neighborhood of Los Angeles. It is very likely that the rulers of the Mexican Republic were not anxious to add to the allurements which were already enticing our people to her distant province, and silence was therefore preserved in relation to its mineral wealth.

California has, at least, illustrated one great moral truth which the avaricious world required to be taught. When men were starving though weighed down with gold,—when all the necessaries of life rose to twice, thrice, tenfold, and even fifty or a hundred times their value in the Atlantic States,—that distant province demonstrated the intrinsic worthlessness of the coveted ore, and the permanent value of every thing produced by genuine industry and labor. It is to be hoped, therefore, that the new State will not degenerate into a mere mining country, or be forever a prey to that feverish excitement in the pursuit of sudden wealth which is fed or frustrated by the contemptible accidents of luck.

The rapid development of the country is almost unparalleled in national history; and now that a substantial government and union with our confederacy are secured, it remains to be seen how the social problem of California will be solved, and whether it possesses any other elements than those of gold and men for the creation of a great maritime State on the shores of the Pacific. Wonderful order has been preserved in spite of the anomalous condition of the immigrants; yet refined woman must be content to cast her lot in that remote but romantic region, and, by her benign influence, soften, enlighten, and regulate a society which is formed almost exclusively of men. In the course of time steam will open rapid communications with the east, and travellers will not be compelled to pass either the desert or those more southern regions where the mouldering ruins of Casas Grandes denote the ancient seat of Indian civilization. The iron bands of railways, the metallic wires of the telegraph, and the gold of California will then bind the whole grand empire of the west in a union, which social sympathies, commercial interests, national policy, and a glorious history will make everlasting.

T H E E N D.

RUINS OF A CASA GRANDE.
RUINS OF A CASA GRANDE.

APPENDIX.

METEOROLOGICAL OBSERVATIONS IN
CALIFORNIA

Mr. T. Butler King was furnished by Surgeon General Lawson, United States Army, with the following thermometrical observations:

At San Francisco, by Assistant Surgeon W. C. Parker, for six months, embracing the last quarter of 1847, and the first quarter of 1848. The monthly mean temperature was as follows: October, 57°; November, 49°; December, 50°; January, 49°; February, 50°; March, 51°.

At Monterey, in latitude 36° 38' north, and longitude 121° west, on the coast, about one degree and a half south of San Francisco, by Assistant Surgeon W. S. King, for seven months, from May to November inclusive. The monthly mean temperature was: May, 56°; June, 59°; July, 62°; August, 59°; September, 58°; October, 60°; November, 56°.

At Los Angeles, latitude 34° 7', longitude west 118° 7', by Assistant Surgeon John S. Griffin, for ten months, from June, 1847, to March, 1848, inclusive. The monthly mean temperature was: June, 73°; July, 74°; August, 75°; September, 75°; October, 69°; November, 59°; December 60°; January, 58°; February, 55°; March, 58°. This place is about forty miles from the coast.

At San Diego, latitude 32° 45', longitude west 117° 11', by Assistant Surgeon J. D. Summers, for the following three months of 1849, viz: July, monthly mean temperature, 71°; August, 75°; September, 70°.

At Suttersville, on the Sacramento river, latitude 38° 32' north, longitude west 121° 34', by Assistant Surgeon R. Murray, for the following months of 1849. July, monthly mean temperature 73°; August, 70°; September, 65°; October, 65°.

These observations show a remarkably high temperature at San Francisco during the six months from October to March, inclusive; a variation of only eight degrees in the monthly mean, and a mean temperature for the six months of fifty-one degrees.

At Monterey we find the mean monthly temperature from May to November, inclusive, varying only six degrees, and the mean temperature of the seven

months to have been 58°. If we take the three summer months the mean heat was 60°. The mean of the three winter months was a little over 49°; showing a mean difference, on that part of the coast, of only 11° between summer and winter.

The mean temperature of San Francisco, for the three winter months, was precisely the same as at Monterey—a little over 49°.

As these cities are only about one degree and a half distant from each other, and both situated near the ocean, the temperature at both, in summer, may very reasonably be supposed to be as nearly similar as the thermometer shows it to be in winter.

The mean temperature of July, August, and September, at San Diego, only 3° 53′ south of Monterey, was 72°. The mean temperature of the same months at Monterey was a little over 59°; showing a mean difference of 13°.

At Los Angeles, 40 miles distant from the coast, mean temperature for the three summer months was 74°; of the three autumn months, 67°; and three winter months, 57°. At Suttersville, 130 miles from the sea, and 4° north of Los Angeles, mean temperature of August, September and October, was 67°. Mean temperature of same months at Monterey, 59°; making a difference of 8° between the coast and the interior, on nearly the same parallel of latitude.

APPENDIX No. 2.

The following statement of the amount of California gold deposited at all the United States Mints, comprising those of Philadelphia, New Orleans, Charlotte, and Dahlonega, from the opening of the mines, or discovery of the metal, until the 30th of the month of September, 1851, is taken from the memoranda of Robt. Patterson, Esq., of Philadelphia, son of the late Director of the Mint.

	Philadelphia.	New Orleans.	Charlotte.	Dahlonega.	Tot
For the year 1848	44,177	1,124			4
" " " 1849	5,481,439	669,921			6,15
" " " 1850	31,667,505	4,575,567		30,025	36,27
9 months of 1851	31,300,105	6,310,462	12,805	70,925	37,69
Totals	\$68,493,226	\$11,557,074	\$12,805	\$100,950	\$80,16

The total production of California gold since its discovery is doubtless over one hundred millions of dollars in value, which, according to official data in my possession, is equal to nearly one half the total coinage of this country in gold,

silver, and copper, since its separation from Great Britain. To the \$80,164,055 received at the U. S. Mints, as shown above, must be added large amounts received here, and consumed by jewellers, dentists, &c.; considerable amounts shipped from San Francisco directly to other countries; the gold coinage and circulation in California itself, including the \$50 pieces stamped by the U. S. Assayer; the shipments received here since the 1st of October, amounting, in New York alone, to about \$5,000,000, and all the gold dust now in the hands of miners and merchants on the Pacific side. It will be a fair estimate, therefore, to set down the entire production, up to the close of 1851, at \$120,000,000, at least.

FOOTNOTES:

[1] Mühlentfordt—Die Republik Mexico: Hanover, 1844, 2 vols.

[2] Ward, vol. 1, p. 7.

[3] Folsom's Mexico in 1842, p. 29.

[4] See maps and tables of areas of the several states of our Union accompanying the President's message of December, 1848.

[5] The high table land of Mexico which we have described, is said to owe its present form to the circumstance that an ancient system of valleys in a chain of granitic mountains, has been filled up to the height of many thousand feet with various volcanic products. Five active volcanos traverse Mexico from *west to east*,—Tuxtla, Orizaba, Popocatepetl, Jorullo, and Colima. Jorulla which is in the centre of the great platform is no less than one hundred and twenty miles from the nearest ocean, which is an important circumstance, showing that proximity to the sea is not a necessary condition although certainly a very general characteristic of the position of active volcanos. If the line which connects these five volcanic vents in Mexico be prolonged westerly, it cuts the volcanic group in the Pacific called the group of Revilla-Gigedo.—Lyell's Geology, American edition, vol. I, p. 294.

[6] See Tschudi's Peru—American Edition, p. 80, and Mühlentfordt—Die Republik Mejico, vol. 1;—Indians.

[7] It is just to Mexico to state that Cortina, in the article previously referred to, estimates the number of persons able to read and write, to be much larger; but his calculations are doubtless made with the partiality of a native, and are based on a limited observation of city life, the army and municipal prisons.

[8] The cholera ravaged Mexico this year, and consequently it would be unfair to use the deaths as a basis of calculation at that period.

[9] See Boletin No. 1, del Instituto Nacional de Geografia y Estadistica, Mejico, 1839.

[10] Ward's Mexico in 1827, vol. 1, p. 55.

[11] "*La propriété c'est le vol.*" Prudhon.

[12] Humboldt, Essai Politique, Book iv., chap. ii.—Paris, 1811.

[13] See Humboldt's essay on the production of gold and silver in the Journal des Economistes for March, April and May, 1838.

[14] See Humboldt's Essay on Precious Metals, *ut antea*—in note—in the American translation, given in vol. iii., of the Banker's Magazine, p. 509.

[15] See Ranke: Fursten and Volker, vol. i., pp. 347, 355.

[16] Pet. Mart. Epist. lib. xxix., No. 556, 23d January, 1516.

[17] See M. Ternaux-Compans' Original Memoirs of the discovery of America—(Conquest of Mexico, p. 451)—Compans publishes in this, for the first time, an official list sent between 1522 and 1587 by the viceroys of New Spain to the mother country. The PESOS of gold, must be multiplied by a mean of eleven dollars and sixty-five cents in order to give their value in dollars. See Banker's Magazine, ut antea, p. 594, in note. See Prescott's History of the Conquest of Mexico, vol. i., 320. Raminez, in his notes on the Spanish translation of Prescott's History of the Conquest rates the *peso de oro* at two dollars and ninety-three cents. This result is reached by a long financial calculation and course of reasoning. See La Conquista de Mejico, vol. ii., at p. 89 of the notes at the end of the volume.

[18] This is Humboldt's estimate in the essay cited in this section. We think it rather too large, yet give it upon such high authority. See our general table of Mexican coinage.

[19] Ward's Mexico in 1827, vol. ii, p. 151.

[20] Ward, ut antea.

[21] See report of the Mexican Minister of Foreign Relations for 1846, at page 139, of *Documentos Justificativos*.

[22] These calculations are made in dollars, *reales*, or pieces of the value of 12½ cents, and *medios*, or pieces of the value of 6¼ cents.

[23] The actual coinage of all the mints in the republic in 1844 amounted, in fact, to the sum of \$13,732,861; but we assume \$14,000,000 as a fair annual average for a period of several years.

[24] Zavala's Historia de las Revoluciones de Mejico. Tomo 1.

[25] The cultivation of cotton is a branch of agriculture of almost marvellous increase. Mr. Burke, a member of our congress, from South Carolina, in 1789, when speaking of southern agriculture, remarked that "cotton was likewise in *contemplation*." During the last quarter of the eighteenth century, when 7012 bags of the article were imported into Liverpool a perfect panic was produced by so unusual a supply, at present 150,000 bags may reach a single port without greatly affecting the price. In 1791 the whole United States produced only two millions of pounds, whilst in 1848, the Commissioner of Patents calculated the whole crop at 1,066,000,000 lbs.

[26] Whilst these pages are passing through the press information has been received from the Mexican gazettes that in 1846 there were sixty-two cotton factories for spinning and weaving, and five for manufacturing woollens;—that the first mentioned have been greatly improved by the introduction of the best kinds of machinery, and that two *new* factories for woollens have been set in operation in the state of Mexico, which produce cloths and cassimeres that are eagerly purchased by the best classes. The cost of these fabrics is not mentioned, but it is probably fifty per cent. higher than if manufactured in the United States.

[27] Mejico in 1842 by del Rivero. Madrid, 1844.

[28] See Otero Cuestion Social y Politica de Mejico, pp. 38, 39, 43.

[29] Mexico as it Was and Is, p. 329.

[30] Rivero, Mejico in 1842, p. 130.

[31] Norman's Rambles in Yucatan, p. 32.

[32] *ib.* p. 91.

[33] Stephens' Travels in Yucatan, vol. 2, page 115.

[34] Forbes's California, p. 215.

[35] Zavala, Rev. de Mejico, vol. 1, pp. 14, 25.

[36] See Mayer's Mexico as it Was and as it Is, 1844; and the review of it by the Rev. Mr. Verot,

in the United States Catholic Magazine for March, 1844: See also the reply entitled Romanism in Mexico, published in Baltimore in the same year.

[37] We trust that it will not be regarded as levity if we relate an anecdote which shows that the church *has* contributed to the money if not to the wealth of the country, in years past, in a most unexampled manner. It will be recollected that in the historical part of this work there is an account of the mode in which a large revenue was derived by the government from the sale of Bulls issued by the church permitting the people a variety of indulgences and acts which, without the possession of such a document, were not allowed by the spiritual laws of Rome, or the temporal laws of Spain. Immense packages of these Bulls were found in the treasury after the revolution, and, when it became necessary for the government to issue a temporary *paper money*, the financiers of the nation thought it a wise stroke to make these Bulls at once a license of indulgence to the holder, and a security against counterfeiters. Accordingly they printed the government notes on the blank back of the Bulls, which had been sent from Spain to supply her revenue. One of these treasury notes, now before us, measures twelve inches in length by nine in breadth, and promises to pay two dollars. The Bull upon which it is printed is an indulgence, valued at "two coined silver reals," or, twenty-five cents, allowing the possessor to eat "wholesome meat, eggs and milk," during lent and on fast days.

[38] Mexico as it was and as it is, p. 269.

[39] See vol. 1, pages

[40] Lerdo, Consideraciones, &c., &c., p. 42.

[41] Lerdo, Consideraciones, p. 46, 47.

[42] Lerdo 43.—Cuevas's memoir of 1849, as Mexican Minister of Foreign and Domestic relations, p. 29 of American translation.

[43] It will scarcely be credited, but such is nevertheless the fact, that it was once seriously contemplated in Mexico to deny the right of sepulture to all strangers who were not Catholics, and that the point was only overruled by an ingenious liberalist, who contended that it was certainly healthier for the living Catholics that the dead *heretic* should rot beneath the ground, than taint the atmosphere by decaying above it! The priests have constantly and violently opposed marriages between Mexicans and foreigners, unless they were Catholics.

[44] Bacalar, Campeché, Ichmul or Izamal, Isla de Carmen, Jequetchacan, Junoma, Lerma, Mama, Merida, Oxhuscab, Seyba, Playa, Sotula, Tizizimin, and Valladolid. These are the names of the Departments given by Mühlenpfordt: the first table is taken from Stephens.

[45] Our table of population on page 43 of this volume, adds about 10 per cent to this number to give the population estimated in 1850.

[46] See Senator Cass' speech, on the proposed occupation of Yucatan, in the Senate, May 10th, 1848, p. 7.

[47] See Stephens's Incidents of Travel in Central America, Chiapas and Yucatan, vol. 2, chapter xxvi; and his Incidents of Travel in Yucatan, vol. 2, page 444.

[48] Transactions American Ethnological Society, vol. 1, page 104, and Stephens's Yucatan, vol. 1, page 434.

[49] This year was remarkable for its dryness and the loss of cattle on the coasts in consequence.

[50] In this year the observations include only ten months.

[51] It will be seen hereafter that expeditions subsequent to Humboldt's calculation give Popocatepetl a height of 17,884 feet.

[52] See Mosaico Mejicano.

[53] See Museo Mejicano, vol. 2, p. 465, for a plate of this temple.

[54] See Museo Mejicano, vol. 3d, p. 329, for lithographic sketches of the palace and temple, and

their monuments. See also vol. 1st of the same work, p. 401; and vol. 3d id., p. 135, for descriptions of Zapotec remains; and vol. 1st id., p. 246, for an imperfect account of military remains, fortifications, &c. &c., near Guiengola, near Tehuantepec.

[55] This peak which is visible from Mexico, has been thus denominated in honor of Mr. William Glennie, who was the chief promoter of the expedition.

[56] See page 179, vol. I

[57] See chapter on the agriculture of Mexico for more extended notices of the character of the valley of Cuernavaca.

[58] Muhlenpfordt, vol. 2, p. 294.

[59] See also, "Mexico as it was and as it is"—p. 63, for a full account of the ceremonies of the Collegiate church, and of Archbishop Lorenzani's sermon, preached in 1760, confirming the miraculous history.

[60] The Indian not being able to point out the precise spot, a fountain gushed from the ground and indicated it.

[61] This armor and patent of nobility, were offered to the author of this work in 1842, before they were purchased by the government, for one hundred and forty dollars, and, at his recommendation, they were tendered, as a first choice, to the national authorities who bought them.

[62] The waters of the lake, it will be recollected, have fallen greatly since the conquest.

[63] The reader will find an interesting account in Spanish, of the residence of Nezahualcoyotl at Tescocingo, extracted from Ixtlilxochitl's history of the Chichimecas, in the third volume of Prescott's History of the Conquest of Mexico, page 430. The hill or mountain described in this section, is doubtless the same one referred to by the Indian historian; and it is to the Vandalism of Fray Zumarraga, the archbishop, that we are indebted for the destruction of one of the most graceful and elegant monuments of Indian civilization.

[64] See Scrope on Volcanoes, p. 267.

[65] Leonhard and Brown's Neues Jarbuch, 1835, p. 36. See Lyell's Geol., Am. Ed., 1 vol., p. 345.

[66] Mühlenpfordt.

[67] The writings of Clavigero, Solis, Bernal Dias, and others describe this mode of disposing of the bodies of those whose hearts had been torn out and offered to the idol.

[68] Ward assigns Catorcé an elevation of *over* 7,760 feet. The statement given in the present work is on the more recent authority of Muhlenpfordt.

[69] Dr. Wislizenius's Memoir, &c., &c., 1848, p. 41.

[70] See Humboldt's Views of Nature, London edition, 1850, p. 208, and Dr. Wislizenius's Profiles of the country in his Memoir on New Mexico, &c., &c.

[71] See Dr. Wislizenius's Memoir, &c., &c. p. 141.

[72] We have used the full account given by Dr. Wislizenius, with but slight alterations of his language, because it is the most complete, consistent and satisfactory that we have encountered in our researches. We could neither improve its method or condense its matter. He is a close observer; an accurate thinker; an industrious traveller, and relates always from his personal observation.

[73] There are no negroes in New Mexico, and consequently neither *mulattos* nor *zambos*. The fatal epidemic fever of a typhoid character that ravaged the whole province from 1837 to 1839, and the small pox in 1840, carried off nearly ten per cent. of the population.

[74] See Gregg's Commerce of the Prairies, vol. i., p. 113.

[75] See Gregg, vol. i., chapter vii.

[76] Gregg, vol. ii., p. 160.

[77] The roads by Gen. Kearney's and by Brevet Lieut. Col. Cooke's routes leave the Rio Grande for California some fifteen or twenty miles below the ford at Valverde; the former just opposite, and the latter below a point on the left bank of the river known as San Diego.

[78] See vol. ii., page 137.

[79] Forbes's California, p. 202.

[80] Gwin, Frémont, Wright and Gilbert: Memorial to Congress accompanying the Constitution of California, 12 March, 1850.

[81] See the admirable "Paper upon California" read by that accomplished scholar J. Morrison Harris, before the Maryland Historical Society in March 1849. It has been published and forms, in the estimation of competent judges, the best resumé and most philosophical disquisition upon California that has been hitherto issued from the press.

[82] See T. B. King's Report on California, Ex. Doc. No. 59, 31 Cong. 1st sess.

[83] See appendix at end of vol. for Meteorological Observations in California.

[84] See Debates on the California Convention: Appendix p. xx.

[85] See Senator Frémont's speech. Debates in Senate of U. States on Friday, 20th September, 1850.

[86] Article by the Hon. Professor Tucker, Hunt's Magazine, July, 1850, p. 25:—See Appendix No. 2.

[87] Fremont, a town laid out by Jonas Spect, on the west bank of the Sacramento river, opposite the mouth of Feather river; Vernon, east bank of the Feather river, at its confluence with the Sacramento; Boston, on the north bank of the Rio Americano, a few miles above its confluence with the Sacramento; Sacramento City, on the site of the celebrated Sutter's Fort; Sutter City, on the east bank of the Sacramento, a few miles below Sacramento City; Webster, on the east bank of Sacramento river, nine miles below Sacramento City; Suisun, on the west bank of the Rio Sacramento, 80 miles from San Francisco; Tuolumne City, at the head of navigation of the Tuolumne river; Stanislaus, on the north bank of the Stanislaus river; Stockton, situated on a slough, or sloughs, which contain the back waters formed by the junction of the Sacramento and San Joaquin; New York upon the Pacific, located at the mouth of the San Joaquin; Benecia, on the Straits of Carquinez, 35 miles from the ocean; Martinez, opposite Benecia; Napa, on the banks of the Napa creek, 40 miles north of San Francisco; Sonoma, in the valley of the same name, three miles from the Sonoma creek; St. Louis, on the Sonoma creek; San Rafael, on the north side of the Bay of San Francisco; Saucelito, on the Bay of San Francisco, at the entrance of the harbor.

[88] Report upon the land titles of California by W. Carey Jones—Washington 1850.

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