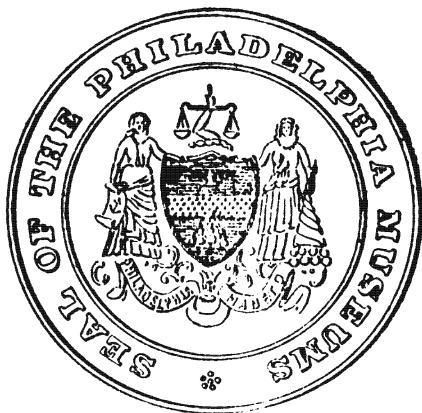


1235
116

THE STATE OF NICARAGUA

OF THE
GREATER REPUBLIC
OF
CENTRAL AMERICA



BY
GUSTAVO NIEDERLEIN

CHIEF OF THE SCIENTIFIC DEPARTMENT OF THE PHILADELPHIA MUSEUMS

PHILADELPHIA
1898

THE PHILADELPHIA COMMERCIAL MUSEUM

F
1523
.N66
1898a

Introduction.

THIS monograph treats of the topography, geology, mineral wealth and soils of Nicaragua; it describes its climate, and presents the details of its flora and fauna with reference to their economic value; it displays the distribution of Nicaraguan population according to race, wealth, communities and social conditions; it examines the agricultural development of the State including its live stock and forests; and, finally, it recounts the most important features of its commerce, industry, finance, and of its economic and political conditions.

It is made up of observations and studies pursued in 1897 and 1898, during seven and a half months of economic and scientific explorations in Central America, and of facts garnered with care from authoritative manuscripts, books and official documents and publications. Respect has been shown to the work of men of originality in research and thought, and care has been taken to adhere closely to the original text when either quoting or translating.

The State of Nicaragua.

I.

TOPOGRAPHY, GEOLOGY AND MINERAL WEALTH.

Nicaragua lies between $10^{\circ} 45'$ and $15^{\circ} 10'$ north latitude, and between $83^{\circ} 11'$ and $87^{\circ} 38'$ west longitude from Greenwich. This territory forms a regular triangle, with about 123,950 sq. km., or 40,000 sq. miles of surface. The Atlantic coast line is 707 km. (or 442 miles) and the Pacific coast line 418 km. (or 261 miles) in length. For navigation purposes, however, there are only 539 km. (or 337 miles) in the Atlantic Ocean and 335 (or 209 miles) in the Pacific. The boundary line between it and Costa Rica runs along the San Juan River as far as San Carlos, thence, but two miles distant along the river course and around the southern shore of Nicaragua Lake to the Rio Sapoa, and from there to the Bay of Salinas. Honduras lies on the north. Nicaragua possesses a few islands in the Caribbean Sea and two small ones in the Pacific.

Topographically Nicaragua is composed of the terrace-lands of the north, of the low plains of the lakes with a distinct line of volcanoes, and of the mountain-lands of Managua, Granada and Rivas between the lakes and the Pacific Ocean. Seen from the Pacific, Nicaragua presents four distinct lines, namely: the low coast, the mountain-ridge rising between that coast and the lakes, which is also the water-shed between the

Pacific and Atlantic Oceans, the line of volcanoes, and the Cordilleras los Andes in the distant east.

This description follows, for the most part, the manuscript of Dr. Bruno Mierisch, a thoroughly educated scientist, whose opinions are based on closely observed facts of extensive travel in Nicaragua for geological and mineralogical purposes.

The terrace-lands of the north occupy about two-thirds of Nicaragua. Towards the low plains of the lakes they end abruptly, and their escarped face appears as a great mountain wall with deep valleys cut through it. Towards the north they shade off gradually into the mountains and plateaux of Honduras. Towards the east they slope gently down to the Atlantic coast, with a number of spurs lying between the rivers.

These highlands are here simply the continuations of the great Central-American Andes plateau, from which in Nicaragua in an earlier epoch a broad strip broke and went down into the Pacific depths. The first step of the terrace-lands is in the south—a broad strip of “llanos” about a thousand feet above the level of the sea; in the west are the “llanos” of San Lorenzo, then the plains of San Isidro, Sébaco, Calabazo, etc.; in the east are the highlands of Chontales. They do not form a single plain, but are crossed here and there by low ridges and hills, which separate them into a number of districts. The southern limit of these lands is a low wall sloping abruptly toward the low plains of the lakes, and forming the so-called mountains of Chontales, Matagalpa and Nueva Segovia, with an average height of 1,500 feet above the sea, only surpassed by a few separate mountains, like the mountain of Guisasil, whose summit reaches 4,000 feet.

Toward the north of these first terraces there are similar dividing mountain-walls by which ascent is made to the higher terraces. These mountain-ridges also rise abruptly, but considerably higher from the “llanos” than the others do from the lake plains. In Chontales they run parallel to the southern line from El Castillo Viejo to La Libertad. Here they take a northwest direction until they cross the Rio Grande near the mouth of Olama, thence they go west be-

tween Matagalpa and Jinotega, where they divide, one branch going westward to Esteli, Pueblo Nuevo and Somoto Grande, while the other trends northward toward Pantasma, following the Coco River to its junction with the Bodega and finally making its way to Jalapa and Honduras. ^{Poteca}

Between these two branches lie the "llanos" of Jinotega, Esteli and Ocotal, having an average height of 3,000 feet. Toward Honduras, as already stated, these plateaux mingle with the highlands of that country. Toward the Atlantic Ocean these mountain-ridges, called Cordilleras de los Andes, and sometimes attaining a height from 4,000 to 6,000 feet, descend gradually, forming secondary systems of ridges or spurs which are the water-sheds between rivers. Such water-sheds are to be found between the Tooma and Matagalpa Rivers; between the Tooma and Coco, between the Rio Grande and the Mico or Bluefields, and between this and the Rama Inferior.

The ridge between the Tooma and Coco Rivers is an important mountain system called Pis-Pis, having an altitude of about 1,000 feet above the sea, and recently known for the gold found there.

From this point the following rivers take their origin and flow in different directions, with lower water-sheds between, namely the Bocay flowing toward the northwest, the Rio ^{Wasapuc} Vaspuc towards north-northeast, the Rio Cuculaia easterly, and the Prinzipolca with the Banbana to the south-east.

On these secondary ridges, which separate from the Andes chain like ribs, there are mountains of tertiary volcanic origin, as, for instance, the Cerro de Trapiche and Cerro de Musun (of andesite formation), in Matagalpa; and the mountains of Salai and Hiyas (of andesite and basalt), in Prinzipolca. Some mountains, as the Peña Blanca in the northeast of Jinotega, are also apparently of recent volcanic origin. All the eastern mountains descend gently to the Atlantic coast. A few chains of hills reach this ocean shore, like the Punta Mico or Monkey Point, which forms an excellent seaport about 60 or 70 miles north of the proposed entrance of the Nicaragua Canal.

As the lowlands of the Atlantic coast form a considerable margin, all the great rivers are navigable by steamers for a long distance, as the Rama or Bluefields, with a course of 220 miles, as far as Rama; the Rio Grande, with a course of 280 miles, beyond the boundary of the Department of Zelaya; the Prinzapolca as far as Yoya; the Cuculaia as far as Ungui; the Waua River as far as Saw Mill; and the Coco River, with a course of 350 miles, as far as Quisalala. However, the rivers along the Atlantic coast silt up badly and form bars at their mouths. The mouth of the Coco has sometimes no more than three feet of water on the bar, those of the Waua and of the Rio Grande six feet, and that of the Bluefields twelve feet. Another obstacle to continuous navigation in some rivers is the enormous fluctuation in the volume of their waters, corresponding to the rainfalls and to the seasons.

The low plains of the lakes, the second great topographical division of Nicaragua, spread like a broad tongue between the Cordilleras and the Pacific coast range, and include the eastern shore of the great lakes with a continuation down the San Juan River to the Atlantic Ocean. They are nearly flat with deep river valleys, and are separated into two parts by a line of volcanoes. This remarkable line of separate volcanoes may have had its origin in the breaking, in its entire length and about its central portion, of the immense falling mass of land which was formerly a part of the Central American Andes plateau, and in opening to volcanic energy a way to the surface for tremendous eruptions.

This line of volcanoes commences in the Gulf of Fonseca, which is a continuation of this remarkable region. It comprises the Coseguina, rising 3,835 feet above the sea, and which in 1835 made an eruption covering with volcanic dust an area of 1,500 miles, reaching as far as the Island of Jamaica; the Chonco and the Viejo (6,266 feet high), which are in the Department of Chinandega; the Santa Clara, Telica (4,190 feet), Orota (2,685 feet) and Las Pilas (3,985 feet), all in the Department of Leon; Asososca, Momotombo (6,121 feet), in the Department of Managua, and active in 1852; Momotombito and Masaya (2,972 feet), which was built up anew about a cen-

tury ago, and underwent a large eruption in 1858, in the Department of Masaya; Mombacho (4,588 feet), Zapatera (2,000 feet), in the Department of Granada; the Ometepe (5,350 feet), which, in 1883, with a prolonged eruption of ashes and alkaline salts, drove the inhabitants of Moyogalpa from their homes; and the Madera (4,190 feet), which, with Ometepe, forms an island in the great lake, and is in the Department of Rivas.

In the opinion of Dr. Mierisch and others, the lakes of Asososca, Nejapa, Tiscapa and Apoyo were once volcanoes. The lavas, ashes and lapilli thrown out by the volcanoes filled the great ocean bay, leaving two large flat basins to receive the waters of the Lakes Managua and Nicaragua.

Toward the Pacific coast the volcanic energy was so great as to form a high rampant, which compelled the waters of these basins to find an outlet through the San Juan River to the Atlantic Ocean. The entire plains of the lake region are covered with the products of this volcanic activity. Their horizontal deposit is homogeneous and over 300 feet deep, which means as high above the sea-level as Leon. This fact proves that the entire lake region might have been, although but for a short time, an ocean bay. The decomposition of these varied volcanic deposits yields a dark sand and magnetic iron.

On this erupted mass lives the larger part of the population of Nicaragua. Here are situated most of the important villages, towns and cities. As all this volcanic matter is porous, surface water speedily disappears but there are springs which spring from water retained in lava beds. There are no perennially flowing rivers on the side that faces the lakes of Managua and Granada.

The great lake of Nicaragua, about 110 miles long and 40 miles in average width, covers about 2,600 square miles, and has a drainage basin of over 8,000 miles. Besides the Ometepe and Zapatera there are in the lake a number of smaller islands, of which the Solentiname group is the most remarkable. Besides the Rio Frio from Costa Rica, and the Tipitapa from the lake of Managua, only small rivers enter the great lake.

The lake of Managua is about 24 feet above the great

lake, and is about 30 miles long and 16 miles wide. Its most important tributary is the Rio Viejo. There are also these smaller lakes: Jilua, in the Chiltepe peninsula; the Tigre, near the volcano of Asososca; and Mogotepe, near the volcano of Viejo.

The third great topographical division in Nicaragua, comprising the mountains of Managua, Granada and Rivas, commences in the Sierra de Managua, separated from the Andes by the lowlands of the Estero Real. The first range begins southwest from Leon in the form of a low long ridge, which increases in height as it runs southeasterly until high mountains appear. The general direction of the Sierra de Managua is from northwest to southeast. It descends to the lake region abruptly, but toward the Pacific it slopes slowly down. Near Diriamba this mountain chain reaches a height of 3,000 feet, but it descends from there to Rivas in such a way that near the latter place it is only 152 feet. There it begins again to rise gradually, passing over into the high mountains of Costa Rica.

The character of this range is similar to that of the terraces of the Andes. It is, perhaps, more a tableland with an abrupt descent to the interior, as it is a real mountain chain. Its character is best displayed in the highlands of Jinotepe. Its base is mostly covered with ashes and lapilli from the volcanoes, brought here in part by the southwest trade-winds. Toward the interior this erupted mass is so deep that in no place, not even in artesian wells, has its peculiar geological formation been studied.

It is different on the Pacific side where the scorix and ashes are less deep, and where, in some places, the erosion of rivers and creeks has brought to light the geological formation. There these mountains are mostly composed of sedimentary rocks, which goes to prove them to be the end of the Andes tableland. The rocks are chiefly a white or gray limestone containing shells. Besides there are clay slates, tufas of melaphyre and of older basalt and andesite, as well as masses of these last two rocks, which are found in the Andes, and they correspond very well to the formations of the northern terrace lands. Toward the lake no constant rivers flow, since

the water is absorbed by the scorix and ashes, as it is in the plains of the lake. There are a large number, however, of creeks and streams on the Pacific side, debouching generally in swamps and in mangrove growths.

The Pacific coast lands are low. The water is deep close to the shore, and neither shoals nor reefs make navigation dangerous. But there is a constant heavy surf, called Tasco, caused by the swell of the Pacific Ocean.

There is between the Gulf of Fonseca and the Pacific the peninsula that contains the volcano of Coseguina. Half way between the Punta of Coseguina and the Bay of Salinas the Cape of Desolado is found. Northwest of this cape is the harbor of Corinto, one of the best protected harbors on the Pacific coast, very capacious, but partly overgrown with mangrove trees. Southwest of it lies the port of San Juan del Sur, a small but deep and safe harbor, as also the Bay of Salinas, forming a nearly circular, beautiful, deep and extensive port.

As for the mineralogical wealth of the district between the lakes and the Pacific, it is important to state that there is found excellent magnetic iron ore, with 48 $\frac{1}{2}$ per cent. pure iron. On the lake plains some lime occurs near Tipitapa, the volcano of Las Pilas and near Chinandega. Thermal springs are found on the Momotombo and sulphur springs near Tipitapa. Alkaline waters exist in the lagoons of Nejapa, Apoyo and Jilua.

The terrace lands of the interior of Nicaragua have a skeleton of red porphyry and melaphyre with corresponding tufas. The mountains and hills traversing the highlands are generally lava, while the llanos are filled with tufas. These tufas of varying colors are abundant and generally full of large pieces of volcanic rocks, a fact which indicates the tremendous activity of the volcanoes in former epochs. Volcanoes must have been very numerous in nearly the entire continent, although to-day, after the lapse of millions of years, no traces of them are found. This central portion of porphyry and melaphyre has on its east and west borders sedimentary rocks. In the east there is a large strip, running from west to south, of silurian clayish and sericitic slates, of

limestones, as well as of triassic sandstones and clays, and of tertiary and also diluvial and alluvial formations. In the west there are apparently no older slates, but there are sandstones and limestones of younger formation.

Along the first terrace and toward the lakes, in the abrupt slopes of the bounding wall, the porphyry is largely crossed by veins of quartz containing gold, especially where basalts and andesites of the tertiary epoch have broken through. Gold ores and gold dust have also been found in Nueva Segovia, Prinzapolca, Matagalpa and Jinotega. In these departments also other ores, such as silver, lead, copper, etc., have been discovered.

The following is a short list of the principal mining districts:

1. Chontales (especially around La Libertad):

San Juan de la Caridad,	Babilonia,	San Miguel,
Los Angeles,	La California and Con-	El Carmen,
El Portillo,	cepcion,	El Escándalo,
El Tope,	Santa Elena,	La Esmeralda,
El Javali,	El Despacho,	El Chamorro,
Santa Fe,	Santo Domingo,	San Gregorio.

Boaco:

Benjamin Quiroz, Manuel Saballos.

2. Matagalpa:

San Benito (A. Wasmmer),	La Tijera (Blandon & Molinarez),
Esmeralda (Pinedo & Mairena),	La Fortuna (Ruiz & Loper),
San Pablo (Alonso & Chaves),	San José (Barrantes & Castillo),
El Potente (Luis N. Arrieta),	Maryland (Rodríguez & Rico),
Cabecal de San Juan,	Santa Brigida (Nicolas Grijalva),
San Antonio (R. Valenzuela),	La Sultana (Alonso, Chaves & Herrera),
Santa Rita (N. Grijalva),	Esmeralda (Pinedo & Mairena),
La Restitucion (Alejandro Cerna),	Centro America (T. G. Bonilla),
Las Perlas de Oro (F. Ruiz),	La Leonessa (Alonso & Chaves),
San José del Zapote (J. L. Vega),	El Baluarte,
Maire Espino (Benito Espinoza),	La Ciudad,
Santa Cruz (R. Valenzuela),	San José (Duarte & Castillo),
Santa Maria (Alonso),	Delfina (D. Caldera),
La Esperanza (Matus & Mairena),	La Envidia (C. Cantarero),
El Consuelo (Molinarez & Miranda),	Cabecal de la Trinidad (Camillo Cal-
Buena Vista (Metrailler & Gallardo),	dera),
La America (Mayorga & Montenegro),	Apantillo (Josefa Mairena),
Las Gemelas (Gen. F. Ruiz),	Las Mercedes (J. Guerrero),
La Niña (David Caldera),	Gemela (Benito Espinoza),
Rosita (Fulgencio Mayorga),	La Leonessa etc. (Amer. Company),
El Pervenir (R. Valenzuela),	Naranjo (Carlos Packer).

3. Nueva Segovia :

Totogalpa :

Castillo & Co.,
Felber & Co.,
Muñoz & Gutierrez,
Felix Muñoz,
Henry Chaplin,
Antonio Lozano.

Telpaneca :

Erasmio Calderon.
Cayetano Casteillon,
Tomas Duarte,
Barrantes.

Jicaro :

Randales,
Montoya Hermanos.

El Golfo :

The Segovia Mining Co.
with the following
mines :

SAN ANTONIO,
Esperanza,
Progreso,
Providencia,
America Central,
Virgen,
CONQUEO,
La Fortuna,
El Socorro,
SAN JUAN,
Eurek,
Excel'sior,
A'hambia,
Welcome.

Quilali :

Medina y Soto.

Encinos :

Gamero & Moneada.

Mineral de Murra :

Talbot & Co.,
Velazquez & Gamero,
Luis Palma.

4. Cabo de Gracias á Dios :

La Constanacia,

Siempre Viva,

Atlas Groups,

Hidden Treasure.

II.

CLIMATE AND METEOROLOGY.

The climate of Nicaragua is determined by its position in the tropics, by the proximity of two great oceans, which gives to the country the regular temperature of an island, and by its topography. The prevailing wind is northeast. In the time of the solstice the direction of the wind changes to southwest, but variable winds without determined influence mostly blow at the time of the equinoxes. The moon also has some effect on the weather. It is generally during passing from one quarter to another, when notable modifications can be observed.

There are two well marked seasons; a dry season called summer, and a wet season called winter, along the Pacific coast, in the lake region and still further inland along the Cordilleras de los Andes. On the Atlantic side of the Cordilleras the rainfall does not entirely cease at any season, and the country there has the character of perpetual spring, although its people also distinguish between a summer and a winter. There the summer begins in January and ends at the end of May. The prevailing northeast wind coming from the Atlantic is full of moisture, which, on its passage over the forests that cover nearly the whole Atlantic slope, is condensed and falls repeatedly but irregularly in showers.

During the rest of the year the rain falls heavily, only temporarily interrupted in August and October, which short and relatively dry seasons the people call "veranillos."

On the Pacific side the rainy season, or winter, begins generally about the middle of May and ends at the middle of November. Here, too, but generally in the month of August, one, or more, veranillo is observed. The hottest months in general are May and August, when the sun is in the zenith, but sometimes they occur later. The rainy season is the pleasanter, for then the temperature is most uniform and the sky full of clouds.

As rainfall and temperature vary according to locality, the following interesting types are given. The first is taken from the very complete observations of Dr. Ernest Rothschuh made at the hacienda "Rosa de Jericho" in Matagalpa in the high mountain region of Nicaragua, over 3,300 feet above the sea, which shows a sort of climate differing from those already described. Dr. Rothschuh's manuscript, presented to the Nicaragua Government, discloses that during the period of his observations, from January, 1893, to March, 1894, there were rainfalls every month:

In 1893:					
January.....	17 days.	May.....	24 days.	September.....	30 days.
February.....	17 "	June.....	29 "	October.....	28 "
March.....	10 "	July.....	31 "	November.....	20 "
April.....	9 "	August.....	27 "	December.....	21 "
In 1894:					
January.....	30 days.	February.....	20 days.	March.....	18 days.

There were heavy tropical rainfalls (aguaceros) five times in January, 1893, once in March, once in April, twice in May, once in June, six times in July, once in August, once in September, ten times in October, twice in November, twice in December, six times in January, 1894, five times in February, once in March. Thunder storms were only observed from September to December inclusive; namely, sixteen times in September, ten times in October, twice in November, once in December. They occurred during the afternoon or night time. The rain fell generally during the afternoon, sometimes also during the night, seldom all day

long. In the morning there were fogs during 295 days until 8, 9, 10 and 11 o'clock. Generally during the forenoon the sky was clouded and very frequently with cumuli. The barometer showed the usual daily variations, but very small oscillations between one day and another. The air was nearly constantly saturated with humidity, 82.37 to 100 per cent. In regard to the prevailing winds there was northeast wind in January, 1893, for 30 days; in February for 28 days; in April for 30 days; in May for 16 days; in June for 27 days; in July for 27 days; in August for 20 days; in September for 22 days; in October for 31 days; in November for 27 days; in December for 31 days; in January, 1894, for 31 days; in February for 28 days; in March for 31 days. There were southwest winds 1 day in January, 1893; 8 days in May; 2 days in June; 3 days in July; 6 days in August; 7 days in September; 2 days in November. Lightning in the far distance was nearly exclusively observed in September (during 10 days) and October (during 13 days).

The maximum temperature was in January, 1893, 28.3 degrees C.; in February 30 degrees; in March 30.1 degrees; in April 32.3 degrees; in May 28.1 degrees; in June 27 degrees; in July 24.4 degrees; in August 28.6 degrees; in September 25.5 degrees; in October 25.2 degrees; in November 23.8 degrees; in December 21.9 degrees; in January, 1894, 20 degrees; in February 20.1 degrees; in March 21 degrees.

The minimum temperature was in January, 1893, 15 degrees C.; in February 17 degrees; in March 14.6 degrees; in April 17.2 degrees; in May 15 degrees; in June 15.5 degrees; in July 15 degrees; in August 15 degrees; in September 15.4 degrees; in October 14.3 degrees; in November 13.6 degrees; in December 11.2; in January, 1894, 12.8 degrees; in February 11.4 degrees; and in March 12.6 degrees.

The average temperature of the entire year was 17.21 degrees C.; the entire rainfall 2437.57 mm.

There are no dangerous fevers in this region, nor dysentery, nor chronic diarrhoea, nor pernicious affections of the respiratory organs, nor rheumatism.

Another meteorological type, from the Atlantic region, is reproduced from the observations of Dr. J. E. Hubbert,

made for the Nicaragua Canal Company at San Juan, for the year 1890. They are as follows:

Month.	Total Rainfall.	Average Temperature.	Maximum Temperature.	Minimum Temperature.
Jan.	26.80 ins. or 670 mm.	75° F. or 23.5° C.	81° F. or 27° C.	70° F. or 21° C.
Feb.	6.86 " " 171 5 "	76 " " 24 "	80 " " 26.5 "	72 " " 22 "
March	5.98 " " 148.25 "	77 " " 24.5 "	81 " " 27 "	73 " " 22.5 "
April.	18.11 " " 452.5 "	76 " " 23.5 "	78 " " 26 "	72 " " 22 "
May.	4.93 " " 123.25 "	76 " " 24 "	80 " " 26.5 "	72 " " 22 "
June.	46.84 " " 1171 "	79 " " 26.5 "	84 " " 29 "	74 " " 23 "
July.	52.55 " " 1313.75 "	78 " " 26 "	81 " " 27 "	75 " " 23.5 "
Aug.	35.72 " " 893 "	78 " " 26 "	81.5 " " 27.25 "	75 " " 23.5 "
Sept.	8.14 " " 203.5 "	78 " " 26 "	81.5 " " 27.25 "	75 " " 23.5 "
Oct.	24.36 " " 609 "	77 " " 24.5 "	80.5 " " 26.75 "	74 " " 23 "
Nov.	25.56 " " 638.75 "	76.5 " " 24.25 "	82 " " 27.5 "	71 " " 21.5 "
Dec.	41.65 " " 1041.25 "	76.5 " " 24.25 "	81 " " 27 "	72 " " 22 "
Total, 296.94 ins. or 7435.75 mm.				

For the Pacific side there are observations from the city of Rivas, about 177 feet above the sea, situated between the great lake of Nicaragua and the Pacific Ocean. During one year the mean highest temperature was 86 degrees F. (30 degrees C.); the mean lowest 71 degrees (21.5 degrees C.), and the mean average of a year 77 degrees (25.5 degree C.). The amount of rain which fell from May to November inclusive, was 90.3 inches; from December to April inclusive, 7.41 inches; and the total for the year, 97.44 inches.

More details about the rainfall, observed at the city of Managua, relate to the years of 1891 and 1892, and are due to Dr. Bruno Mierisch, in Masaya.

There fell no rain during the months of January, February, March and April, and very little in December. During the months of May, June, July, August, September, October and November there fell in 1891, 1241.8 mm., and in 1892, 1688.5 mm., which gives an average of 1500 mm. (60 inches).

In 1891 there were 3 rainy days in May; 20 in June; 18 in July; 14 in August; 18 in September; 19 in October; 13 in November; and 5 in December; a total of 105 rainy days.

In 1892 there were 21 rainy days in May; 24 in June; 15 in July; 26 in August; 23 in September; 23 in October; and 8 in November; a total of 140 rainy days.

During the dry season the sky is cloudless; vegetation dies; the leaves of a number of trees fall; the fields become parched. This southern summer has practically similar effects to those of a northern winter. In this season the temperature is

less often cool; the air, and, indeed, nearly everything, is filled with dust; many rivers and creeks dry up. In many places, especially in the Departments of Carazo, Rivas and Granada, it has been necessary to sink artesian wells in order to secure to the people a supply of water.

In regard to salubrity the summer is considered healthier than the winter, although less agreeable. The healthiest months of the year are January, February, March and April, and the most sickly are June and July. The most prominent disease is an intermittent fever, usually mild in character and cured by simple remedies. There are also cases of dysentery, especially among children, and sometimes dangerous affections of the respiratory organs, but there is no yellow fever.

Owing to its varied topography Nicaragua has its "*tierra caliente*" (hot zone), its "*tierra templada*" (temperate zone), and its "*tierra fria*" (cold zone). The Atlantic and Pacific coast lands, except where broken by mountains, as well as the plains surrounding the lakes and also the valley of the San Juan River, are regarded as *tierra caliente*, and are highly productive of tropical plants, especially of cacao and rubber. The *tierra templada* is found on the slopes of the volcanoes, the land of which is favorable to coffee raising, and also on the mountain ridges along the Pacific as well as on some slopes of the Cordilleras of Nueva Segovia, Jinotega, Matagalpa and Chontales. In the highlands of these departments and on the higher mountains is found the *tierra fria*, with pine and oak forests and lands adapted to wheat and other cereals.

Most of the people of Nicaragua live in the *tierra caliente*, which is less dangerous to health because of the porous tufas which enter into its formation. About two-thirds of the population have settled on the lake and Pacific coast lands.

In this distribution of people Nicaragua differs remarkably from Guatemala, Salvador, Costa Rica, and also from Mexico.

The population of the *tierra templada* and the *tierra fria* is, for want of cart roads, in a state of isolation, and, therefore, further behind in civilization.

III.

CHARACTER OF VEGETATION.

The vegetation of Nicaragua depends greatly on its meteorological conditions. In the following phytographical sketch the reader is taken to the Atlantic coast, and thence over the terrace lands to the isthmus lying between the lakes and the Pacific Ocean. The entire Atlantic slope, from the coast to the so-called Cordilleras de los Andes, has about the same quantity of rainfall, the same seasons and the same meteorology. The dividing line between the Atlantic and the Pacific phytographical conditions goes generally along the eastern mountain wall of the Nicaragua terrace lands.

The border of the Atlantic coast contains a great number of points, gulfs, bays and lagoons, and is crossed by many rivers which broaden on their way to the ocean, and through branches, arms and lagoons often connect one with the other. Along the low and swampy coast there are found enormous tracts of mangroves (*Rhizophora Mangle* L.) and coco palms (*Cocos nucifera* L.). Here and there live a small number of Zambos-Mosquitos, who engage in selling provisions, liquors, clothing, etc., to the extractors of rubber and the hunters of deer and other animals in the interior. From here are visible a number of the ramifications and ends of the Andes.

Going up one of the many rivers we see its waters slowly

flowing through a large tract of low and partly swampy lands. Both banks present a narrow belt of trees and palms and shrubs, densely covered with vines and climbing plants. Beyond these are extensive plains clothed with grass, very often low and swampy, and dotted with lagoons. From the Rio Grande northward the subsoil of all the coast lands and, to a great extent, of the interior lands for many miles is composed of pure quartz pebbles covered only with a few inches of humus. The water readily percolates through this soil, and, hence, we find above it immense evergreen savannas and large forests of pines and palms, among which are hamlets (*caserios*) and small Indian cattle ranches. The region is a paradise for hunters. This character is general where the shores of the rivers begin to rise, and only changes when the foothills and the rapids, here called *raudales*, are reached, and where also steam navigation ends. Here the savannas cease, and a different forest, denser and higher, with fewer vines, begins. An evergreen virgin forest, dark and beautiful in the variety of its vegetation, often with *pacayas* (*Chamaedorea Pacaya* Oerst) and tree-ferns (*Alsophila aculeata* Swartz) underneath, cover the now broken and hilly lands, on which the humus often attains a depth of four feet. Here also is found in abundance the Central American rubber tree (*Castilloa elastica* Cerv.).

In this region the rivers are only navigable by small boats. We see here and there houses of lumbermen who deal in caoba (*Swietenia mahogani* L.) and cedar (*Cedrela odorata* L.), or the huts of the *huleros* or the extractors of rubber. The shores of the rivers become higher, their currents run faster, and their courses are more tortuous. Very soon points are reached where even canoes must be left behind. The alluvial soil long ago gave place to laterite, a reddish clay of great fertility. The forest now becomes still higher and darker and its trees straighter. Innumerable creeks cross the valleys and cañons. Very often the naked porphyrous and melaphyric rocks of the mountains are seen, sometimes also the basalts, trachytes and andesites of older formations. Here the temperature is milder and during the night it is rather cold. In the morning there are fogs, and

in the afternoon frequent showers and thunder storms occur. In this region grow the caoba, cedar, ron-ron, almendro, posan, lagarto, palo de arco, plomo, laurel, as also rubber and hundreds of other kinds of trees and useful plants.

The same region furnishes abundant nourishment to hundreds of birds; to the beautiful quetzal and other *Trogonidae* of equally brilliant and metallic plumage; to the different lapas (*Ara*) and other *Psittacidae* of elegant exterior; to the oropendola (*Ostinope Montezumae*) remarkable for its hanging nests; to the toucans (*Rhamphastidae*); to the ocos or pavones (*Crax*, *Meleagris*, *Penelope* and *Oreophasis*); and an immense number of small birds. In this region dwell also large numbers of monkeys, jaguars, cougars and other wild cats, the tapirs, the jabali and peccary, the guardatinaja (*Calogenis paca*), the pisote (*Nasua socialis*), the oso real (*Myrmecophaga*), the ~~perezozo~~ ^{runa} (*Cercoleptes*), the pericoligero (*Galictis barbara*), the huatusa (*Dasyprocta*), various deers (*Cervus*) and many other animals.

Soon the dividing line is reached. From a region of cloudy and rainy skies we come suddenly upon one of sunshine, from the virgin forest to an *ocotal* (pine forest) and *roblares* (forests of oaks).

As the dividing mountain range is abruptly broken, so are the changes of climate and vegetation. The change from a virgin forest to an *ocotal* is often so sharply marked that the border line between them can be distinctly traced and even measured off, as with a surveyor's chain.

There is as great difference in climate and vegetation as there is in the landscape. We left on the other side the immense but uniform, evenly covered and slowly descending slopes of the Andes. Here before us we have a chaos of mountains, hills, valleys, plains, lakes, volcanoes, etc., which represent one of the greatest of terrestrial convulsions. Near by we seem to behold a solidified furious sea; further down we observe the vast plain with splendid lakes, and then the majestic line of volcanoes, whose summits generally wear a cap of clouds; still again we see the cities, towns and villages built on the shores of the lakes, on the slopes of the mountains and on the plains of Leon and Chinandega. Finally,

beyond this water-shed of two great oceans, lies the vast Pacific.

Analyzing this wonderful panorama, we see around us a number of high mountains, like those of Matagalpa, Jinotega, Datanli, Pantasma, Apanase and others, the sides of which bear the fertile character of the Atlantic slopes. We see them also largely cultivated with coffee, corn, etc., and, although they are partly beyond the dividing line, being high they still receive the moisture of the other region, which comes up through the river valleys that break through the main dividing chain. It might here be said that all the large rivers rise beyond this main dividing line, except the Blue-fields and those south of that.

The character of the country changes, as has been already mentioned, very suddenly toward the terrace lands. Here the mountains are covered with pines and lower down with oaks (robles). There are pine forests, as for instance near San Rafael, which are over 30 miles in length and about 6 miles in width, and crossed by a number of rivers. The pines often mingle with the oaks, although the oak prefers a better soil. These trees cover the lower sides of the mountains and the slopes at their feet.

Looking down on the table-land we see a great number of basalt and andesite circles of considerable extent, in whose centres are large grassy plains on which grow, here and there, the jicaro (*Crescentia Cujete* L.) tree, covered with epiphytes (air-plants) and parasites, which gives the landscape a very singular physiognomy. The terrace lands of Ocotal, Jinotega and Esteli present for the most part treeless llanos, having excellent pastures, which also extend to the hills and which remain green when on the lowlands of the lakes or on the isthmus, along the Pacific everything is dry and dead.

Descending the dividing ridge, now mostly covered with pines and oaks, we note that the virgin forests have ceased, and we are more in the region of rocks and scenes of volcanic energy.

Everything around shows the proximity of the volcanoes which did such tremendous work further down. The mountains and hills are no more clad with dense forests, as

on the other side. Only here and there are seen small islands of forest trees and two narrow strips of lower trees along the banks of the rivers which flow to the lakes. The ligneous vegetation consists more of *matorrales* (low trees and bushes), and there are more grassy than wooded lands.

Coming down to the llanos of the first terrace we find them often surrounded by roblares. The plains are broad, but mostly swampy, forming the so-called *jicarales*. They have a dark clay soil in which in summer time tremendous fissures open. As they are covered with grasses they are used for pasturage, and only for agriculture where a creek has mixed the clay with sand. The hills and mountains are stony, but covered with oaks and *matorrales* and small trees, like the guayacan, brazil and fustate, which let their leaves fall during the dry season, and also with cacti, agave and bromelia. Especially arid are the hills of volcanic ash and the flat plains of the same origin along the lake of Managua. A little better, because they have more rain, are the llanos of Chontales, but there also are *jicarales* for miles and miles. Their hills have open woods and they are also partly cultivated.

Leaving the slopes of the first terrace and coming down to warmer lowlands, we encounter a belt of forest containing numerous species of trees densely covered with vines and climbing plants; and now we stand before the lakes. In the larger, the Great Lake of Nicaragua, beautiful islands are embosomed. The flat lake valley has generally a much better vegetation than that of the just described Andean slope. The hills are covered with forests and the plains contain a great number of *potreros*, or grassy lands mixed in an irregular way with trees and bushes, on which cattle browse. Here and there also are *jicarales*, but, with a few exceptions, of less extent than those already described. In many places the land is cultivated. The prevailing trees are pochote (*Bombax macrocarpum* K. Sch.), guacimo (*Guazuma ulmifolia* Lam.), guabillo (*Inga* sp.), guanacaste (*Enterolobium cyclocarpum* Gr.), elequeme (*Erythrina corralodendron* L.), chilamate (*Ficus* sp.), guarumo (*Cecropia insignis* Liebm.), espino, madroño (*Calycophyllum candidissima* D. C.), and jocote (*Spondias lutea* L.). The most common plants are a kind of

verbesine, a kind of spiranthes and a species of sida. Very abundant is also the piñuela (*Bromelia*), which is generally used for fences.

Ascending again on the way across the mountain ridge between the lakes and the Pacific, we encounter a change in climate. In these higher elevations there is less heat and considerably more rainfall than below, probably because the range, rising somewhat abruptly, presents an opposing wall to the clouds coming from the east, chiefly through the valley of the San Juan River. There is a remarkable difference in the rainfall and moisture and in fertility between the lake and the Pacific fronts. For this reason the vegetation on the side facing the lakes is richer than on the opposite side. For the same reason the coffee tree grows better on the eastern than on the western slope. But the quality of this coffee is not equal to that of the Cordillerean region because of a well defined dry season of many months. As stated in the topographical and geological description, these mountains or highlands rise to about 3,000 feet, and have been covered to a considerable depth, as have all the lands along the line of the volcanoes, with their eruptive material. On the Pacific slope there are creeks which run sluggishly for a short distance through the gradually descending pastoral and slightly wooded lands to the ocean, which announces its nearness with a thunderous noise caused by the breaking of its swell into surf.

Along the coast the little rivers discharge into swamps, and the vegetation is composed mostly of mangrove and icaco. Here a' o grow the *cocales*, though less abundantly than on the Atlantic side. Inland jicarales occur in many places. In Chinándega are immense swamps facing the Gulf of Fonseca. There are also many valuable forests along the river courses or depressions. The vegetation of the San Juan valley belongs to the Atlantic flora, although it is less rich and dense in the upper than in the lower part.

The following tables give an enumeration of the vulgar names of woods, tannings, dyeings, textile plants, drugs and medicines, gums, resins, rubbers, etc.

Native Names of Nicaraguan Woods.

Aceltuno.
Achote or Achiote.
Achotillo.
Aguja.
Aguja de arras.
Aguacate de monte.
Aguacate colorado.
Alba.
Alamo.
Almendron.
Almendra negro.
Algodon.
Amargoso.
Ahuchué or espavel.
Alcornoque.
Anono.
Anono colorado.
Arrayan.
Areño.
Apsilague.
Azaharcito.

Balsa.
Barillo.
Balsamo negro.
Balsamo amarillo.
Balsamito.
Bambayan.
Bainillo.
Barazon.
Brazil macho.
Brazil.
Brazilillo.
Barbasco.
Burillo blanco.
Burrelquita.
Brujo.

Caoba leonado.
Caoba.
Caoba claro.
Cacahuito.
Café.
Carao.
Cangrejo.
Capulin cimarou.
Capulin.
Capulin de monte.
Canilla de venado.
Cascuchigue.
Caraña.
Caraña negro.
Caprote.
Cascarilla.
Cacalojoche.
Caprote.
Cachito.
Caimito.
Camiva or copaliba.
Cacao mico.
Cacao.
Carbon.
Canelon.
Canelo amarillo.
Canelo.
Cajinicuitl.
Campeche.
Caulote.
Cedro espino.
Cedro real.
Cedro comun.
Cedro caoba.

Cedro.
Cedro macho.
Cerito.
Cedron.
Cerrillo.
Cera vegetal.
Celba.
Celbillo.
Centzaro.
Cedrillo.
Chiquirin.
Chile.
Chillil' blanco.
Chillillo amarillo.
Chilamo.
Chaperno blanco.
Chaperno negro.
Chaperno.
Chirimoya.
Chilamate.
Chilamatillo.
Chilca.
Chocomico.
Chocoyo macho.
Chocoyo hembra.
Chocollito.
Chicharron.
Chinameca.
Chichipate.
Chaparron .
Cidra.
Cincho.
Cineoya.
Ciruelo.
Ciruelo de monte.
Ciruellito.
Cicaguite.
Cortés macho.
Cortés colorado.
Cortés.
Cortés negro.
Cornizuelo.
Coyote.
Coyolito.
Coyol.
Conmoje.
Copalehi.
Copal.
Copalchiton.
Cocobola.
Coco.
Cordoncillo.
Copel.
Corallito.
Corozo.
Cojon de mico.
Crucecillo.
Cuhumate.
Cutura.

Dragonero.
Durasnillo.

Ebano.
Elequeme.
Elequenito.
Enclno.
Espino negro.
Espino blanco.
Espino de playa.
Espino santo.
Espino macho.

Espluo verde.
Espabel.
Escobillo blanco.
Escobillo de patio.
Escobillo amarillo.
Escobillo ocre.
Esquisito.
Estorague or liquid-
ambar.
Flor blanca.
Flor amarilla.

Flor de Nacastape.
Fruto negro.
Funera.
Frijolillo.

Garrobo.
Gavilan.
Goma.
Granadillo.
Granadillo amarillo.
Granadillo blanco.
Granadillo negro.
Granada.
Guachipilin.
Guapinol.
Guanacaste colo-
rado.

Guanacaste negro.
Guacimo de ternero.
Guacimo blanco.
Guacimo moleuillo.
Guacimo negro.
Guacimo amargo.
Guacimo dulce.
Guanguero.

Guacul.
Guanábana.
Guarumo.
Guayabo de monte.
Guayabo.
Guayacan.
Guayacan amarillo.

Guache.
Guaje.
Guabillo.
Guayabillo.
Guillguiste.
Guillguiste ama-
rillo.

Guiscayol.
Guitarrero.
Guitto.
Gusenague.
Gutta-percha.

Higuaron.
Higo.
Hoja aucha.
Hoja chigué.
Hoja menuda.
Hoja tostada.
Hoja pendolla.
Hombre grande.
Huillhuiste.
Huesito.
Huacal.
Huacuco.
Huaviluna.
Huache or guache.
Huelenoe.

Native Names of Nicaraguan Woods—Continued.

Hule.
Huevo de burro.
Icaco.
Irarosa.
Irarosa bacina.
Irarosa amarilla.
Irili.
Irayol.
Ilambo.
Jaboncillo.
Jagua or Lligualtil
or Guaitil.
Jenicero.
Jobo.
Jocote jobo.
Jocote fralle.
Jocote verde.
Jocote negro.
Jocote.
Jocomico.
Jelinjoché montés.
Jicaro montés.
Jicaro sabanero.
Jicarito.
Juasca cuague.
Jollo.
Jinocuague.
Lagarto.
Laurel.
Laurel macho.
Laurel comun.
Laurel real.
Laurel hembra.
Laurel negro.
Laurel blanco.
Lirio.
Liquidambar.
Limón.
Limoncillo.
Listón.
Lima.
Leche.
Leche amarilla.
Llema de huevo.
Mataplojo.
Madroño colorado.
Madroño.
Madroño negro.
Madera negro.
Madre cacao.
Mangle oscuro.
Mangle blanco.
Marañón.
Mano de león.
Mano de tigre.
Mango.
Mallínche.
María.
Manteco.
Machalaguate.
Majagua.
Manzano.
Manzano de rosa.
Manzano blanco.
Matapalo montés.
Matapalo amarillo.
Matapalo negro.
Mazorquillo.
Maquengue or Ma-
kengue.

Matasano.
Mascobo.
Marango.
Macuetizo.
Manchón.
Mamey.
Melón.
Melero.
Mico.
Mora.
Morisco.
Morán.
Moroparán.
Morillo.
Muñeco.
Muñeco blanco.
Muscuñiste.
Muerto.
Murcielago.
Muchuguste.
Nacascolo.
Sambar excelstor.
Sambar.
Naranjo blanco.
Naranjo dulce.
Nance.
Nancelte.
Nancelte agrio.
Nangelul.
Nispero.
Nispero montes.
Niño muerto.
Nogallito.
Negro.
Negrito.
Ocote.
Ocotillo.
Ojoché macho.
Ojoché amarillo.
Ojoché comun.
Olivo silvestre.
Pacaya.
Palo de carbon.
Palo de sangre.
Palo de arco.
Palo de cucho.
Palo de leña.
Palo de piedra.
Palo percha.
Palo de zapo.
Palo de rosa.
Palo de sebo.
Palanco.
Pan or palo de pan.
Patácon or racun.
Papayo montés.
Paraiso.
Papaturreo.
Pacica.
Panania.
Pastor.
Patáste.
Papaya.
Pastores.
Palma real.
Padre y Madre.
Pefne de mico.
Pimienta de monte.

Piedra.
Pipilacho.
Piojillo.
Pino.
Pijibulle.
Platanillo.
Plomo.
Pochote amarillo.
Pochote.
Pochotillo.
Pozol.
Poroporo.
Posan.
Poponjoché.
Quebracho amarillo.
Quebracho negro.
Quebracho colorado
or Sare.
Quesillo.
Quina blanca.
Quina negra.
Quisará blanco.
Quitiquis.
Quita calzon.
Quitacalzon negro.
Reseda.
Roble espinol.
Roble.
Ronron.
Ronron colorado.
Salamo.
Sarna.
Sauce.
Sangredo.
Sangre de drago or
Sangregrado.
San Sebastián.
San Juan.
Sapotillo.
Sasafraz.
Sietecuero.
Soncollo.
Sombra de ignana.
Soplote.
Sota caballo.
Sonsapote.
Sulte.
Suncho.
Talatate.
Tamarindo.
Tamarindo terciol.
Tatascame.
Tupabottija.
Tamascón.
Talcacón.
Tabaquillo.
Taral.
Tecunmajuche.
Templisque.
Tepalon.
Tempaté.
Teton.
Tlocnaje.
Tigullote.
Toro.
Toronja.
Tololo macho.

Native Names of Nicaraguan Woods—Continued.

Tololo.	Vara blanca.	Zapote.
Tres Ojos.	Vara de alcalde.	Zapote mico.
Trigre.	Vara de espada.	Zopilote.
Troton.	Vainillo negro.	Zontol.
Tusa.	Vainillo colorado.	Zanguayan.
		Zorro.
Uva.	Yema de huevo.	Zapotillo.
Ujuste.	Yugualti or jagua.	
Uña de gavilan.	Yoillo.	

Native Names of Nicaraguan Tannings and Dyeings.

Achiote, dyeing.	Chaparro, tanning.
Añil or Jiquillite, dyeing.	Guatuco, dyeing.
Aguacate, tanning.	Mora, dyeing.
Castenequeme, dyeing.	Nascascolo, dyeing and tanning.
Cachito, tanning.	Ojo de Venado, dyeing.
Corteza roble, tanning.	Palo Brazil, dyeing.
Corteza elequeme, dyeing.	Sacatinta, dyeing.
Corteza nancite, tanning and dyeing.	Sangre dedrago, dyeing.
Corteza chichipate, tanning.	Yuquilla, dyeing.
Corteza encino, tanning.	
Corteza guanacaste, tanning.	
Corteza mangle, tanning and dyeing.	

Native Names of Nicaraguan Gums and Resins, Rubbers, Vegetable Wax, Balsams.

Balsamo camivar.	Iscanal, gum.
Balsamo liquidambar.	Jobo, gum.
Balsamo copaliba.	Jocote, gum.
Brea, resin.	
Cachito, gum.	Liquidambar, resin.
Cedro, gum.	Malcajaco, gum.
Cera vegetal, vegetable wax.	Mangle, gum.
Espino blanco, gum.	Marango, gum.
Goma tuno, gutta-percha.	Nopal, gum-resin.
Hule, rubber.	Trementina, turpentine.

Native Names of Nicaraguan Textile Plants.

Anono colorado.

Burillo.

Cabulla.

Canilla vegetal.

Celbo.

Coco.

Chupamiel.

Guarumo.

Escobilla.

Junco.

Majagua.

Mastate.

Mosote.

Macume.

Majaguillo.

Maguey.

Paja de jiplapa.

Palma de sombreros.

Pelne de mico.

P'ita.

P'ñuela.

P'ña.

Pochote.

P'latano.

Soncollo.

Tule.

Native Names of Nicaraguan Medicinal Plants.

Albahaca.

Alchucn.

Apasote.

Amapola.

Ajenjo.

Artemisa.

Barba de viejo.

Barba de cerro.

Boaco.

Borraja.

Bellisima.

Burriquita.

Bejuco de San Juan.

Bejuco de pita.

Bejuco de sardina.

Bejuco del hombre.

Bejuco del diablo.

Bejuco de papamiel.

Bejuco de perro.

Bejuco de copellito.

Bejuco de vergatoro.

Bejuco de corraliso.

Bejuco de picamano.

Bejuco blanco.

Bejuco caribe.

Bejuco hojachigue.

Bejuco negro.

Bejuco del amor.

Canchalagua.

Cascarrilla.

Caña de cuajichote.

Canutillo.

Capitaneja.

Canjura.

Cañastula.

Cardo santo.

Carao.

Cabello de angel.

Cebollin.

Chilmetate.

Coloquintida.

Corona de cristo.

Cola de alacran.

Cola de gallo.

Cola de lapa.

Copalchi.

Cordoncillo.

Contrayerba.

Corteza de critrina.

Corteza de tinte.

Corteza de pellejo de vieja.

Corteza de Jinocubabo.

Corteza de guayacan.

Corteza de balsamo negro.

Corteza de laurel macho.

Corteza de quebracho blanco.

Corteza de liquidambar.

Cuculmeca.

Culantro silvestre.

Elequeme or poroporo.

Eneldo.

Escobilla.

Escorzonera.

Espadillo.

Flor de sauco.

Flor de piedra.

Flor de pochote.

Friega plato.

Gramma.

Guarumo.

Huasimo.

Hoja de buey.

Hoja de piedra.

Hoja sen.

Huistomate.

Native Names of Nicaraguan Medicinal Plants—Continued.

Jenciana.
Juanislama.

Leche de perro.
Lengua de ciervo.
Lengua de pajaró.
Llanten.

Malva comun.
Malva silvestre.
Manzanilla.
Meona blanca.
Moradita.
Morazan.
Moroparán.

Nagnapate.

Ojo de venado.
Orégano.
Orosús negro.
Orosús.

Pavana.
Pericon.
Pico de pato.
Pico de pajaró.
Piñalvie.
Poligala.
Polipodio.

Quelite.
Quina blanca.

Raiz de cuasquite.
Raiz de la corona.
Raiz de la estrella.
Raiz de cuculmeca.
Raiz de cereus.
Raiz de picamono.
Ruda.
Ruibarbo.

Sapoyol.
Salvin.
Sacate limon.
Semilla de aroma.
Siempreviva.
Sin verguenza.
Suela con suelda.

Tapate.
Tapa botija.
Tempate.

Uva montes.

Vitamo.
Vetiver.

Yerba té.

Zarza mora.
Zarza negra.
Zarza comun.
Zarzaparilla.
Zorrillo.

Native Names of Nicaraguan Oilseeds.

Ajijoll.
Algodon.

Cacahuite.
Cardosanto.
Chan.
Coco.
Corozo.
Culantro.

Coyol.
Higuerillo or Ricino.
Hulscoyol.

Lino.
Melon.
Piñon (Jatropha).

Native Names of Nicaraguan Spices.

Anis.

Chile.
Cominillo.
Culantro.

Enelda.

Gengibre.
Mejorana.
Mostaza.
Pimienta.
Vanilla.

IV.

POPULATION.

Nicaragua is politically divided into 12 departments, 3 comarcas, 2 districts and 110 municipalities, with 108 jurisdictions, as follows:

No.	Department.	Jurisdictions.	Cities.	Towns.	Villages.	Valleys.	Caseríos.	Population.
1.	Managua	7	1	2	4	9	16	42,460
2.	Masaya	8	2	2	4	4	15	33,869
3.	Granada	4	2	2	2	9	9	18,938
4.	Carazo	6	2	1	3	4	11	18,545
5.	Rivas	8	2	5	5	6	32	25,883
6.	Leon	9	1	3	5	27	51	87,772
7.	Chinandega	10	4	1	7	31	19	34,614
8.	Chontales	13	4	2	7	16	122	40,387
9.	Matagalpa	7	2	..	5	61	35	29,895
10.	Jinotega	7	2	1	4	81	97	37,653
11.	Nueva Segovia	18	2	..	16	77	134	32,642
12.	Zelaya							
13.	District of Prinzapolca	9	2	..	..	52	..	14,541
14.	District of Sigüla							
15.	Comarca, Río Grande							
16.	Comarca, Cabo de Gracias a Dios	1	..	..	..	30	..	4,000
17.	Comarca, San Juan del Norte.	1	2	..	3	..	..	2,000

The following table gives the cities of Nicaragua with their populations; first of the city itself, and second with its jurisdiction included. These data are found in the statis-

tical office and in the memorial prepared by the Nicaraguan Department of Gobernacion (Interior):

Name.	Department.	Pop.	Houses.	Streets.	Jurisdic'n.				Pop.	Commercial Facilities.
					Plazas.	Val.	Cas.	Pop.		
Leon.....	Leon.....	45,000	4,570	41	10	1	1	49,964	R. R. Sta'n. P. O.	
Managua.....	Managua.....	25,000	3,000	55	7	2	13	25,000	Lakeport. "	
Masaya.....	Masaya.....	15,000	1,500	38	6	1	2	15,850	R. R. Sta'n. "	
Chinandega.....	Chinandega.....	12,620	2,588	32	8	1	14	15,070	R. R. Sta'n. "	
*Granada.....	Granada.....	9,086	4,494	21	5	7	5	11,493	Lakeport. "	
Jinotepe.....	Carazo.....	6,500	476	19	8	1	5	7,210	" "	
Bluefields.....	Zelaya.....	5,000	582	19	1	1	1	5,000	Seaport. "	
Diriamba.....	Carazo.....	4,500	908	22	2	2	2	5,010	" "	
Jinotega.....	Jinotega.....	4,325	727	40	4	23	10	11,742	" "	
El Viejo.....	Chinandega.....	4,021	131	25	5	8	8	5,152	R. R. Sta'n. "	
Maatepe.....	Masaya.....	4,000	120	22	8	1	2	4,350	" "	
Chichigalpa.....	Chinandega.....	3,813	375	32	1	1	4	4,145	R. R. Sta'n. "	
Rivas.....	Rivas.....	3,800	1,510	1	18	1	1,000	R. R. Sta'n. "		
Matagalpa.....	Matagalpa.....	3,683	829	20	8	30	8	14,378	" "	
Boaco.....	Chontales.....	2,796	202	11	1	18	14,000	" "		
Juigalpa.....	Chontales.....	2,000	150	11	1	4	6	5,364	" "	
Nandaimo.....	Granada.....	2,500	604	10	1	1	4	8,019	" "	
Metapa.....	Matagalpa.....	1,795	143	6	2	9	5	8,687	" "	
Estelí.....	Jinotega.....	1,683	288	12	2	9	31	13,247	" "	
Ocotral.....	Nueva Segovia.....	1,630	288	13	1	1	2	1,739	" "	
Corinto.....	Chinandega.....	1,397	1	1	1	12	25	6,400	Seaport. "	
Somoto.....	Nueva Segovia.....	1,224	169	10	1	12	25	6,400	" "	
San Juan del Norte.....	S. Juan del Norte ¹	1,166	1	1	1	7	8	2,000	Seaport. "	
Rama.....	Siquia ²	825	78	17	1	1	1	"	" "	
Acoyapa.....	Chontales.....	800	103	10	1	2	12	2,380	" "	
La Libertad.....	Chontales.....	741	1	1	1	7	3,162	"	" "	
Ciudad America.....	S. Juan del Norte ¹	500	1	1	1	1	1	Seaport	" "	
San Juan del Sur.....	Rivas.....	829	1	1	1	4	674	"	" "	

* This number must be an error. † 1 city; 1 town. ‡ 2 towns. § Also R. R. Station.
¶ 1 city. ¹Comarca. ²District.

The towns (*Villas*) of Nicaragua, following the same official sources of information, are as follows:

Name.	Department.	Pop.	Houses.	Streets.	Jurisdiction.				Pop.	Commercial Facilities.
					Plazas.	Val.	Cas.	Push.		
La Paz.....	Leon.....	6,000	300	1	1	1	1	1	6,000	R. R. Sta. Post Office.
Nagarote.....	Managua.....	3,000	500	25	2	1	1	1	3,000	" "
San Marcos.....	Carazo.....	2,600	138	14	1	1	1	1	4,380	" "
Belen.....	Rivas.....	2,400	19	2	2	2	1	1	3,000	Lakeport. "
Alta Gracia.....	Masaya.....	2,000	13	1	1	1	1	1	3,400	" "
La Victoria.....	Managua.....	1,500	38	7	1	1	1	1	2,200	R. R. Sta. "
Nindirí.....	Masaya.....	1,500	178	7	1	1	1	1	2,000	" "
San Jorge.....	Rivas.....	1,382	9	1	1	1	1	1	1,500	" "
Buenos Ayres.....	"	996	254	16	1	1	1	1	1,689	" "
El Jicaral.....	Leon.....	800	99	9	1	5	4	1	4,688	" "
Santa Rosa.....	"	700	222	6	1	15	13	1	1,667	" "
Potosí.....	Rivas.....	615	116	12	1	1	7	1	2,129	" "
Camoaipa.....	Chontales.....	580	59	10	1	12	1	1	2,732	" "
Comalapa.....	"	440	56	8	1	1	9	1	3,204	" "
La Trinidad.....	Jinotega.....	212	79	11	2	13	16	1	"	" "
Rcalejo.....	Chinandega.....	73	1	1	1	1	1	1	"	" "

The villages (*Pueblos*) of Nicaragua, as officially stated, are as follows:

Name.	Department.	Pop.	Houses.		Streets.	Jurisdic't'n.		Pop.	Commer'l Facilities.
			Houses.	Streets.		Val.	Cas.		
Subtlava.....	Leon.....	8,000	.....	.....	.....	.....	5,8,655	R. R. Sta.	P. O.
El Sauce.....	".....	7,500	500	13	1	15	4,9,697	"	"
Teustepe.....	Managua.....	4,000	83	8	1	.....	.....	"	"
Telica.....	Leon.....	3,000	250	14	1	.....	6,4,327	"	"
Diriomo.....	Granada.....	3,000	717	6	1	.....	.....	"	"
San Rafael del Sur.	Managua.....	3,000	133	11	2	.....	.....	"	"
La Concepcion.....	Managua.....	2,000	.....	.....	.....	.....	4,3,800	"	"
Nandasmo.....	".....	1,500	.....	6	1	.....	1,1,650	"	"
Santa Teresa.....	Carazo.....	1,500	226	18	1	.....	3,2,050	"	"
Catarina.....	Managua.....	1,349	.....	.....	.....	.....	1,419	"	"
Diria.....	Granada.....	1,273	700	.....	1	.....	1,426	"	"
Somotillo.....	Chinandega.....	1,051	426	28	5	.....	4,2,464	"	"
Quemalguaque.....	Leon.....	1,000	202	8	1	.....	3,1,525	R. R. Sta.	"
Tisma.....	Managua.....	1,000	.....	5	2	.....	1,200	"	"
Terrabona.....	Matagalpa.....	998	51	8	1	4	6,2,328	"	"
Villanueva.....	Chinandega.....	958	195	11	3	.....	1,428	"	"
Sobaco.....	Matagalpa.....	850	70	9	1	3	14,1,867	"	"
Muyamay.....	".....	810	57	7	1	7	3,4,890	"	"
Mateare.....	Managua.....	800	40	9	1	.....	.....	"	"
Tola.....	Rivas.....	800	.....	.....	.....	.....	.....	"	"
Achuapa.....	Leon.....	800	32	9	1	.....	3,1,227	"	"
Posoltega.....	Chinandega.....	705	132	6	1	4	1,265	R. R. Sta.	P. O.
El Rosario.....	Carazo.....	675	60	10	1	.....	.....	"	"
Esquipulas.....	Matagalpa.....	702	100	11	3	1	1,412	"	"
La Paz.....	Carazo.....	675	.....	10	1	.....	.....	"	"
Moyogalpa.....	Rivas.....	600	.....	11	.....	2	3,1,712	Lakeport.	"
San Pedro.....	Chinandega.....	513	.....	.....	.....	5	1,418	"	"
Sto. Tomas.....	".....	510	.....	.....	.....	4	1,206	"	"
San Francisco.....	".....	506	.....	.....	.....	8	1,022	"	"
Lima.....	Nueva Segovia.....	503	108	9	1	2	19,1,329	Lakeport.	"
Pueblo Nuevo.....	".....	500	106	9	1	11	10,8,051	"	"
San Jose.....	Chontales.....	500	40	.....	.....	18	1,939	"	"
La Concepcion.....	Rivas.....	500	.....	.....	.....	.....	.....	"	"
Momotombo.....	Managua.....	500	.....	.....	.....	.....	.....	{ R.R. Sta Lakeport.	P. O.
San Carlos.....	Chontales.....	459	.....	.....	.....	8	789	Riverport.	P. O.
San J'n de Cinco Pinos	Chinandega.....	428	.....	.....	.....	7	445	"	"
San Rafael del Norte	Jinotega.....	412	100	.....	1	6	8,4,000	"	P. O.
Pueblo Nuevo.....	Rivas.....	426	.....	.....	.....	.....	.....	"	"
Jalapa.....	Nueva Segovia.....	423	50	10	1	7	1,597	"	"
San Isidro.....	Jinotega.....	390	.....	9	.....	4	6,2,019	"	P. O.
San Miguelito.....	Chontales.....	390	70	.....	1	2	595	Lakeport.	"
San Lorenzo.....	".....	370	47	2	2	7	18,8,812	"	"
La Concordia.....	Jinotega.....	365	98	9	1	18	4,2,086	"	"
Jicare.....	Nueva Segovia.....	312	73	12	1	2	9,1,507	"	"
San Pedro de Lovago.	Chontales.....	327	42	6	1	.....	16,1,824	"	"
Condega.....	Nueva Segovia.....	256	72	9	1	10	10,8,892	"	"
Puerto de Becay.....	Jinotega.....	250	.....	.....	.....	2	21,1,415	"	"
Dipilte.....	Nueva Segovia.....	244	86	8	1	.....	593	"	P. O.
Ciudad Antigua.....	".....	224	50	6	1	5	15,906	"	"
San Dionisio.....	Matagalpa.....	230	24	7	1	5	1,833	"	"
Telpanca.....	Nueva Segovia.....	224	209	8	1	8	4,486	"	"
El Castillo.....	Chontales.....	211	.....	.....	.....	.....	.....	Riverport.	"
Las Salinas.....	Rivas.....	200	9	.....	.....	.....	.....	Seaport.	"
Palaguajina.....	Nueva Segovia.....	197	23	4	1	.....	3,1,430	"	P. O.
Yalaguina.....	".....	197	41	5	1	.....	7,780	"	"
Macuelizo.....	".....	176	30	4	1	8	8,680	"	"
Totogalpa.....	".....	127	89	8	2	6	1,908	"	"
Sto. Tomas.....	Chontales.....	125	30	8	1	1	72,000	"	"
Mosote.....	Nueva Segovia.....	118	43	7	1	4	893	"	"
Murra.....	".....	109	74	3	1	2	6,892	"	"
Quilali.....	".....	108	15	2	1	5	5,777	"	"
Sta. Maria.....	".....	66	21	2	1	.....	5,814	"	"

The principal Valleys (*Valles*) are, following the list of the statistical offices:

Department.	Name.	Population.	Jurisdiction.
Managua.....	Sabana Grande	300	Managua.
	Sto. Domingo.....	700	"
	Zambrano.....	300	"
	San Francisco del Carnicero	350	"
	Telpochapa.....	500	"
Carazo.....	La Conquista.....	400	Jinotepe.
	Tanenbuya.....	300	San Marcos.
Granada	Las Islas.....	446	Granada.
	Malacatoya.....	521	"
Rivas.....	Narimimi.....	500	Belen.
	Esquipulas	412	Moyogalpa.
	Las Pilas.....	300	Alta Gracia.
Chontales	Cuapa.....	600	Juigalpa.
	Betulia.....	912	"
	Sta. Rita.....	468	San Lorenzo.
	Morrito.....	300	Acoyapa.
	El Almendro.....	300	"
	Radio de la Legua.....	346	Sto. Tomas.
	Piedra Pintada.....	441	Juigalpa
Leon.....	Los Zapatas.....	1500	Leon.
	San Nicolas.....	300	Santa Rosa.
	Salale.....	368	El Sauce.
	Sabana Grande.....	370	"
	San Antonio.....	100	"
	Ocotlan.....	350	"
Chinandega.....	Atoya.....	359	El Viejo.
	Coseguilua.....	313	"
Nueva Segovia.....	San Lucas.....	625	Somoto.
	Cuje.....	728	Totogalpa.
	Amacayan.....	734	Telpaneca.
	Tamarindo.....	413	"
	Vijahual.....	551	"
	Pericon.....	646	"
	Sto. Domingo.....	712	"
	Carbonal.....	722	"
	El Coyol.....	392	Condega.
	Estanzuela.....	800	Esteli.
Jinotega.....	Santa Cruz.....	1604	Esteli.
	Villa Vieja.....	1145	"
	Pqtrero Grande.....	425	"
	Tomahú.....	413	"
	Apanas.....	543	Jinotega.
	Sta. Maria.....	385	"
	Mancotal.....	700	"
	San Esteban.....	400	"
	Sisle.....	512	"
	Llano de Tejera.....	500	"
	Dantali.....	664	"
	Chahuite Grande y Mojon.....	680	"
	San Antonio.....	325	"
	Yale.....	1300	San Rafael del Norte.
	San Gabriel.....	369	"
	Sabana Grande.....	404	"
	Guadalupe.....	346	Matsagalpa.
	El Hono.....	362	"
	Guasquil.....	367	"
	Las Cañas.....	363	"
	Samulali.....	430	"

Department.	Name.	Population.	Jurisdiction.
Jinotega.....	Matazano.....	324	Matagalpa
	Guinco.....	331	
	Yucul.....	468	
	Ocotul.....	392	
	San Pablo.....	334	
	Limones.....	170	
	Molino Norte.....	515	
	Apanto.....	350	
	Llano Grande.....	582	
	Yacica.....	404	
	Jucupa arriba.....	366	
	Junalqui.....	437	
	Gülligua.....	670	Muyunuy.
	Agua caliente.....	50	
	Cangrejal.....	800	
	El Ojoche.....	773	
	Mal Paso.....	590	
	San Jerónimo.....	40	
	El Potrero.....	300	

Principal *Caserios* as enumerated in the official documents:

Department.	Name.	Population.	Jurisdiction.
Masaya.....	Norome.....	400	Masaya.
	Los Trapiches.....	1000	La Victoria.
	Monte Redondo.....	300	"
	Potrero.....	300	Nindiri.
	San Juan.....	1200	La Concepcion.
Cavazo.....	Los Potrerillos.....	300	Sta. Teresa.
Rivas.....	Los Cerros.....	1200	Rivas.
	Las Piedras.....	600	"
	Veracruz.....	1000	"
	El Rosario.....	800	"
	Popocatepetl.....	1000	"
	La Puebla.....	1100	"
Chontales.....	La Chocolata.....	300	"
	San Marcos.....	461	Judgalpa.
	San Buenaventura.....	1695	Boaco.
	Boaco Viejo.....	821	"
	El Tule.....	387	"
	Sacal.....	526	"
	Olama.....	433	"
	El Rodeo.....	726	"
	Saguatope.....	413	"
	Vejuco.....	413	"
	Cerro Largo.....	332	"
	Santa Inés.....	951	"
	Wirruca.....	840	"
	Paso de Lajas.....	415	"
	Tuquesa y Aguasca.....	1800	"
	Fruta de pan.....	1000	La Libertad.
	El Jocote.....	420	Comalapa.
	La Montanita.....	340	"
	" Casas Dispersas ".....	492	"
	Montaña.....	300	San José.
	Montefresco.....	336	San Lorenzo.

Department.	Name.	Population.	Jurisdiction.
Chontales.....	Pueblo Viejo.....	340	Sto. Tomas.
	Alto.....	346	"
Leon.....	Tololar.....	807	Leon.
	Los Lechegueros.....	836	"
	Paso Bonito.....	300	Tellica.
	Salitre.....	311	"
Chinandega.....	San Benito.....	400	Chinandega.
	Sta. Barbara.....	300	"
Nueva Segovia.....	Agua Buena.....	816	Somoto.
	Las Sabanas.....	346	"
	Ducual.....	462	Palacaguina.
	Jocote.....	420	"
	Zapote.....	351	"
Jinotega.....	Laguna.....	300	Estel.
	Potrerrillos.....	327	"
	Bocay abajo.....	350	Puerto de Bocay.
Siquia.....	Rio Mico.....	342	Rama.
	Rio Siquia.....	342	"
Corn Island.....	Great Corn Island.....	600	Bluefields.
	Little Corn Island.....	300	"
Gobernacion Chucuma.....	Chucuma.....	500	
	Wany.....	300	
	Siuna.....	600	
	Tunkey.....	400	
Laguna de Perlas.....	Laguna de Perlas.....	422	

Other Valleys are, still following official documents:

Department.	Name.	Population.	Jurisdiction.
Managua.....	Laurel Galan.....	250	
	La Mica.....	250	
	San Benito.....	200	
	El Obrero.....	180	
Masaya.....	Veinte Cuatro.....	200	Tisma
	Los Altos.....	200	Masaya.
	Norome.....	49	Catarina.
	Pacaya.....	21	"
Carazo.....	El Aguacate.....	150	Dirlamba.
	Buena Vista.....	100	"
Granada.....	Panuloya.....	228	Granada.
	La Orilla.....	220	Nandaine.
	Los Cocos.....	118	Granada.
	Ozangay.....	85	"
	Santa Clara.....	282	"
	El Arroyo.....	153	Dirla.
Rivas.....	Zapatera.....	64	Granada.
	Sanchez.....	250	Belen.
	Los Angeles.....	250	Moyogalpa.
	San Francisco.....	250	Alta Gracia.
Chontales.....	Llano Grande.....	170	Juigalpa.

Department.	Name.	Population.	Jurisdiction.
Chontales.....	San Francisco.....	230	Boaco.
	Sto. Domingo.....	229	La Libertad.
	Rodeo.....	200	San Lorenzo.
	San Ildefonso.....	200	"
	Rejosa.....	110	"
	Llano Grande.....	160	"
	Posoli.....	105	"
	Potrero Grande.....	140	"
Leon.....	Los Zarzales.....	200	Leon.
	Los Arcos.....	80	El Jicaral.
	Buena Vista.....	85	"
	San Juan de Dios.....	95	"
	El Alcaraban.....	123	"
	Las Pilas.....	39	"
	Hatillo.....	200	Santa Rosa.
	Chaparral.....	200	" "
	Las Delicias.....	128	" "
	Real de la Cruz.....	120	" "
	El Cuervo.....	120	" "
	El Boqueron.....	150	" "
	Guiljalapa.....	240	" "
	Limay.....	150	" "
	El Rodeo.....	200	" "
	Valencia.....	250	" "
	San Martin.....	174	" "
	Guingajapa.....	200	" "
Chinandega.....	La Pita.....	72	" "
	Mesitas.....	32	" "
	Las Mercedes.....	150	El Sauce.
	Opico.....	250	El Viejo.
	Los Mayorgas.....	157	Posoltega.
	Jinocuanigto.....	272	Somotillo.
	Pueblo Viejo.....	102	"
	Los Huatales.....	160	"
	El Pilon.....	156	"
	El Obraje.....	253	"
	Espino.....	149	Santo Tomas.
	Obitos.....	209	" "
	Ojo de Agua.....	155	" "
	Vado Ancho.....	182	" "
	Los Araditos.....	206	San Juan de Cinco Pinos.
	El Zapote.....	111	" "
	El Cerro.....	115	" "
	Pavon.....	171	" "
	Espino.....	101	" "
	Zacaton.....	217	" "
	Zarzal.....	98	" "
Nueva Segovia.....	Montaña.....	160	San Pedro.
	Plan Grande.....	275	" "
	Ocotillo.....	150	" "
	Vijahna.....	170	" "
	Panal.....	150	" "
	Talquezal.....	83	San Francisco.
	El Terrero.....	181	" "
	Nancital.....	252	" "
	La Concepcion.....	85	Villanueva
	Los Encuentros.....	104	"
	Los Achotes.....	208	"
	Santa Teresa.....	267	Somoto.
	Santa Isabel.....	185	"
	El Espino.....	198	"
	El Angel.....	267	"
	Ycalupe.....	148	"
	Talquezal.....	200	"
	Sta. Rosa.....	95	"
	San Juan.....	121	"
	El Potrero.....	149	"
	Sta. Barbara.....	124	"
	San Francisco.....	201	"

Department.	Name.	Population.	Jurisdiction.
Nueva Segovia.....	Terrero Grande.....	213	Tototalpa.
	Sto. Domingo.....	284	"
	Salbana Grande.....	276	"
	Verapaz.....	144	"
	Cayantil.....	146	"
	Raicho.....	269	Telpaneca.
	San Juan.....	130	"
	El Suyatal.....	58	Macueliso.
	Calabazeras.....	29	"
	Amatillo.....	87	"
	Apansiguel.....	200	Mosonte.
	Santa Ana.....	59	Limay.
	San Jeromino.....	58	"
	San Ramon.....	205	Condega
	San Diego.....	284	"
	Santa Rosa.....	239	"
	El Jocote.....	220	"
	Potrerrillos.....	260	"
	Santa Lucia.....	162	"
	Culce.....	107	"
	Guayucali.....	269	"
	Algodonel.....	111	"
	Calpules.....	179	Pueblo Nuevo.
	Mata Palo.....	191	"
	Pura.....	117	"
	Palagua.....	153	"
	Cofradia.....	122	"
	Hatillos.....	277	"
	Salbana Grande.....	256	"
	Roble.....	111	"
	San Francisco.....	112	"
	Penasco.....	133	"
	Rio Abajo.....	120	"
	Guisuli.....	190	Mosonte.
	Los Arados.....	90	"
	Sapote.....	90	"
	Calpules.....	29	Ciudad Antigua.
	Aradito.....	27	"
	La Jagua.....	33	"
	Raicho.....	23	"
	San Fernando.....	100	"
	Sucucayan.....	118	Jicaro.
	Casas Viejas.....	146	"
	El Carbon.....	120	Jalapa.
	Tostoli.....	250	"
	La Puerta.....	84	"
	El Limon.....	200	"
	El Trapiche.....	205	"
	Solonli.....	98	"
	Totecosinte.....	211	"
	E Plantel.....	101	Murra.
	Los Pozos.....	57	"
	Los Cruces.....	96	Quilali.
	Caulatli.....	70	"
	Jabalies.....	129	"
	Trincheras.....	83	"
	Marafonal.....	93	"
Jinotega.....	San Pedro.....	211	Estell.
	Isidrillo.....	220	"
	Cerritos.....	110	"
	Funosa.....	150	"
	Pastoreo.....	215	"
	Carrizo.....	180	"
	Regadillo.....	157	"
	Jicaro.....	160	"
	San Rafael & Labrancita	223	"
	Labranzas.....	285	"
	Rodeo.....	266	"
	San Roque.....	237	"
	San Antonio.....	152	"
	Hatli.....	183	"

Department.	Name.	Population.	Jurisdiction.
Jinotega.....	San Lorenzo.....	96	Trinidad.
	Licoray.....	101	"
	Cañada.....	153	"
	Kapinal.....	136	"
	Tomabul.....	173	"
	Kapino.....	135	"
	Rosario Viejo.....	125	"
	El Hornillo.....	149	"
	Ollanca.....	152	"
	El Naranjo.....	140	"
	Rincon Largo.....	140	"
	San Francisco.....	157	"
	Caña y Vopai.....	139	"
	Robles.....	238	Jinotega.
	Barranco Blanco.....	184	"
	Jocomico.....	269	"
	Tomayuncu.....	200	"
	Yanque.....	150	"
	Naranjo.....	189	"
	Mesitas.....	150	"
	Matazano.....	110	"
	Dominical.....	139	"
	Buculnuy.....	169	"
	Santa Barbara.....	115	"
	Lipululo.....	101	"
	Tomatoya y Pilas.....	150	"
	Lomas.....	225	"
	Namungtia.....	232	San Rafael
	San Marcos.....	247	" " " "
	Somi.....	275	" " " "
	Yupall.....	100	La Concordia.
	Mesas.....	142	"
	Llano Largo.....	166	"
	Lajas.....	129	"
	Los Potrerillos.....	96	"
	Guiscanal.....	78	"
	Guizulque.....	93	"
	Mora y Chichigues.....	249	"
	Camalote.....	38	"
	Vijagual.....	117	"
	La Bolsa y El Plan.....	67	"
	La Pavona.....	134	"
	Coyolar.....	84	"
	Quebrada Seca.....	20	San Isidro.
	San Andres.....	200	"
	Cidras.....	20	"
	Rodeo Grande.....	270	"
	Santa Cruz.....	40	Boeay.
	Cabuyal.....	25	"
Matagalpa.....	Laguna Fea.....	143	Matagalpa.
	Piedra Colorada.....	177	"
	Claro.....	139	"
	Susuli.....	179	"
	San José.....	191	"
	Azanear.....	146	"
	Pueblo Viejo.....	247	"
	Salama Grande.....	228	"
	San Marcos.....	242	"
	Rancho.....	227	"
	Tejas.....	223	"
	Yaula arriba.....	212	"
	San Salvador.....	268	"
	Los Cocos.....	148	Metapa.
	Las Limas.....	144	"
	Totumbilita.....	144	"
	Calpulis.....	138	"
	Macuelizo.....	141	"
	Trujillo.....	144	"
	Chasa Vieja.....	192	"
	El Chaguite.....	168	"
	Las Mesas.....	150	"

Department.	Name.	Population.	Jurisdiction.
Metagalpa.....	Montaña.....	201	Terrabona.
	Rincon.....	213	"
	Apatua.....	169	"
	San Antonio.....	108	"
	El Barro.....	195	Esquipulas.
	Piedras Grandes.....	200	"
	Montaña.....	221	"
	Jamaica.....	160	Soloco.
	Maguica.....	100	"
	Rio Viejo.....	100	"
	Carizo.....	183	San Dionisio.
	Carrizal.....	265	"
	Pacaya.....	255	"
	Tempisque.....	122	"
	Ocole.....	278	"

To give an exact idea of Nicaragua, the following table completes the list of the existing Caserios, as stated in official documents:

Department of Managua.					
Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
San Andres.....	150		Los Narvaez.....	150	
Nandayosa.....	100		San Cayetano.....	130	
El Carmen.....	151		Los Sanchez.....	100	
Las Filas.....	100		Tastoloya.....	180	
San Juan.....	150		Los Gutierrez.....	130	
Santa Ana.....	80		Tragalegua.....	160	
San Joaquin.....	70		Jacobo.....	80	
San Pablo.....	100		Las Mercedes.....	80	
Department of Masaya.					
Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
Los Trapichitos.....	150	Nandamo.	El Portillo.....	100	La Victoria.
Monte Rostondo.....	300	La Victoria.	El Volcan.....	200	Nindirí.
San Ignacio.....	150	La Concepcion.	Tiemanfepe.....	200	"
El Llano.....	250	Masaya	San Caralampio.....	200	La Concepcion.
Los Rincones.....	200	Masatepe.	Los Moncados.....	250	"
El Arenal.....	150	"			
Department of Granada.					
Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
Malacos.....	138	Granada.	Jiguelite.....	48	Granada.
El Capulin.....	274	"	La Grandilla.....	200	Nandaimo.
La Laguna.....	138	"	Santa Juana.....	50	"
San Caralampio.....	19	Nandaimo.	San Ramon.....	30	"
Mombacho.....	65	Granada.			

Department of Carazo.

Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
El Ojochal.....	50	Jinotepe	Aragon.....	100	Jinotepe.
Las Cañadas.....	100	Diriamba.	Tecomapa.....	60	"
Las Cinco Esqui- nas.....	100	San Marcos.	Abompa.....	60	Diriamba.
El Abra.....	50	Jinotepe.	Santa Cruz.....	20	Sta. Teresa.
El Zapotal.....	50	"	Las Cruces.....	50	"

Department of Rivas.

Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
Ostional.....	185	San Juan del Sur	El Limonal.....	133	Buenos Aires.
Sonzapote.....	96	" "	El Mencho.....	175	"
La Cuesta.....	96	" "	El Cocul.....	196	"
Papayal.....	78	" "	San Marcos.....	180	Belen.
Palenque.....	96	San Jorge.	Nata de Caña...	200	"
San Antonio.....	96	"	San Isidro.....	200	Rivas.
Chilate.....	110	Moyogulpa.	El Abompa.....	267	Potosi.
La Concepcion...	210	"	Callo de Enmedio	247	"
San José del Sur	130	"	El Limonal.....	48	"
San José del		"	Paso de Piedra..	62	"
Norte.....	200	Alta Gracia.	Subana Grande..	136	"
Balbué.....	150	"	Pijijé.....	150	"
Urbaité.....	100	"	Las Lajas.....	132	"

Department of Leon.

Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
Platanal.....	128	Leon.	El Tambor.....	68	Santa Rosa.
Avangasca.....	237	"	El Pulito.....	69	"
Barro.....	250	"	El Garrobero...	108	"
Los Ranchos.....	200	"	Tierra nova.....	24	"
Hato Grande.....	225	"	Ojo de agua.....	200	Subtiava.
El Convento.....	250	"	La Platera.....	150	"
Chacra seca.....	221	"	El Terrero.....	100	"
Tolapa.....	200	"	El Chagüe.....	125	"
Tolapita.....	120	"	Cerro Coyote....	84	"
Cerritos.....	100	"	El Parral.....	135	El Sauce
Tierra blanca...	100	"	Petaquillas.....	163	"
Las Tablas.....	50	El Jicaral.	Tololo.....	230	"
La Calera.....	60	"	El Guayabo.....	135	"
Nance dulce.....	150	"	El Jicarito.....	286	Tellica.
El Tule.....	200	"	Las Lajas.....	150	"
Bordos.....	100	Santa Rosa.	Mojon.....	133	"
San Pedro.....	250	"	Los Caraos.....	147	"
Mal Paso.....	100	"	La Platera.....	150	Guezuquague.
Mozotal.....	150	"	Cuatro Esquinas	125	"
El Picacho.....	135	"	El Pascante.....	250	"
El Coyol.....	115	"	Las Tablas.....	144	Achuapa.
Las Cañas.....	100	"	Las Delicias...	158	"
Corralito.....	78	"	Lagartillo.....	125	"
El Jicote.....	105	"			

Department of Chinandega.

Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
San Jos. de Macachin.....	200	Chinandega.	El Guanacastal.....	113	Chichigalpa.
San Jos. de las Lajas.....	80	"	El Bosque.....	95	Posoltega.
Sasama.....	81	El Viejo.	Monte San Juan.....	107	"
Tonolli.....	60	"	El Medrano.....	94	"
Aguate.....	69	"	Valle Viejo.....	167	"
El Pelisco.....	114	Chichigalpa.	La Danta.....	140	Somotillo.
Los Placeres.....	48	"	Palo Grande.....	170	"
El Alto de Tepetate.....	57	"	Pavanita.....	160	"
			Consulta.....	69	"

Department of Chontales.

Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
Santa Rita.....	261	Jingalpa.	Tomatoya.....	100	San Jose.
El Potrero.....	154	"	Pajarito.....	100	"
San Antonio.....	295	"	San Bartolo.....	29	"
La Merced.....	49	"	Buena Vista.....	100	"
El Hatillo.....	30	"	San Francisco.....	80	"
El Potrerillo.....	286	Boaco.	Potrero Cerrado.....	216	S. Pedro de Lévago.
La Pita.....	210	"	La Pintada.....	77	"
La Laguna.....	177	"	Bavadi.....	54	"
El Arado.....	89	Acoyapa.	El Coyol.....	76	"
Guanacastillo.....	159	"	Miluco.....	59	"
San Lucas.....	120	"	Panguazin.....	139	"
La Manga.....	80	"	Palo Solo.....	127	"
Maderas Negras.....	80	"	Llano de los Pedros.....	243	"
Madera de Aguilares.....	70	"	Casa de piedra.....	54	"
Banadi.....	109	"	Cunagua.....	46	"
El Avispero.....	69	"	El Charco.....	49	"
San Ubaldo.....	100	"	Los Meleros.....	109	"
San Jos.....	30	"	El Juste.....	54	"
San Agustin.....	69	"	La Caballada.....	63	"
Agua Buena.....	50	"	Lévago Viejo.....	52	"
El Zapote.....	199	La Libertad.	La Palma.....	59	"
Cerca.....	140	"	San Pio.....	80	San Lorenzo.
Carquita.....	111	"	Sonzapote.....	75	"
Cosmitillo.....	120	"	Corrizal.....	60	"
Caña de Castilla.....	218	"	Quizaltepe.....	49	"
Cerro Grande.....	98	Camoapa.	Ranchos.....	60	"
La Corona.....	115	"	Cascabel.....	96	"
La Calera.....	115	"	Sieerras.....	70	"
Tolimapa.....	81	"	La Joya.....	58	"
Mombacho.....	225	"	Tierra blanca.....	96	"
Las Salinas.....	159	"	Potreros.....	160	"
San Isidro.....	125	"	Portillo.....	45	"
La Palma.....	109	"	Acote.....	15	"
Matumba.....	120	"	Guabas.....	39	"
Las Lajas.....	109	"	San Agustin.....	28	"
Tesorero.....	195	"	Incendio.....	30	"
El Roblar.....	125	"	Laguna.....	49	"
El Pochote.....	220	Comalapa.	Balsamo.....	70	"
San Francisco.....	140	"	El Peñon.....	137	San Miguelitis.
La Concepcion.....	280	"	Terron colorado.....	68	"
San Antonio.....	120	"	Atilas.....	162	Santo Tomas.
Cangrejal.....	180	"	Los Molejones.....	133	"
El Aguacne.....	100	"	Huancas.....	103	"
El Seno.....	100	San Jose.	Santa Clara.....	174	"
Cañada.....	209	"	Jicurito.....	271	"
Barro.....	100	"	Melchor.....	89	San Carlos.
Palancas.....	80	"	Tule.....	50	"
Caña Vieja.....	90	"	Islas de Solentiname.....	150	"
Hatillo.....	110	"			
Majada.....	50	"			

Department of Matagalpa.

Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
San Francisco....	150	Matagalpa.....	Hatillo.....	46	Terrabona.
Buena Vista.....	201	"	Caserios.....	296	"
Cumpilda.....	208	"	Las Piles.....	95	Esquipulas.
Yauli.....	191	"	Santa Cruz.....	25	Sebeuco.
Macaleras.....	138	"	Hatillo.....	80	"
Cacao.....	162	"	Molino.....	80	"
Tajerina.....	191	"	Almirante.....	25	"
Quebrada Honda	156	"	Valle abajo.....	88	"
San Antonio.....	96	Metapa.	Estero.....	39	"
Coyol.....	102	"	Rio Nuevo.....	60	"
Chaguitillo.....	120	"	Paso Real.....	24	"
San Esteban.....	102	"	Chaguitillo.....	50	"
La Vitahaya.....	100	"	Apamico.....	30	"
El Esquiriu.....	50	Muymuy.	Cacao.....	25	"
Bonitos.....	78	Terrabona.	Quebrachal.....	50	"
Poyucuen.....	88	"	Instancia.....	60	"
Santa Rosa.....	96	"	Tamarindo.....	90	"
Piedras Grandes.	37	"			

Department of Jinotega.

Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
Las Lajas.....	131	Esteli.	Gualaza.....	35	Jinotega.
Juanina.....	84	"	Corral de piedra.	80	"
La Pita.....	56	"	Horno y Hatillo.	10	"
La Joya.....	62	"	Limón.....	100	"
Pintadas.....	81	"	Yauli.....	60	"
Limón.....	118	"	Sta. Ana.....	59	"
Ferrero.....	10	"	El Vijagual.....	82	San Rafael del Norte.
Calabaza.....	80	"			
Chicara.....	62	"	El Arco.....	92	"
La Cruz.....	80	"	Concepcion.....	70	"
Carno.....	140	"	Quebrada de arriba.....	83	"
Laguna.....	108	"	Rinconada.....	173	"
Cañada.....	63	"	Potrerrillos.....	60	"
Ajenjal.....	109	"	Vallecillo.....	60	"
Santa Clara.....	111	"	Pavona.....	41	"
Yarull.....	60	"	San José.....	50	La Concordia.
Sontule.....	199	"	Los Pericos.....	23	"
La Caña.....	199	"	Yelunca.....	27	"
Blandon.....	118	"	Quebrada arriba.....	27	"
Rodero Grande.....	81	"	Santa Rosa.....	180	San Isidro.
San José.....	107	"	Sabanetas.....	100	"
Pital.....	266	"	Mal Paso.....	150	"
Agua Fria.....	215	"	Rio Viejo.....	90	"
Montaña.....	270	"	El Bonete.....	89	"
Lagunilla.....	232	"	Guanacaste.....	100	"
Pacaya.....	283	"	Bocny abajo.....	350	Puerto de Bocny.
Despoblado.....	208	"	Rafí y Burimate.....	60	"
Esipal.....	110	"	Laena.....	10	"
Palmita.....	85	Trinidad.	Sisintialca.....	60	"
Coloncito.....	80	"	Sisyeri.....	50	"
Mojon.....	76	"	Turiguas.....	25	"
Llano largo.....	60	"	Craosirpe.....	25	"
Mesa Alta.....	62	"	Quipapiscne.....	25	"
La Loma.....	49	"	Balana.....	80	"
Las Animas.....	36	"	Cajuril.....	60	"
Laguna.....	38	"	Azan.....	25	"
Mochupa.....	84	"	Nahualmas.....	20	"
Cuajinicuil.....	88	"	Colón y Caserios.	70	"
Concepcion.....	86	"	Holusakin.....	50	"
Rosario Nuevo.....	96	"	Wamblan y Poteca.....	30	"
Monte Verde.....	97	"	Quá.....	30	"
Pacaya.....	66	"	Humaca.....	15	"
El Cacao.....	66	"	Oculi.....	25	"
El Horno.....	110	"	Wina.....	40	"
Los Chabuites.....	100	Jinotega.	Atiguas.....	25	"
Jigüina.....	54	"	Walcra.....	25	"
Cal.....	50	"			
Pita.....	59	"			
Chabuites.....	39	"			

Department of Nueva Segovia.

Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
Zapote	54	Somoto.	Los Leones	7	Ciudad Antigua.
Jicarito	70	"	Santa Clara	80	"
Quebrahacha	72	"	San Lorenzo	50	"
Portilla de la Cruz	37	"	Achuapa	70	"
Coyol	30	"	Salamaji	21	"
Jobo	63	"	Arenal	180	Jicaró.
Gaybupabillas	112	"	Sabana grande	77	"
Cosmapa	24	"	Caliejón	49	"
Salamar	60	"	Encinos	176	"
Carranza	84	"	Muyuca	144	"
Nacascólo	73	"	Lajaramica	110	"
Limon	103	"	Las Vueltas	126	"
Sapotillo	65	"	Ologalpa	33	"
Melonar	43	"	Sasacal	36	"
Matasano	131	"	Socorro	10	Murra.
Cascabel	100	"	Montañita	11	"
Cacauli	161	"	Las Carretas	27	"
Sonis	29	"	Candelaria	18	"
La Guayaba	107	"	Camalotal	22	"
Mal Paso	80	"	Las Animas	37	"
Matasano	80	"	Patuli	41	Quilali.
Inali	90	"	Guama	20	"
El Naranjo	128	"	Monte Redondo	47	"
Coyolitos	96	"	Cuntil	42	"
Moropota	25	"	Teocintal	31	"
Agua Nueva	31	"	Estanzuela	52	Limay.
San Antonio	181	Yalagüina.	Guailo	68	"
Cerro Grande	124	"	San Lorenzo	98	"
Samascunda	115	"	La Flor	82	"
Chaguito grande	58	"	Tranqueras	17	"
Trapichito	60	"	Horno	27	"
Rio Abajo	62	"	Quebradas	42	"
La Tuna	57	"	Colocondo	53	"
El Petrero	77	Ocotul.	El Naranjo	24	"
El Jobo	32	"	Pedernal	9	"
Ococona	33	Macuelizo.	San Roque	34	"
Eucino	50	"	Tablas	39	"
Brufil	59	"	Capulin	45	"
Calpules	27	"	Carrizal	18	"
Tragaleguas	26	"	Guarrimo	9	"
Mesa de Alcayan	60	"	Mateore	16	"
El Panisito	40	"	Bumbum	35	"
Ocoté Seco	40	"	Chacara	10	"
Zapotal	126	Santa Maria.	Pahuar	31	"
La Joya	198	"	Pedernal	39	Condega.
Coyolar	161	"	Tule	83	"
Calpules	91	"	Pedraza	43	"
Aguate	172	"	San José	136	"
Caracol	53	Mesonte.	Santa Teresa	47	"
El Robo	31	"	Laguna	97	"
Las Huertas	72	"	Rodeo	64	"
San Antonio	49	"	Rio Arriba	169	"
Dipilito Viejo	44	"	Labranza	192	"
Horno	28	Dipilito.	Cacala	28	"
Apali	21	"	Carao	95	Pueblo Nuevo.
Guineo	103	Ciudad Antigua.	San José	56	"
Zapote	20	"	Sonecan	55	"
Cuecharas	6	"	Calera	63	"
Ramos	15	"	Limon	132	"
Sabanetas	15	"	Guasimo	122	"
Matasano	13	"	Casuali	76	"
Tablazon	9	"	San Antonio	83	"
El Carbon	22	"	Cerro Grande	60	"
Santa Rosa	8	"	La Milla	31	"

Department of Zelaya.

Name.	Pop.	Jurisdiction.	Name.	Pop.	Jurisdiction.
San Vicente.....	58	Gob. Laguna de Perlas.	Ocanguas.....	100	Gob. Cuicuilma.
El Palenque.....	118	"	Pis-Pis.....	100	"
Reyculpura.....	188	"	Des Boens.....	108	Gob. Rio Grande
Cacavilla.....	87	"	Palzaguas.....	65	"
Punta de machete.....	45	"	Borra de Rio Grande.....	112	"
Jalova.....	123	"	Sinquista.....	25	"
Brow Bank.....	100	"	Cucaraguala.....	47	"
Tasbapovine.....	204	"	Sisicuas.....	99	"
Saw Mill.....	111	Gob. Warva.	Quepi.....	54	"
Clyna.....	57	"	Sandy Bay.....	135	"
Carafa.....	88	"	Walpa.....	24	"
Klah.....	91	"	La Luz.....	104	"
Biuly.....	57	"	Rio Rama.....	281	Dis. Siquia.
Tuapy.....	120	"	Bajo San Juan.....	500	Com. S. Juan del Norte.
Kinkira.....	164	"	San Jacinto.....		
Sisusiu.....	56	"	El Almacen.....	1,134	Com. Gracias á Dios.
San Jacinto.....	250	Gob. Punta Gorda	Cabo Gracias á Dios.....		
El Almacen.....	101	"	Crapagua.....		
Punta Gorda.....	200	Com. Gracias a Dios	Behuruna.....		
Cun.....	138	"	Sandi Bay.....	106	"
Wonta.....	180	"	Haya.....		
Sanpuca.....	267	"	Cicelli.....	299	"
Ulnas.....	183	"	Seven Creek.....	116	"
Sanlola.....	46	"	Sawa.....	62	"
Leimus.....	49	"	Bum.....	272	"
Bulsirpi.....	41	"	Andreas.....	241	"
Barra de Prinzapolca.....	78	Dis. Prinzapolca	Rayapura.....	66	"
Halhua.....	181	"	Saelin.....	262	"
Cuculaya.....	216	"	Prausa.....	56	"
Zayasixa.....	225	"	Buebue.....	109	"
Wanta.....	77	"	Umbra.....	138	"
Comualta.....	182	"	Nacuanas.....	35	"
Walpasixa.....	104	"	Cajuro.....	135	"
Tawan Tara.....	7	"	Balana.....	65	"
Wancua.....	18	"	Wailaca.....	..	"
Cuiculifta.....	200	Gob. Cuicuilma.	Pulpa.....	..	"
Tungla.....	150	"	Daca.....	..	"
			San Ramon.....	..	"

The people of Nicaragua are distributed in :

155	communities,	each with	50	or less	inhabitants.
248	"	"	50	to	100
383	"	"	100	"	250
157	"	"	250	"	500
62	"	"	500	"	1,000
16	"	"	1,000	"	1,500
11	"	"	1,500	"	2,000
8	"	"	2,000	"	3,000
9	"	"	3,000	"	5,000
3	"	"	5,000	"	7,500
2	"	"	7,500	"	10,000
2	"	"	10,000	"	15,000
1	"	"	25,000	"	"
1	"	"	45,000	"	"

Total, 1,058 communities, with 423,199 inhabitants.

¹ This figure may be an error of the census. ² See first note. ³ This number of houses may also be a mistake.

Studying the census lists the reader will find a great number of anomalies. There are cities, like San Juan del Sur and Ciudad America, and towns like Realejo and Trinidad, with a very reduced population (Realejo not having more than 73 inhabitants); and, on the other hand, caserios like San Buenaventura, Tasagua y Aguasca, La Pueblo, and five others, with over 1,000 inhabitants, and villages like Subtiava and Sauce¹ with over 7,500 inhabitants.

Stranger still is the comparative small population in some cities, as Granada² with 4,494 houses and only 9,086 inhabitants, or Rivas³ with 1,510 houses and only 3,800 individuals, while other cities have comparatively a very dense population, like Leon with 45,000 people in 4,570 houses, Managua with 25,000 persons in 3,030 houses, El Sauce with 7,500 inhabitants in 500 houses, Juigalpa with 2,796 people in 150 houses, and El Viejo with 4,021 people in 131 houses.

The following table exhibits the relative numbers of Indians of pure blood and of Ladinos (who comprise white people, negroes, zambos, mestizos, mulattoes and other colored population), and also the morality and mortality of population:

Departments.	Inhabitants.	Communities.	Births.					Deaths.					Difference. Augmentation.
			Ladinos.	Indians.	Illegitimate.	Legitimate.	Total.	Ladinos.	Indians.	Adults.	Children.	Total.	
Leon	87,772	87	1115	112	625	605	1227	377	103	176	178	480	747
Managua	42,460	32	580	52	261	372	632	262	28	117	71	290	342
Chontales	40,387	151	716	497	461	752	1213	216	227	160	183	443	770
Jinotega	37,653	185											
Nueva Segovia....	32,642	229	1788	843	889	1712	2631	764	572	434	493	1336	1295
Chinandega	34,614	62	563	50	321	292	613	360	48	153	151	408	205
Masaya	33,869	27	233	562	306	399	795	110	346	120	221	456	339
Matagalpa	29,895	103	533	455	245	735	988	206	94	57	116	300	688
Rivas	25,883	50	539	146	306	289	685	247	35	127	81	282	403
Granada	18,938	22	756	159	597	318	915	353	55	124	156	408	507
Carazo	18,545	21	257	264	240	281	521	96	94	62	66	150	331
	402,658	969	7080	3140	4427	5755	10,220	2991	1602	1520	1666	4583	5627

In this table, for want of data, the entire population of the Atlantic coastland, 89 communities with 20,541 inhabitants, has been excluded.

In comparing this census with the above demographic table, which embraces the entire year of 1896, and which is also made out of official data, new abnormalities appear. Not counting the comparatively low death rate and the widely differing and unequal augmentation of the people in different departments, the whole population appears in the census as too small and seldom in correspondence with the relations of births and deaths.

Each Department is governed by a "*Geefe politico*," who, at the same time, is "*Sub-delegado de Hacienda*," "*Inspector-General de Instruccion publica*," "*Geefe de Estadistica*," and, with the exception of Managua, Granada and Leon, also "*Comandante de Armas*." The Departments are sub-divided into cities (*ciudades*), towns (*villas*), villages (*pueblos*), valleys (*valles*) and *caserios*. The first three of these are further sub-divided into "*cantones municipales*" and "*cantones electorales*." The same three divisions have municipal boards (*juntas municipales*). From the military standpoint the Republic is divided into "*gobernaciones departamentales*," "*mayorias de plaza*" and "*comandancias locales*." Besides each economic district has an "*Administrador de Rentas fiscales*," and each judicial district one or more judges of first instance for civil matters, and one or more for criminal matters.

Since 1896 Nicaragua, with Honduras and Salvador, has been a State of the *Republica Mayor de Centro-America*. This new federation is represented for its exterior relations by a board called "*Dieta*," of three, one of whom is appointed by the legislature of each State. At the same time a substitute for each is designated. Each State by itself has a representative government, with alternating official terms, the powers of which are divided between legislative, executive and judicial branches. The Congress of Nicaragua is composed of 24 deputies, who meet generally each year in August for 60 consecutive sessions. The executive power of Nicaragua is exercised by a President elected directly for a term of four years. He is associated with a Minister of "*Gobierno*," a Minister of

"Fomento," a Minister of "Hacienda," a Minister of "Guerra y Marina," and a Minister of "Instruccion publica." The President is also General-in-Chief of the Army. The judicial power is vested in a Supreme Court of Justice, in two Chambers of Second Instance and in judges of inferior tribunals. The present President, General Santos J. Zelaya, whose first term ended on the first of February, 1898, has been elected for a second term.

His cabinet and the other chief officers of State are as follows:

General Erasmo Calderon	Minister of Interior, Police, etc., Premier.
Engineer José Antonio Roman	" " Public Works.
Señor Enrique C. Lopez	" " Finance and Commerce.
General Erasmo Calderon	" " War and Navy.
Señor J. Muñoz	" " Fomento, Acting.
Señor T. Castillo	Director-General of Post and Telegraph.
Señor Tiburcio G. Bonilla	President of the Supreme Court.

Other important authorities are the *Gefes politicos*, or Governors, of the different Departments, as:

General Domingo Lacayo, Xerez	for Carrazo.
Col. Feliz Pedro Zelaya,	" Chinandega.
Col. Carlos Zubiria,	" Chontales.
General Juan Bodan,	" Granada.
General Nicasio Vazquez,	" Leon.
Francisco Guerrero,	" Managua.
Dr. José Perez S.,	" Masaya.
General Rullings,	" Matagalpa.
J. Padilla,	" Nueva Segovia.
Gerardo Barrios,	" Rivas.
General Pablo Reyes	" Zelaya.

The Captains of the Ports are:

Col. D. Estrada	For Corinto.
Manuel Antonio Aguilar	" San Juan del Sur.
E. Espinoza	" San Juan del Norte.

V.

PUBLIC INSTRUCTION.

In 1890 there were 263 primary and intermediate national schools, with 303 teachers and 16,554 pupils of both sexes; 10 municipal schools, with 15 teachers and 871 pupils; 37 private schools, with 95 teachers and 1,895 pupils; 2 normal schools for young men, with 42 professors and 724 students; 1 normal school for young women, with 9 professors and 117 students; and 2 universities, with 10 professors and 40 students; a total of 315 institutions, with 474 teachers and 20,305 pupils and students.

During the revolution of 1893 a great number of national schools were closed, and in 1894, of the above mentioned high and private schools, there were only 193 in operation, as follows:

Department.	Schools.	Department.	Schools.
Managua.....	12	Matagalpa.....	12
Chinandega.....	26	Rivas.....	12
Jinotega and Nueva Segovia.....	33	Carazo.....	10
Granada.....	12	Chontales.....	21
Masaya.....	18	On the Atlantic coast.....	6
Leon.....	31		

Since then, and especially since 1896, the government has reopened some schools. Also a faculty of medicine and a

law school were founded recently in the capital, Managua, and new private schools have been established. There are now about 46 schools more in operation, especially in the Departments of Granada, Jinotega, Nueva Segovia, Matagalpa, Rivas, Chinandega and in the territory along the Atlantic coast. Most of the schools are located in the large cities, as Managua, Leon, Granada, Masaya, Chinandega and Rivas, but besides nine large communities, with from 5,000 to 45,000 inhabitants, there are 263, with from 250 to 5,000 inhabitants, which have in all only about 291 institutions for public instruction. The population of Nicaragua still ranks low in education. No census has yet been made to ascertain how many persons know how to write and read. The mass of the people, there is no doubt, is entirely ignorant.

This fact cannot be more forcibly stated than in the words of a competent and well-authorized government official.

The Inspector-General of Public Instruction, Mr. I. Alberto Gamez, says in his recently published annual report of 1895: "No tenemos maestros, no tenemos mobiliario, no tenemos útiles, no tenemos edificios; en una palabra, en la República no existe la escuela," ("we have no teachers, we have no furniture, we have no teaching material, we have no schoolhouses; in one word, the Republic has no school"). The same government official further says, "that in Granada and Leon (the most civilized cities of the country) there are 30 per cent. of the children enrolled; but only 15 per cent. learn the few things that are taught, and as the number of the enrolled represents really no more than a fifth of the children who ought to go to school, only 3 per cent. acquire these few things."

VI.

AGRICULTURE.

The principal agricultural product of Nicaragua is coffee (*Coffea arabica*). The amount of this berry raised shows the cultivation of the coffee tree to be very extensive. The number of trees growing in the different Departments is approximately as follows:

Department.	Number of Trees.	Department.	Number of Trees.
Managua	9,761,500	Nueva Segovia.....	531,100
Carazo	6,000,000	Chontales.....	500,000
Matagalpa.....	4,500,000	Chinandega.....	500,000
Masaya	2,549,900	Rivas.....	150,000
Jinotega.....	1,580,000		
Granada	1,000,000	Total.....	27,072,500

An official publication of 1894 shows 32,375,696 trees under cultivation, with 23,000,000 in Managua alone, which is an exaggeration so far as that Department is concerned. As in the coffee region almost everybody has some trees under tillage, their real number it is very difficult to ascertain. There are over:

250 large coffee fincas in the Department of Managua.					
520	"	"	"	"	Carazo.
100	"	"	"	"	Matagalpa.
90	"	"	"	"	Jinotega.

The principal coffee-finca owners in the Department of Managua are P. M. Eisentuch (900,000 trees); Salvador Cas-

trillo (720,000), Ignacio Paez (200,000), José Maria Falla (200,000), Arturo Lizondo (153,000), Angel Robleto (150,000), Daniel Frixione (150,000), Morris Heyden & Co. (140,000), Ramon Sanz & Co. (125,000), Maximo Lopez (120,000), Teodoro Hock (110,000), Salvador Bermudez (100,000), Francisco Solorzano L. (100,000), Rafael Cabrera (100,000), Terencio Garcia (100,000), etc.

The principal proprietors of coffee plantations in Jinotega are Alberto Peter, J. J. Bermudez, Palacio J. Vivas, Arana & Lacayo, Alfaro & Gutierrez, Espinozas & Pando, Talavera Hermanos, Lacayo & Robleto, Marcos A. Lacayo, Tomas Lacayo, Margarito Zamora, and others.

Large coffee-finca owners in the Department of Carazo are Desiderio Roman, Testamentary Pareval J. M. Sanchez, Juan P. Meda, Roman Castillo, Cleto Asenjo, José A. Hernandez, Gregoria V. de Jimenez, Magdalena Acevedo, Salvador Garcia, Manuel Ortega, Gregorio Pena, and others.

Those in Jinotepe are Rapassoli & Hermanos, Vicente Rodriguez, Testamentary Julian Parrales, José Antonio Gonzalez, Enrique Baltodano, José Gonzalez, Francisco Gonzalez, Julio Castro, and others.

Those in Diriamba are Lacayo Hermanos, Juan Quintero, Los Chamorros, Isandro Plata, Pedro Ortego, Chamorro Hermanos, Anastasio Gonzalez, José Robleto, Donoso Martinez, Dr. Ramirez, Francisco Artolo, and others in San Marcos.

Some of the largest proprietors of coffee plantations in Matagalpa are Guillermo Jericho, Charles T. Manning (representing a number of American companies), Narciso Lacayo, Fernando Lopez, Cosme Pinedo, Guillermo Sheridan, Lopez & Zaguire, Gen. A. Metrailler, Carlos Leclair, Vega & Cantarero, Salvador Chamorro, Horacio Bermudez, José Vita, Salvador Cuadra B., and others.

The American coffee companies in Matagalpa are the Indiana Coffee Co. (\$50,000), Jumaiqui Coffee Co. (\$50,000), Esmeraldo Coffee Co. (\$40,000), Jilgueros Coffee Co. (\$30,000), all managed by Chas. T. Manning; also San Francisco Coffee Co.; Matagalpa Coffee Co. (\$25,000); Nicaragua Land

and Coffee Co. (\$50,000); the Minnesota and Nicaragua Coffee Co. (\$60,000); and the California Improvement and Commercial Co. (\$50,000).

The coffee tree yields, when 3 years old, little fruit.

"	"	"	"	4	"	an average of $\frac{1}{4}$ lb.
"	"	"	"	5	"	from $\frac{1}{2}$ to 1 lb.
"	"	"	"	6	"	and thereafter, $1\frac{1}{2}$ to 2 lbs.

In the commercial statistics are stated the quantities of coffee which were exported in 1896 and 1897, as well as in a number of years before.

The government encourages the cultivation of coffee by paying five cents for each tree to planters having 5,000 or more plants under cultivation in the Departments of Nueva Segovia, Chontales, Matagalpa and Jinotega. Twenty-one cents are paid for each cacao tree and ten cents for each rubber tree.

In regard to cacao the Department of Rivas twenty years ago had about 1,000,000 cacao trees under cultivation; to-day this number is reduced over one-half, partly by negligence, partly by insufficient rainfall during a number of years, and also by the eruption of the Ometepe in 1883, which destroyed a number of plantations with its ashes. Cacao is further produced in Chontales, Chinandega and Carazo, as well as in Granada, and especially in the region called "Valle Menier," where a plantation was founded years ago by the celebrated chocolate house of Menier in Paris, but the yield is not sufficient in quantity for export. There are new plantations of cacao along the San Juan River, and also plantations of the indigenous rubber tree (*Castilloa elastica*).

The government has paid premiums to the following cacao growers; in Chinandega to Fulgencio Mayorga for 3,787 trees, Alberto Gamez for 3,998, Isidro Cornejo for 6,392, Mariano & A. Arguello for 44,258 and Pablo E. Schubert for 8,688; in Rivas to Vicente S. Urcuyo for 22,300 trees, Isidro Urtecho for 8,754, Manuel Maliaño for 12,323 and Francisco Sacasa for 21,552; making a total of 132,052 cacao trees.

There are some rubber plantations in Rivas; one of 15,000 trees from 6 to 12 years old exists in Santa Fé,

near Buenos Aires, about one and a half leagues from Rivas. As no premiums have yet been paid for plantations of rubber no more details can be obtained.

Premiums were paid for indigo produced in the Department of Rivas to Manuel Antonio Carazo for 366½ pounds, Augusto Cavalli G. for 6,746, Vaughan Hermanos for 2,200, Ximenez & Hermanos for 1,087, or, altogether, for 10,399½ pounds.

The cultivation of indigo is no longer profitable, and only in a few places in the Departments of Rivas, Carazo and Chinandega is the plant (*Indigofera añil*) still cultivated.

The *cabulla* (*Agave*) and *pitañoja*, for which also premiums have been offered, are mostly cultivated in Telica, Quezalguaque and Subtiava in the Department of Leon, and in less quantity in Chinandega, Chontales and Nueva Segovia. Both plants are found nearly everywhere in all Departments, and are partly used for domestic purposes.

Tobacco is especially cultivated in the Department of Masaya and out of thirty-three planters in the city of Masaya, Leopoldo Solano had 90,000 plants, José de Castro 60,000 Anguiz 55,000, and Carlos Abanuza 45,000. In Masatepe there were 500,000 tobacco plants cultivated, and Victoria yielded a crop of 200,000 pounds of leaves.

In regard to corn, beans, mandioca, flame, potatoes, bananas, pineapples, rice, sugar cane, sorghum, cereals, vegetables, fruit trees, grapes, etc., no reliable data were to be obtained either as to the area devoted to them or the amount of the crops.

There are a great number of fincas (plantations) in every Department; for instance, Chinandega has 926, Carazo 743, Jinotega 679, Matagalpa 716, Chontales 829, etc., if the official cadastre in the Department of Interior is correct. Nearly every family of the rural population tills a little farm, often rented from a large land owner. They always raise bananas, corn, beans and some fruit trees, generally jocote (*Spodias edulis*), mango (*Mangifera indica*) and orange.

A great number of fincas is used for cattle farming, especially in Leon, Chontales, Chinandega, Nueva Segovia,

Jinotega, Rivas and Managua. According to some statistical data there were about:

50,000 head of cattle in Leon.			20,000 head of cattle in Rivas.		
50,000	"	Chinandega.	18,000	"	Matagalpa.
40,000	"	Chontales.	15,000	"	Granada.
40,000	"	Managua.	10,000	"	Masaya.
35,000	"	Nueva Segovia.	5,000	"	Carazo.
25,000	"	Jinotega.	5,000	"	Zelaya and Atlantic coastlands.
Total,			313,000		

There are also about 32,000 horses and mules in the country. Swine are seen everywhere, even in the streets of the cities. There are a small number of goats, and a few sheep. Poultry is raised in immense quantity, and this as well in the large cities as in the valleys and caserios.

In order to promote the improvement of live-stock and the increase of vegetable products, as well as colonization, the government gives premiums for the introduction of high grade animals for breeding, and pays, for instance in the Department of Zelaya for 5 years 3 pesos for 1 hectare of wheat, 4 pesos for 1 hectare of sugar cane, 3 pesos for 1 hectare of tobacco, 3 pesos for 1 hectare of rice, 2 pesos for 1 hectare of beans, 2 pesos for 1 hectare of corn, 2 pesos for 1 hectare of potatoes, 2 pesos for 1 hectare of pasturage.

VII.

INDUSTRIES.

The liquor business is a monopoly of the government, which sells the products of the great distilleries. Sugar cane is the raw product from which the liquor, known as aguardiente, is distilled. The following is a list of the existing distilleries.

Department.	Name.	Department.	Name.
Chinandega	San Antonio, Ch.....	Granada.....	San Rafael.....
	San Antonio, B.....		San José.....
	San Isidro.....		El Pital.....
	San Jerónimo.....	Carazo	El Sol.....
Leon	La Gloria.....		Santa Cecilia.....
	Corcuera.....		San Jacinto.....
	El Polvon.....	Rivas.....	La Asuncion.....
Managua	El Polvoncito.....	Chontales.....	San Benito.....
	Santa Rosa.....	Jinotega.....	Las Pías.....
	El Trapichito.....	Nueva Segovia..	Las Delicias.....
Masaya.....	Santa Rosa.....		Pasmata.....

The partly corresponding revenue from liquors in 1896 was in pesos as follows:

Managua	118,260.05	Rivas	23,787.98
Leon	50,492.65	Chontales	26,683.01
Granada	77,716.49	Matagalpa	12,980.00
Chinandega	52,634.68	Nueva Segovia	4,400.44
Masaya	84,504.87	Jinotega	8,740.88
Carazo.....	36,742.63	Total.....	505,992.72

These distilleries are large producers of sugar and syrup, products which are also manufactured in small quantities all over the country, especially in the Departments of Chinandega, Leon, Managua, Masaya, Carazo, Granada and Jinotega.

Some indigo is produced in the Departments of Rivas and Carazo; starch in Masaya, Rivas, Chinandega and other Departments; cheese in Chontales, Leon, Chinandega, Rivas, etc.; soap in Leon, Managua and Granada; cigars and cigarettes in Masaya and Managua; salt in Chinandega, Rivas, Leon and Managua, along the Pacific coast; earthenware especially in Masaya, Granada, Leon and Rivas, but also in several other Departments; matting of palm and other leaves, as well as baskets, straw hats and hats made out of palm leaves and Panama hats made out of *Carludovica palmata*, called *jipijapa*, chiefly in Rivas, Nueva Segovia and Masaya, there being in the latter Department about 600 people whose sole occupation is making hats; in these Departments and in Chinandega and Chontales hammocks, ropes and similar goods are made of cabulla (*Agave*) and pita floja.

Another domestic industry is the carving of coco nuts, calabases and horns, done mostly by women in Rivas, Carazo, Masaya and a few other places. In the same category falls the production of artificial flowers, all kinds of feather work and figures and fruits made of wax, as well as cotton and woolen cloth and other textiles. These products come from nearly every Department. There is only one textile factory in Leon, which also has an ice factory. Another ice factory exists in Managua, and others are under way in Granada and Bluefields. In these three cities there are on a small scale also factories in which machinery is employed for making bricks, tiles, shoes and furniture.

There are saw mills in Leon, Viejo, Chinandega, San Antonio, Managua and Waua in which American machinery is used. Other industrial establishments are tanneries in Leon, Chinandega, Segovia, etc., as well as establishments for cleaning and drying coffee, which abound in the coffee districts of Carazo, Managua, Matagalpa, etc. Further, in Santa Teresa there is an establishment for extracting yellow dye from the mora or fustic tree. In Nueva Segovia, Jinotega and Mantagalpa balsam, liquidambar, turpentine and vegetable wax are produced.

Counting the shops of carpenters, shoemakers, blacksmiths, tailors, silversmiths, saddlers, etc., it would appear,

from official data, that there were over 100 industrial establishments in the city of Managua, 200 in Masaya, 171 in Leon, 134 in Rivas, 90 in Granada, 83 in Jinotega, 43 in Chinandega, 43 in El Viejo, 30 in Matagalpa, 20 in Jinotepe, 18 in Diriamba, and 16 in Ocotal.

Mining industries exist in the Departments of Chontales (La Libertad), Matagalpa, Nueva Segovia, Prinzapolca and Cabo de Gracias á Dios.

VIII.

FINANCE.

Since 1893 Nicaragua has been the scene of constant revolution, so that statements of the present resources and expenses do not correspond with what they would be in normal conditions of peace.

The revenues of the country are derived from duties on imports, and on exports of coffee, from stamps, government monopolies in liquors, tobacco and powder, and some small taxes. There are no taxes on coffee lands. In the above statement will be seen the small proceeds of a tax on capital.

A new tariff has been prepared, the publication of which is expected soon. Municipal taxation is moderate, and in smaller communities it is low, because of the primitive manner of living.

The government is the owner of three steamers and of the railroads.

Silver is the standard money of the country, in which the paper currency is redeemable. Gold has naturally to be bought at high price.

The foreign and interior debts, inclusive of the loan of 1886 and the Guirola debt, amounted in August, 1897, to 6,000,000 pesos in round numbers, of which 3,368,433.41 constituted the interior debt. In October of 1897 the national treasury had the following standing:

ASSETS.**Cash and Portefeulle:**

Cash	\$182,183.42	
Reserves for distillery centres.....	3,663.64	
Bills receivable.....	152,118.95	
Exchange bills for tobacco.....	16,954.00	\$354,920 01

Rents and Contributions:

Direct tax on capital.....	1,138.50	
----------------------------	----------	--

Inventory:

Public property, railroads, steamers, telegraph and post.....	5,500,000.00	
--	--------------	--

Different Accounts:

Voluntary supplements.....	1,273.00	
Materials for consumption.....	113,359.64	
Various active debts	276,411.00	
Debt from Public Instruction.....	3,838.40	
Cable Company.....	77,894.39	
Agents of Government in Exterior.....	174,287.69	
Railroad to Los Pueblos.....	120,000.00	
Deposits of bonds of territ. credit.....	96,080.00	
Railroad credits.....	100,000.00	963,144.12

\$6,819,202.63

LIABILITIES.**Cash and Portefeulle:**

Accounts payable.....	\$19.26	
-----------------------	---------	--

Different Accounts:

Supplements in favor of various accounts	\$78,409.84	
Deposits.....	459,325.06	
Bills of the Nat. Treasury.....	493,500.00	
Bonds of Custom House, 1891.....	2,297.74	
Bonds of territ. credit, 1893.....	94,594.04	
Orders against the Treasury.....	462.04	
Orders to the porter.....	150,938.37	
Orders of 30 per cent.....	.52	
Different passive debts.....	836,258.76	
Interior loan, 1895.....	9,489.74	
Forced loan, 93-94.....	91,180.67	
Constancy of excess of duties.....	3,856.03	
Loan of 1896.....	332,195.18	
Forced loan of Leon.....	8,401.40	
Spec. contributions.....	7,282.00	
Voluntary loan.....	3,055.00	
Institute of Managua.....	179.68	
Foreign loan, 1886.....	2,628,519.38	
Credit of Emp. Nic. C.....	294,767.57	
Loan of foreign Colony.....	32,500.00	
Vol. contributions to R. R. dividends...	7,400.00	
Value of Railroad credit.....	100,000.00	
Recognized expenses.....	6,103.20	5,640,216.22

Balance.....	1,178,967.15	
--------------	--------------	--

\$6 819,202.63

There is but one bank in the country, the London Bank of Central America, Limited. Its headquarters are in Managua, but there are branches in Granada and Leon, and agencies in Massaya, Corinto and Rivas. There is another bank of the same name in Salvador, which has branches in Sonsonate, Santa Ana and San Miguel. About the operations of the bank in Nicaragua little information was obtainable, but a general statement from its manager, Mr. A. M. Bayan, in Managua, namely a printed report of the 23d of April, 1897, shows that the bank has an authorized capital of £600,000, of which £135,500 are paid in. The net profits of 1896 were £18,741; dividends of 8 per cent. were paid, leaving £7,956.16.4 for reserved fund and new account.

IX.

NATIONAL WEALTH.

According to data obtained from the Minister of the Interior, the property of Nicaragua and its national wealth are appraised as in the tables below. As these tables distinguish between rural and urban properties, a table is first given from which the ratio between rural and urban populations can be calculated, although it must be noted that most of the rural property is owned by the urban population.

Departments.	Total Population.	Urban Population.	No. of Cities, Towns and Villages.	Rural Population	No of Valleys and Caserios
Managua	42,460	37,800	7	4,660	25
Masaya	33,869	28,349	8	5,520	19
Granada	18,038	15,859	4	2,179	18
Carazo	18,545	16,375	6	2,170	15
Rivas	25,883	14,078	12	11,805	38
Leon	87,772	72,800	9	14,972	78
Chinandega	84,614	26,593	12	5,021	50
Chontales	40,387	9,730	13	30,648	138
Matagalpa	29,895	9,054	7	20,841	90
Jinotega	37,653	7,025	7	30,028	178
Nueva Segovia	32,612	6,579	18	26,033	211
Zelaya	14,511	5,825	2	8,716	52
San Juan del Norte	2,000	2,000	5	.....	.....
Cabo Gracias a Dios	4,000	.....	.....	4,000	30
Total	423,199	252,676	110	170,523	948

VALUE OF THE URBAN PROPERTIES IN NICARAGUA IN PESOS.

Department of Managua.		Department of Leon.	
Managua	2,744,333.38	Leon	787,427.07
Nagarote	1,200.00	El Sauce	4,152.00
San Rafael del Sur	2,132.00	Tolica	800.00
Total	2,747,665.38	Total	741,879.07

VALUE OF THE URBAN PROPERTIES IN NICARAGUA
IN PESOS.—*Continued.*

Department of Granada.

Granada.....	2,570,562.90
Dirla.....	3,660.00
Dirlomo.....	13,419.00
Nandulme.....	23,818.00
Total.....	2,611,489.90

Department of Carazo.

Santa Teresa.....	8,530.00
San Marcos.....	44,850.00
Jinotega.....	235,365.00
Dirlamba.....	100,170.00
Total.....	388,915.00

Department of Jinotega.

Jinotega.....	101,278.00
La Concordia.....	1,085.00
San Isidro.....	410.00
San Rafael del Norte.....	1,610.00
Esteli.....	40,265.00
La Trinidad.....	5,100.00
Total.....	149,698.00

Department of Matagalpa.

Matagalpa.....	191,637.00
San Dionisio.....	100.00
Metapa.....	830.00
Muyumuy.....	11,925.00
Sébaco.....	245.00
Terrabona.....	80.00
Total.....	204,817.00

Department of Chinandega.

Chinandega.....	310,763.00
Chichigalpa.....	35,560.00
Corinto.....	55,477.25
Pasoltega.....	5,950.00
Somotillo.....	7,937.00
El Viejo.....	7,562.00
Villanueva.....	1,000.00
Total.....	424,219.25

Department of Masaya.

Masaya.....	410,629.64
La Concepcion.....	11,480.00
La Victoria.....	14,660.00
Nastepu.....	56,630.00
Nandulme.....	700.00
Catarina.....	635.00
Tiama.....	14,477.00
Total.....	515,211.64

Department of Rivas.

Rivas.....	487,859.77
Alta Granada.....	8,254.50
Belen.....	2,920.00
Buenos Aires.....	7,740.00
Moyogalpa.....	1,700.00
Potosi.....	36,800.00
San Jorge.....	11,894.00
San Juan del Sur.....	9,000.00
Total.....	566,168.27

Department of Nueva Segovia.

Fomoto.....	9,459.00
Ciudad Antigua.....	240.00
Jalapa.....	3,600.00
Jicaro.....	5,200.00
Macuelizo.....	130.00
Mosote.....	70.00
Ocotol.....	55,155.00
San José de Quilal.....	210.00
Santa Maria.....	400.00
Telpanceca.....	2,875.00
Condega.....	1,500.00
Total.....	78,820.00

Department of Chontales.

Juigalpa.....	44,162.80
Acota.....	250.00
Acoyapa.....	23,248.00
Banco.....	18,680.00
Cainopa.....	22,300.00
El Castillo.....	14,362.00
Comalapa.....	6,100.00
La Libertad.....	22,350.00
San Carlos.....	1,600.00
San Lorenzo.....	730.00
San José.....	1,614.00
San Miguel.....	2,785.50
San Pedro.....	3,165.00
Santo Tomas.....	200.00
Total.....	161,545.10

Resumé.

Managua.....	2,747,665.38
Leon.....	741,879.07
Granada.....	2,611,489.90
Carazo.....	388,915.00
Jinotega.....	149,698.00
Matagalpa.....	204,817.00
Chinandega.....	424,219.25
Masaya.....	515,211.64
Rivas.....	566,168.27
Nueva Segovia.....	78,820.00
Chontales.....	161,545.10
Total Pesos.....	8,590,428.70

VALUE OF THE RURAL PROPERTY IN NICARAGUA IN PESOS.

Department of Carazo.

Diriamba.....	840,399.00
Jinotepe.....	1,413,688.10
San Marcos.....	574,637.00
Santa Teresa.....	42,885.00
Other Districts.....	491,839.00

Total..... 3,362,948.10

Department of Chinandega.

Corinto.....	255,133.76
Chinandega.....	901,035.41
Chichigalpa.....	102,287.74
El Viejo.....	70,450.00
Posoltega.....	32,740.00
Somotillo.....	32,950.00
Villanueva.....	16,260.00

Total..... 1,410,756.91

Department of Chontales.

Acoyapa.....	93,619.00
Acosta.....	9,100.00
Boaco.....	54,960.64
Camasca.....	87,853.00
Comalapa.....	43,638.00
El Castillo.....	8,645.00
Juigalpa.....	188,616.20
La Libertad.....	248,288.00
San Carlos.....	10,000.00
San José.....	14,332.00
San Lorenzo.....	7,364.00
San Miguel.....	11,011.00
San Pedro.....	38,686.00
Santo Tomas.....	26,630.00

Total..... 842,626.84

Department of Granada.

Diria.....	44,250.00
Diriomo.....	83,583.00
Granada.....	8,671,679.31
Nandaimo.....	100,822.00
Panuloya.....	1,760.00
Other Districts.....	15,840.00

Total..... 8,817,940.31

Department of Jinotega.

Concordia.....	23,211.00
Jinotega.....	440,288.86
San Isidro.....	2,450.00
San Rafael del Norte.....	24,145.00
Esteli.....	278,867.72
La Trinidad.....	13,162.00

Total..... 786,124.58

Department of Leon.

El Sauce.....	58,758.20
Leon.....	2,718,572.94
Telica.....	6,631.00

Total..... 2,778,962.14

Department of Managua.

Managua.....	9,515,675.09
Monimombo.....	15,300.00
Nagarote.....	11,010.00
San Rafael del Sur.....	33,263.00

Total..... 9,573,248.09

Department of Masaya.

Catarina.....	5,392.00
La Concepcion.....	181,463.00
La Victoria.....	78,105.00
Masaya.....	2,194,402.00
Musatepe.....	419,348.00
Nandasimo.....	10,540.00
Tisma.....	66,308.00

Total..... 2,906,618.00

Department of Nueva Segovia.

Ciudad Antigua.....	7,650.00
Julapa.....	37,229.00
Jicaro.....	106,980.00
Macuelizo.....	7,656.00
Mosote.....	8,433.00
Ocotul.....	177,554.00
Somoto.....	122,698.00
San José de Quilali.....	6,000.00
Sta. Maria.....	9,350.00
Telpateca.....	14,890.00
Condega.....	19,113.50

Total..... 510,952.60

Department of Rivas.

Alta Gracia.....	25,847.57
Belon.....	23,500.00
Buenos Aires.....	4,440.00
Moyogalpa.....	7,635.00
Potosi.....	104,392.00
Rivas.....	1,671,968.99
San Jorge.....	125,151.73
San Juan del Sur.....	22,340.00

Total..... 1,985,247.29

Department of Matagalpa.

Matagalpa.....	896,938.84
Metapa.....	8,628.10
Muymuy.....	76,916.00
San Dionisio.....	7,100.00
Sibaco.....	4,748.75
Terrabona.....	2,416.00

Total..... 997,265.69

Resume.

Managua.....	9,578,248.00
Granada.....	8,817,940.31
Carazo.....	8,362,948.10
Masaya.....	2,906,618.00
Leon.....	2,778,962.14
Rivas.....	1,985,247.29
Chinandega.....	1,410,756.91
Matagalpa.....	997,285.69
Chontales.....	842,626.84
Jinotega.....	786,124.58
Nueva Segovia.....	510,962.50
Total pesos.....	33,972,693.45

Arranging the different Departments in the order of their relative wealth, the following result is reached:

Department.	Millions of Pesos.	Department.	Millions of Pesos.
Managua.....	12.32	Chinandega.....	1.83
Granada.....	11.42	Matagalpa.....	1.20
Carazo.....	8.75	Chontales.....	1.00
Masaya.....	8.72	Jinotega.....	0.98
Leon.....	8.52	Nueva Segovia.....	0.59
Rivas.....	2.54		

The principal cities in their appraisalment of property have the following order:

Cities.	Total in Pesos.	Urban Property in Pesos.	Rural Property in Pesos.
Managua.....	12,260,008	2,741,333	9,516,675
Granada.....	11,142,241	2,570,562	8,571,679
Leon.....	3,451,000	737,427	2,713,572
Masaya.....	2,611,031	416,629	2,194,402
Rivas.....	2,159,842	487,859	1,671,983
Jinotega.....	1,649,053	285,365	1,413,688
Chinandega.....	1,211,798	310,763	901,035
Matagalpa.....	1,088,570	191,637	896,933
Diriamba.....	940,569	100,170	840,399
San Marcos.....	619,487	44,850	574,637
Jinotega.....	541,516	101,228	440,288

In another order follow the Departments in regard to their contributions to the national treasury, which is as follows:

Carazo, Granada, Managua, Leon, Masaya, Matagalpa, Jinotega, Nueva Segovia, Chinandega, Rivas and Chontales. Custom houses have the following relative importance, Corinto, San Juan del Norte, San Juan del Sur and Bluefields.

X.

COMMERCE.

The following data are due to the German Consul, Mr. Carl Heyden, who, at the expense of the German Government, with the help of the Chief of Statistics and of Custom House Officials, brought them together. They relate to the year of 1896 and partly, for comparison, to 1895:

Importation.			Exportation.	
	Pesos. 1895.	Pesos. 1896.	Pesos. 1895.	Pesos. 1896.
Germany.....	683,074.41	929,939.84	2,973,318.53	2,286,145.83
Great Britain.....	1,483,572.22	1,427,385.48	684,798.00	729,696.63
United States.....	719,253.10	676,372.91	997,649.95	1,008,715.96
France.....	371,881.51	477,611.27	285,954.20	386,661.89
Italy.....	23,876.94	43,250.00	211,062.20	273,627.50
Spain.....	9,620.39	12,185.55	.....	.....
China.....	12,622.50	7,952.50	.....	.....
Colombia.....	6,629.85	9,947.01	8,500.00	23,500.00
Chile.....	12,071.13	7,250.81	.....	.....
Mexico.....	9,177.65	6,963.09	.....	.....
Cuba.....	1,525.00	.....	.....	.....
Austria.....	.....	.....	.....	19,176.40
Ecuador.....	10,945.45	8,618.54	.....	.....
Peru.....	191,107.50	6,960.00	.....	.....
Guatemala.....	44,853.26	13,983.76	132,594.08	102,655.46
Honduras.....	61,317.50	.....	226,419.45	137,067.58
Salvador and Costa Rica.	501,931.27	101,846.41	615,861.02	619,667.31
Other countries.....	90,000.10	497,000.00	2,338.60	.....
Total.....	4,235,459.78	3,726,667.17	6,138,896.08	5,647,004.05

The imports from the United States consisted principally of:

	Pesos.		Pesos.
Wheat flour.....	155,385.86	Iron piping	9,776.55
Wines	60,174.88	Cottonades.....	9,587.07
Cashmere.....	47,256.24	Perfumes.....	7,204.45
Petroleum.....	47,089.71	Machetes.....	6,842.74
Drugs and Medicines.....	37,453.68	Machinery	6,484.02
Wire (Fence).....	25,435.00	Preserved fruits	6,405.94
Calf Leather.....	20,979.04	Corn.....	6,187.16
Cotton Goods	18,668.04	Lamps.....	5,828.06
Beer.....	19,292.18	Potatoes.....	5,028.44
Rice.....	18,304.32	Hardware.....	4,174.86
Groceries.....	16,499.74	Olives.....	3,710.00
Printed cotton.....	11,774.34	Ink.....	1,458.02
Sewing machines.....	11,680.74		

Principal imports from Great Britain in 1896 were:

	Pesos.		Pesos.
Cotton goods.....	271,447.81	Woolen blankets.....	27,645.85
Cotton blankets.....	145,318.75	Laces.....	21,116.64
Gauze.....	148,649.74	Roofing sheets.....	21,090.26
Drilling	68,464.30	Cotton handkerchiefs.....	18,238.65
Sacks.....	46,733.44	Cashmere.....	17,305.16
Cotton thread.....	38,034.81	Machetes.....	16,999.24
Machinery	36,481.24	Yarn.....	15,391.21
Drugs and Medicines.....	81,647.41	Railroad material	14,728.64
Hardware.....	25,346.87	Iron tanks.....	13,003.65

Principal imports from Germany in the same year were:

	Pesos.		Pesos.
Steel rails	110,000.00	China ware.....	17,480.60
Cotton goods.....	44,350.42	Cement.....	17,005.32
Beer.....	34,696.56	Hardware.....	16,760.45
Socks, etc.....	32,916.60	Toilet Sets.....	16,224.70
Drilling	32,335.80	Distillery apparatus	15,816.23
Machetes.....	27,740.67	Matches.....	15,176.00
Sacks.....	25,752.65	Drugs and Medicines.....	13,593.64
Wire (Fence).....	25,232.76	Rice.....	11,944.60
Wine glasses.....	21,269.58	Leather goods.....	11,189.68
Calf leather.....	20,170.51	Stearin candles.....	10,561.63
Cashmere.....	19,686.16	Furniture.....	10,453.60
Milk braid.....	18,664.26	Printed cotton.....	9,661.63

France sold in Nicaragua chiefly wines, ribbons, roofing, furniture, shoes, hats, cotton goods, jewelry, leather, perfumes, cashmere, silk fabrics, paper, hardware, books, drugs and medicines, and pocketbooks.

Italy: Vinegar, wines, hats, paper, salami sausage, oil, fence wire.

Spain: Books, wines and sausages.

China: Silk fabrics.

Chile: Wines, canned goods, beans.

Mexico: Cigars and cigarettes.

Colombia: Sackcloth, cotton goods, clothing, wines and liquors.

Guatemala: Woolen blankets.

Salvador and Costa Rica: Cacao, tobacco, cigars, rice.

Peru: Sugar.

Ecuador: Panama hats.

The exports of Nicaragua consist largely of coffee, and in 1896 she sent as follows:

1,112,470 kilos.	valued at	647,658.80 pesos,	to the United States.
3,174,479 "	"	2,276,531.60 "	" Germany.
591,972 "	"	374,653.68 "	" France.
863,699 "	"	560,133.43 "	" Great Britain
447,010 "	"	271,340.60 "	" Italy.
11,481 "	"	19,176.40 "	" Austria.

Total.....6,501,113 kilos. valued at 4,158,194.21 pesos.

The largest portion of the coffee goes out of the port of Corinto, one-twelfth out of the port of San Juan del Sur, and the same proportion out of the port of Greytown, or San Juan del Norte. The largest portion goes out clean as "café en oro;" about one-tenth is "café en pergamino;" one-one-hundredth "café negro," and one-three-hundredth "café en cereza."

For comparison the following list of coffee exports for fifteen years, although incomplete, is given. It was made out by the Austrian Consul, Mr. Low, with the help of government officials:

Year.	Pounds.	Price in Pesos per 100 lbs.	Value in Pesos.
1879.....	3,529,300	8.00	282,344
1880.....	4,528,300	8.50	384,905
1881.....	4,698,200	9.00	422,838
1882.....	7,328,900	9.00	657,547
1883.....	5,458,100	9.50	518,519
1884.....	7,238,100	9.50	687,648
1885.....	7,052,500	10.00	701,210
1886.....	7,235,100	10.00	723,510
1887.....	6,347,000	20.00	1,369,400
1888.....	8,816,800	18.00	1,586,088
1889.....	8,414,500	20.00	1,682,900
1890.....	1,382,000	24.00	2,731,680
1891.....	9,154,000	22.00	2,013,880

Other articles of exportation are bananas, sugar, rubber mora or fustic in logs or in extract, campeche or brazilwood, hides, deer skins, gold, cheese, cattle, coconuts, indigo, turtle shell (carey), cacao, tobacco, starch, hammocks, palm leaves, salt, corn and beans.

To the United States there were exported during 1896, besides the already mentioned coffee:

Hides.....	68,667 kilos.	valued at 217,286.74 pesos.
Rubber.....	16,290 "	" 7,952.00 "
Coined silver.....	7,190 "	" 269,710.00 "
Deer skins.....	34,781 "	" 12,173.85 "
Gold bullion.....	"	" 49,939.10 "

The United States Consul, Dr. Paul Wieseke, in Managua, whose district embraces all Nicaragua, except the Atlantic coast lands, furnished the following data about the exports to the United States during the fiscal year, from the 1st of July, 1896, to the 30th of June, 1897. passing through the ports of Corinto and San Juan del Sur:

Articles.	Port of Corinto.	Port of San Juan del Sur.
Cedar logs.....	244.00 pesos.	.....
Chocolate.....	50.00 "	.....
Coffee.....	283,473.06 "	18,012.40 pesos.
Deer skins.....	21,639.76 "	4,260.40 "
Feathers.....	600.00 "	.....
Hides.....	26,096.76 "	3,101.95 "
Rubber.....	31,776.71 "	18,103.30 "
Walnut.....	301.20 "	.....
	363,181.49 pesos.	38,178.05 pesos.

From the Atlantic coast were sent during the same time, and mostly through the port of Bluefields:

Bananas.....	1,433,000	bunches, valued at	\$483,654
Cocoanuts.....	220,510	"	8,273
Gold dust.....	3,949	ounces,	169,565
Rubber.....	446,216	pounds,	204,670
Coined silver.....	51,700	pesos,	25,498
Turtle shell (carey).....	470½	pounds,	1,619
Hunan bones (probably the bodies of Chinamen being sent back to China) "			1,011
			<hr/> \$869,285

At Cabo de Gracias á Dios were imported during 6 months on 11 steamers, 18 sailing vessels, 17 canoes, 330,840 pounds, valued at 45,371 pesos, and exported rubber, carey, tuna, gutta-percha, cedar, caoba, skins, gold, bananas, 61,814 pounds, valued at 32,409 pesos.

The exportation to *Germany* consisted mostly of coffee, brazilwood and coined silver.

To *Great Britain*, coffee, gold and coined silver.

To *France*, coffee, mora or fustic and hides.

To *Italy* and *Austria*, only coffee.

To *Colombia*, silver.

To *Guatemala*, sugar, corn, salt, beans and hides.

To *Costa Rica*, sugar, tobacco, palm leaves.

To *Honduras*, beans, corn and sugar.

To *Salvador*, corn, hammocks, salt, cheese, hides, sole leather and starch.

For the year 1897 the following data were secured concerning the export of coffee:

Port of Corinto.

FROM JANUARY TO SEPTEMBER.

1,172 sacks, or 140,624 pounds coffee "negro."
 10,583 " " 1,189,031½ " " "pergamino"
 85,265 " " 11,496,166½ " " "oro."

Port of San Juan del Sur.

FROM MARCH TO JUNE

1,843 sacks, or 238,400 pounds coffee "oro."

Port of San Juan del Norte.

FROM JANUARY TO JUNE.

10,178 sacks, or 1,290,580 pounds coffee "oro."

From San Juan del Norte were exported during the first six months of 1897, 62,153 pounds of rubber under the following marks: F. CH. H.—V. Z. H.—C.—K.—M. V. H.—M. A.—E. CH.—F. AJ.—J. FG.—S. C.—L.—M. E.—R. M.—J. A. C.—NZ.—C. F. B.—J. G.—BA.—J. E.—J. E. A.—J. C. K.—I. I.

As the National Department of Statistics in Nicaragua consists only of a chief without subordinates, the latter having been dismissed because the last revolution demanded economy, no other official data could be obtained without personal work in the different custom houses and other offices.

From the as yet unprinted report of the Minister of Fomento the following note is taken which may be of some use, namely, that on the national railroads and steamships there had been transported to the port of Corinto, from February to June, 1897:

66,626 sacks, or 8,448,122 pounds of coffee from Managua:	
21,908 " " 2,928,425 " " " Masaya	
1,190 " " 160,990 " " " Granada.	
88,823	11,536,537

The statements presented in this chapter have been compiled from official sources. While the disorganized condition of affairs in Nicaragua makes the presentation of accurate statistics almost an impossibility, still these figures may be accepted as fairly representative of the commerce of the country.

It will be seen by a glance at the tables given, that in 1896 the total importations were 3,726,667 pesos as against an exportation of 5,647,004 pesos, leaving a balance of trade in favor of Nicaragua amounting to 1,920,337 pesos.

Of the total import and export trade the ratios according to principal countries were divided as follows: Germany 34 per cent., Great Britain 23 per cent., United States 18 per cent., France 9 per cent.

Taking the exports from Nicaragua, the proportionate shares of chief countries in this trade were: Germany 40 per cent., United States 18 per cent., Great Britain 13 per cent., France 7 per cent.

The imports into Nicaragua were distributed as follows: Great Britain 38 per cent., Germany 25 per cent., United States 18 per cent., France 13 per cent.

The principal lines of importation are textiles (especially cotton fabrics), steel rails, ironwares of all kinds, and machinery.

Of cottons there were imported a valuation of 831,830 pesos, chiefly drilling, muslins, calicoes, thread, etc. Of these Great Britain sent 72 per cent., Germany 17 per cent., and the United States 11 per cent.

Of iron, its manufactures, and hardware there were imported 296,011 pesos, of which 60 per cent. came from Germany, 23 per cent. from Great Britain, 17 per cent. from the United States.

Of machinery, about 43,000 pesos were imported, six-sevenths of which were from England and the remainder from the United States.

Of the trade in food-stuffs the United States held the most important share. They sent thither, in 1896, a valuation of 188,618.18 pesos, comprising, in order of importance, wheat-flour, rice, maize, potatoes, and olives. The only food importation enumerated from other countries for the same period was about 12,000 pesos in value of rice, from Germany.

XI.

MEANS OF COMMUNICATION AND TRANSPORTATION.

POST AND TELEGRAPH.

Since the 20th of April, 1876, Nicaragua has been connected with the outside world by telegraph. There are now 1,752 miles of telegraph wire running through the country, with 126 apparatus in 83 stations, served by 127 officials, 117 messengers and 66 guards of lines. During the year ending with May, 1897, there were sent out 222,464 private messages; 150,640 official; 103,916 transit; in all 477,020 messages.

On the 2d of October, 1882, a submarine cable office was opened at San Juan del Sur. Some years ago telephone apparatus were put in connection with the telegraph lines.

The postal service is managed in Nicaragua by a Director General, 10 employés of the General Direction, 19 administrators, 18 auxiliaries, 91 postal agents, 126 letter carriers and 29 postal contractors, all at the headquarters of the Department. There are 19 first class, 91 second class, and 9 exchange offices.

The largest amount of correspondence was received and despatched in Corinto, followed by Granada, Managua, Leon, Masaya, Rivas, San Juan del Norte, Bluefields, Chinandega, Jinogalpa, Jinotepe, Matagalpa, Rama, San Juan del Sur, Somoto, Jinotega, Ocotal.

In 1896 there were received 1,376,366 pieces of correspondence, and 1,242,876 were delivered.

[illegible]

On the Atlantic side a steamer of the Atlas Steamship Co., Limited, now calls once a month at the port of San Juan del Norte, or Greytown, both on its way going south and returning north. In former times this port was reached by these steamers twice a month each way. In addition, an Italian line, "La Veloce," sends vessels here once a month to

seek cargo and passengers going south. Some time since steamers of the Royal Mail Line came twice a month to this port, but finding the business unprofitable abandoned the service.

It is said that there is an independent steamer of 250 tons burden plying between the ports of San Juan del Norte, Bluefields, Boca del Rama, Rio Grande, Wuonauta and Prinzapolca, Cabo de Gracias á Dios, Corn Island and Puerto Limon, making several round trips a month, and receiving 24,000 silver pesos a year for carrying the mail.

At the ports of San Juan del Norte and Bluefields, as occasion may require, fruit or banana steamers call, as those of the Bluefields' Banana Co., of the Morgan Line, of the Honduras & Guatemala Mail Line, etc. Often passengers destined to Europe or the United States are obliged to take small sailing vessels to Puerto Limon in Costa Rica, about 60 miles south of San Juan del Norte, in order to obtain passage. Small sailing vessels do most of the coast business along the Atlantic.

In the chapter on Commercial Statistics there is enumerated the number of ships which entered the Atlantic and Pacific ports of Nicaragua during the year 1896.

From the port of Greytown there is communication, by means of flat-bottomed steamers on the San Juan River, with Nicaragua Lake; three times a month by the steamer "Hollembeck," which runs in one day to Castillo Viejo, and by the steamer "Managua," which runs thence to San Carlos in one-half day, and *vice versa*. This line has lately been bought by the Atlas Steamship Co., Limited, which also owns the steamer "Victoria," of 180 tons burden, made in Wilmington, Del., plying on the Great Lakes, and performing service between San Carlos and the different lake-ports, as San Ubaldo, Granada, San Jorge and others. This line has its headquarters at Granada.

There are about 6,000 to 8,000 tons of freight transported by this line each year, and from 3,550 to 5,000 passengers. The freight rate is from 25 to 35 pesos per ton, except for coffee, which pays one gold peso per 100 pounds for delivery in New York and Europe. Passenger rates are 30

pesos for first class and $12\frac{1}{2}$ for second class between Granada and San Juan del Norte.

On the Lake of Managua are three steamers, the "Managua," of 120 tons, the "Angela," of 120 tons, and the "Progreso," of 100 tons. These belong to the National Government and ply between the ports of Managua and Momotombo, connecting daily with the railroad service, on one side to the sea-port of Corinto and on the other side to the lake-port of Granada.

There is besides a small private steamer, "Vapor Güis," which runs between Managua and San Francisco del Carnicero, Tipitapa and San Ramon. The passage costs 50 centavos per person, and the freight 30 centavos per 100 pounds.

The national steamers had, during the fiscal year ending with June, 1897, the following income from passengers and freight:

Passengers from Momotombo to Managua.....	19,578.75 pesos.
Freight " " " "	45,742.84 "
Passengers from Managua to Momotombo	22,127.65 "
Freight " " " "	88,243.25 "
	<hr/> 125,491.90 pesos.

The railroads were built by the National Government. The first, between Corinto and Momotombo, was opened to the public on February 27th, 1884, and the second, between Managua and Granada, on May 1st, 1886.

The itinerary of the first road is:

18 miles from Corinto to Chinandega.	35 miles from Corinto to Leon.
21 " " Chichigulpa.	50 " " La Paz.
25 " " Posoltega.	58 " " Momotombo.
29 " " Quezalguaque.	

The itinerary of the second road is:

8 miles from Managua to Sabana Grande.	19 miles from Managua to Managua.
11 " " Portillo.	21 " " San Blas.
14 " " Campuzano.	32 " " Granada.
17 " " Nindirí.	

Between Momotombo and Managua the distance is 32 miles by steamer.

On the first road there were moved 37,972 first class passengers and 266,487 third class on ordinary trains, and 420 first class and 9,364 third class on excursion trains, from whom 110,260.30 pesos were derived.

Of freight there were moved on the same line 31,735 tons of private goods, 2,052 tons of official goods, and 7,238 tons received from the eastern division, making a total of 41,025 tons, on which the freight was 247,159.91 pesos.

The eastern division of the railroad moved 29,499 first class passengers, 2,350 second class and 245,144 third class, making a total of 276,922 passengers. Their fares came to 120,001.25 pesos during the year, from the preceding July to June, 1897.

During the same time 83,823 sacks of coffee, weighing 11,535,500 pounds, and 10,185,200 tons of other freight were moved, for which 106,274.16 pesos were paid. These statistics are compiled from an unpublished memorial of the Minister of Fomento.

The following interesting tables are derived from the same source, and concern the traffic on the eastern and western divisions of the railroad during the year ending June 25th, 1897. In them is presented the traffic of different cities in such a way as to disclose the relative commercial importance of each, as well as the aggregate freights and the receipts of the roads by months.

FREIGHT TRAFFIC OF NICARAGUA RAILROADS FOR THE YEAR ENDING JUNE 25TH, 1897.

Freight in pounds moved on the western railroad:

Name.	Corinto.	Chinandega.	El Viejo.	Chichigalpa.	Posoltega.	Quezalguaque.	Leon.	La Paz.	Momotombo.	Total.
Corinto.....		2,015,553	182,104	938,657	119,524	109,085	10,728,026	29,985	3,973	14,126,907
Chinandega.....	2,609,477		127,202	538,899	87,698	311,073	1,369,991	201,286	1,283	5,246,909
El Viejo.....	1,170,223	239,413		4,547	4,834	5,287	194,147	19,730		1,638,181
Chichigalpa.....	1,212,867	1,081,178	19,041		25,894	138,152	1,350,140	104,903	26,845	3,959,020
Posoltega.....	339,948	120,286	7,127	21,201		18,402	427,185	86,872	14,220	1,030,241
Quezalguaque.....	281,757	77,685	219	10,433	2,178		192,969	31,456	4,829	601,531
Leon.....	4,910,165	857,612	100,714	534,671	258,296	106,322		365,399	124,486	7,257,965
La Paz.....	776,024	606,907	145,260	308,524	54,343	108,083	2,300,319		25,619	4,320,079
Momotombo.....	112,320	600	290	400	279	1,630	58,722	62,355		236,566
Total.....	11,412,781	4,999,237	581,897	2,352,337	553,016	793,034	16,621,499	902,016	201,255	38,417,693

Freight in pounds moved during the same time from the western to the eastern division:

Name.	Managua.	Sabana Grande.	El Portillo.	Campazano.	Nindirí.	Masaya.	San Blas.	Granada.	Total.
Corinto.....	6,277,806	59,281				1,651,374	4,472	7,407,450	15,380,383
Chinandega.....	1,565,935				835	331,143		253,447	2,151,360
El Viejo.....	442,807					55,545		83,500	581,852
Chichigalpa.....	423,448	171				185,276	230	809,420	1,418,595
Posoltega.....	185,594					22,852		7,231	215,677
Quezalguaque.....	19,927			2,000		5,297			27,224
Leon.....	2,228,143	7,913			297	742,408		872,973	3,851,716
La Paz.....	400,785					451,652		514,441	1,366,878
Momotombo.....	50,011					400		8,962	59,373
Total.....	11,594,456	47,365		2,000	1,114	3,445,947	4,752	9,957,424	25,053,058

Freight paid in pesos to the eastern division of the Nicaragua National Railroad:

Name.	July.	August.	Sept.	October.	Nov.	Dec.	January.	February.	March.	April.	May.	June.	Total.
Granada city.....	913.36	1,081.31	1,406.78	987.19	1,296.95	1,201.47	1,354.19	1,142.43	1,297.06	1,256.08	1,849.81	1,050.36	14,948.02
Granada pier.....	333.41	544.20	499.48	436.86	600.47	512.65	300.48	585.99	357.13	373.07	355.71	472.87	5,322.32
San Blas.....	8.95	17.00	18.75	3.90	21.80	31.90	41.15	16.20	19.65	7.40	25.50	11.15	223.35
Masaya.....	697.60	519.59	644.80	639.05	595.15	865.50	2,235.80	3,084.95	5,030.15	5,371.05	5,423.10	3,466.10	28,576.54
Nindirí.....	2.52	3.50	15.87	8.79	7.19	2.94	3.44	11.57	17.05	17.41	15.10	24.84	130.22
Campazano.....													
El Portillo.....					61.00	61.00	67.10	74.85	127.15	50.00	39.25	35.50	515.35
Sabana grande.....	26.90	23.77	45.06	41.24	29.18	82.12		96.29	52.08	35.49	27.43	35.72	495.28
Managua station.....	144.35	240.80	194.25	236.70	197.55	175.50	174.10	152.50	116.15	139.20	128.50	148.15	2,047.25
Managua pier.....	2,675.89	1,431.80	1,313.23	1,097.23	893.98	1,073.27	1,574.75	5,295.05	11,098.82	14,665.68	10,446.86	2,451.82	54,018.27
Total.....	4,802.98	3,861.56	4,138.22	3,450.96	3,708.27	4,006.15	5,751.05	10,409.	18,115.27	22,015.38	18,814.26	7,706.21	106,274.60

A new railroad is under construction by the National Government, under contract with Messrs. Morris, Heyden & Co., of Managua, Mr. J. Wiest being the engineer-in-chief. It is to connect Masaya and Jinotepe, passing through a number of villages (pueblos), and is to be called "*Ferrocarril de los Pueblos*." It is virtually a branch of the eastern line, and will be of extreme importance to the coffee planters and merchants in the Department of Carazo.

A tramway line, with steam service, connects the port of San Jorge on the great lake with Rivas. A horse tramway runs also from San Juan del Norte to Ciudad America. Another tramway exists in Bluefields, connecting this city with Bluff, its harbor. Also, a street tramway line in Granada may be mentioned.

There are lines of stages between Granada and Rivas (51 miles) and between Masaya and Jinotepe (18 miles), having a government subsidy and running daily during the summer or dry season.

Over 300 leagues of wagon roads (*caminos carreteros*), connecting with the railroads and other places, cross the country in the Departments of Chinandega, Leon, Managua, Masaya, Carazo, Granada, Rivas and Chontales. The traffic on these roads, which are very defective, and during the rainy season are impassable, is carried mostly on primitive ox-carts with two wooden wheels and without springs. These carts move very slowly up and down the hills, through rivers and creeks without bridges, very often also through swamps (*jicarales*) in tortuous track. There remains a macadamized road between the port of San Juan del Sur and the lake port of La Virgen, constructed about forty-five years ago by the New York and Californian Transit Company.

Toward the north, northeast and east of the Cordilleras, in the Departments of Nueva Segovia, Jinotega, Matagalpa and the larger part of Chontales, as also in many other regions of Nicaragua, the country is too mountainous for wagon roads, and communication between the different communities is only possible on the back of a horse or mule over difficult trails.

XII.

NICARAGUA CANAL.

Of great importance to Nicaragua, and also to the commerce of the world, is the construction of the Nicaragua Inter-Oceanic Canal. Fortunately, as the author of the book on Nicaragua, published by the Bureau of the American Republics, says, through a timely intervention of the celebrated engineer, Mr. A. G. Menocal, representing an American company, the execution of this work is still reserved for American enterprise. A contract to this end was ratified by the Nicaraguan Congress on April 24th, 1897, giving to the American company an exclusive privilege for 99 years to control this canal, allowing it also to construct a railroad along its route, and engaging not to permit the building of other railroads that might enter into competition for the traffic of the canal.

The Nicaragua Government, desirous that this water-way should be built with American money, obtained through Mr. Rodriguez, Minister of the Greater Republic of Central America in Washington, a renewed interest of the United States Government, which appointed three eminent engineers to re-survey the proposed route in order to obtain authentic data to quiet any controversy raised in Congress or by the press against the construction of this work.

It is interesting to read the history of this canal route and of that on the Isthmus of Panama, as well as of numerous other proposed inter-oceanic routes, between Colombia and the Isthmus of Tehuantepeque, with the various

modifications proposed from time to time since Nuñez de Bilbao in 1513 crossed for the first time the Isthmus of Panama. There is extant a voluminous literature on this subject available to those who care for such research, but it cannot be introduced here without destroying the proportions of this monograph. In regard to the proposed Nicaragua Canal the following technical details are of great interest.

Total distance from ocean to ocean.....	168.4 miles
Canal in excavation.....	26.8 "
Length of basins.....	21.6 "
River San Juan.....	64.5 "
Lake Nicaragua.....	56.5 "
Free navigation in lake, river and basins.....	142.6 "
Elevation of summit—level of canal above sea-level.....	110 feet
Length of summit-level.....	53.2 miles
Number of locks.....	6
Greatest lift of lock.....	45 feet
Dimensions of locks.....	650 feet long, 80 feet wide
Depth of canal.....	80 feet
Least width at bottom.....	100 "
Time-transit from ocean to ocean.....	28 hours
Cost of canal, American estimate.....	\$60,000,000 to \$88,000,000

The San Juan River has a number of mouths, the largest being the Colorado, Taura and the San Juan, the latter flowing into the proposed harbor of the canal. The whole deltaic country consists of flat, alluvial lands in which there are numerous lagoons and swamps. These lands are covered with high grasses, bushes and trees enveloped by climbing vines. They extend for about $9\frac{1}{4}$ miles along the course laid out for the new canal. The canal is to be excavated through these low lands by machinery, and then to pass between low hills and through wooded valleys by means of a number of locks in close succession, the first one having a lift of 21 feet, the second, $1\frac{1}{4}$ miles further on, a lift of 30 feet, and a third, $2\frac{1}{4}$ miles beyond, a lift of 45 feet. Here, at an elevation of 106 feet above the sea, the summit level begins. A cut of about 3 miles in length and 141 feet deep must be made to connect the water of the canal with the waters of the San Juan River at Ochoa, a little below the mouth of the San Carlos River on the other side.

The San Juan River, called by the conquistadores the Desaguadero because it is the outlet of the Great Nicaragua

Lake, is the most peculiar tropical river on earth, being exempt from floods, such as, for example, occur in the upper Parana River in very similar surroundings, where they rise to 39 meters above the average level of the year, producing a tremendous current and carrying down the stream an immense number of trees dangerous to any boat, and often making the regular ports inaccessible. This peculiarity of the San Juan River, which it has in common with the rivers connecting the Great North American Lakes, is of great advantage in the construction of this canal. At Ochoa a dam will be erected to deepen the water over the rapids, and especially to keep the upper waters of the San Juan River permanently at a level of 106 feet above the sea. These impounded waters form a continuation of the canal until the Great Lake is reached, the surface of which is 110 feet above the sea level. With the exception of about 28 miles above the Toro Rapids, where rock blasting and dredging to an average depth of $4\frac{1}{2}$ feet will be required in several localities, the navigation channel will be 1,000 feet wide and from 28 to 130 feet deep. In the Great Lake of Nicaragua a channel 30 feet in depth will be secured by dredging through a soft mud bottom to an average depth of 10 feet for about 14 miles from the shore. This channel will have a width of 150 feet. From this point the course of navigation is across the lake to the mouth of the Rio Lajas. Thence the canal must pass for a distance of about 9 miles to the valley of the Rio Grande and the Tola basin, penetrating on its way a slight ridge that reaches a level of 43 feet above the lake. This work will require considerable earth and rock excavation. About $5\frac{1}{2}$ miles further on, near La Flor, are to be located locks Nos. 4 and 5 and a large dam, to hold the waters of the Tola basin. The first of these locks terminates the summit level of the canal. The locks are to be close together, and to have a lift of $42\frac{1}{2}$ feet each. About $1\frac{1}{2}$ miles beyond is lock No. 6, the last of the western series, and designed to lower the waters of the canal to the level of the Pacific by means of a lift of from 21 to 29 feet, varying according to the state of the tides.

From lock No. 6 to Brito, the western terminus, there will be $1\frac{1}{4}$ miles of alluvial excavation. A port will have to

be built at Brito, and very considerable sums are required for its construction. The harbor on the Atlantic side, at San Juan del Norte, is obstructed by drifting sand, and large sums will be needed for its restoration and maintenance. Enormous amounts of money will also be required to build the dam at Ochoa and the embankments in the river valley necessary to retain the navigable waters at the required height.

This inter-oceanic line may be the best attainable under existing circumstances, but there is an excellent port in the Bay of Salinas on the Pacific coast, which could be reached by bringing the canal thence to the Sapo River. The isthmus there is about $7\frac{1}{2}$ miles narrower than by the Lajas River route, although the summit to be surmounted is 80 feet higher. The harbor of Salinas is unexcelled, having an area of from 6 to 8 square miles, and being nearly circular; it is also without entering rivers and without sediment or drifting sands; is from 35 to 80 feet deep; is well protected from the southwest winds, and has shores which would permit direct landing. It is surrounded by a beautiful as well as healthful country. The United States Government would do well to instruct its engineers to take this harbor question once more into serious consideration. This line has been proposed by a very competent and distinguished French engineer, M. Belly, who once owned a concession for this canal, and devoted many years to the investigation of its problems. Even before him an eminent Swedish engineer, Mr. M. Oerstedt, recommended this same line from the Sapo River to the Bay of Salinas.

XIII.

GENERAL CONSIDERATIONS.

Nicaragua was first sighted by Columbus in 1502, and it was first visited and explored by the Spanish military adventurer, Gil Gonzales de Avila, in 1522, who gives a very interesting account of his manner of taking possession of Nicaragua in his letter to the Emperor Charles V, dated March 6th, 1524. He says: "En el cielo, mas arriba del Sol, hay un Señor que hizo todas las cosas y los hombres y los que esto creen y lo tienen por Señor y son Cristianos, cuando mueren van arriba donde él está y los que no son Cristianos van á un fuego que está de bajo de la tierra! Hizoles ademas comprender que todos los que asi creian quedaban por vasallos del gran Rey de Castilla."

(In heaven, above the sun, there is a Lord who made all things and mankind, and those who believe this and accept Him as their Lord and are Christians, after death will ascend to where the Lord is, and those who are not Christians will go to a fire which is beneath the earth. I gave them to understand that all who believe this would be considered as vassals of the great King of Castile.)

The aborigines of Nicaragua, who inhabited the country at the time of the conquest, were:

1. The Chorotegans, divided into Dirians, Nagrands and Orotinans, who occupied the valley of the lakes and part of the highlands of Masaya.

2. The Chondales, who lived along the Cordillera de los Andes, facing the lakes.

3. The Niquirans and Cholutecans of Mexican origin who occupied Rivas, the islands of Ometepe and Zapatera, the Pacific coast and the Costa Rican territories of Guanacaste and Nicoya.

4. The Carabisi, who lived in the rest of the Nicaraguan territory, from the Cordilleras to the Atlantic Ocean, as savage tribes.

The languages spoken by them were Niquiran or Mexican, Chorotegan, Oritinan, Chondal, Pipil and Caribisi.

There are still many Indians of the Carabisi tribes along the rivers of the Atlantic slopes, who have changed their customs very little. Other Indians have blood mixed with that of the conquerors and their descendants, and have accepted their language and customs. There are also many Indians who, besides the Spanish, speak their own language, as in Masaya, Chontales, Carazo, Matagalpa, Nueva Segovia and Jinotega, where they have preserved their blood pure. Comparatively few full-blooded Indians remain in the Departments of Leon, Granada, Managua, Rivas and Chinandega. In the ports and places along the Atlantic coast the negro element prevails and much English is spoken. Negro blood is apparent also in a great number of Zambos and people of all shades of color.

The white people of pure blood are comparatively scarce among Nicaraguans. They are mostly found in the larger cities in the Departments of Leon, Chinandega, Granada and Rivas. A few thousand white foreigners are scattered through the ports and larger cities, in some mining districts and on some plantations. As seen in the demographic tables already given, the population of Nicaragua is only distinguished as Indian and Ladino. By Ladinos we may understand people of all colors and shades who wear clothes differing from the native Indian dress.

Nicaragua is an immensely rich and fertile country, but her development is far below her capabilities. That development is retarded by the character and customs of her people, and by revolutions which have brought the government authority into disrepute. Her agriculture is restricted and almost primitive; her mines improperly managed; her indus-

tries poorly organized; her labor inefficient and improperly handled; her commerce defective; her social life and her intellectual level, for want of education, comparatively low; and her municipalities are lacking in energy.

One reason for the backwardness of civilization probably lies in the fact that the people have always been poor, uneducated and inexperienced. They have not been trained to the function of self-government so as to make it the instrument of attaining the best results.

The lives of most of the people are quite simple and primitive, and they are indifferent to the refinements of life, the benefits of education, the enjoyment of luxury and the acquisition of wealth. Among them still exists a kind of caste based on color, established by the Spaniards, and the temperament of the lower classes exhibits an apathetic resignation to poverty and a lack of social ambition.

Withal they are a joyous people, full of gayety despite their poverty. Perhaps the very fertility of their soil and the mildness of their climate contribute to this temperament. They do not hunger, because they have an abundance of bananas and other fruits, of fish, pork, game, milk and eggs. They do not shiver, because the climate is warm, and a roof to protect against the rain is an adequate shelter. The generosity of nature leaves them little to desire worth the trouble of much exertion. Correspondent with these conditions, but also a hindrance to progress, is a disposition to leave everything for *mañana* (to-morrow). Little is done with promptness or completeness. It surprises these people to see our fevered impatience for results. Yet they have a sensitive self-respect and a disposition to emulate, if the task be not too arduous, the example of nations in the van of modern progress.

The mass of the people live in adobe houses with a roof of tiles. These are seldom floored or ceiled, and where the latter is found it is "*cielo raso*" (a frame over which white cotton cloth is stretched). Owing to the hot climate glass windows are not in vogue amongst ordinary people. The furniture is simple and scant. Bedsteads are without mattresses, and in the kitchen cooking is generally done over an open fire. In many of the houses the old Indian mill-stone is still in use.

In cities the houses are mostly arranged in streets of equal lengths, which cross at right angles. But how diverse the aspect of these cities is may be conjectured from facts like these; Jinotega, with 727 houses, has 49 streets; El Viejo, with 131 houses, has 25 streets; Somotillo, with 426 houses, has 28 streets; while Granada, with 4,494 houses, has only 21 streets. In a table in Chapter IV are given lists of towns and villages, with the number of their houses, streets and plazas, where the curious may find material for comparing their varied appearance.

In Granada, Leon and La Libertad a few streets are paved. Between the houses in some cities are walls of adobe or wood. In others the partition line is marked by a hedge of cereus or cactus, or by the same pinuela (bromelia) of which the fences are made that enclose the potreros in the country. There are usually a few fruit trees near the house, but seldom a flower garden. Street cleaning is generally left to the rain or the wind, to the pigs and to the zopilotes (*Cathartes aura*), the well known black bird seen everywhere in tropical and sub-tropical lands. Another street feature is the large number of naked children, mostly boys. The girls generally wear chemises. Very few cities have plazas of cultivated aspect. The capital, Managua, has none which could induce the people to resort to it. During the rainy season the streets are in a very bad condition. So also are the country roads. In the northern highlands and in the jicarales the roads at that season are practically impassable, and an order of the government has been seen prohibiting in certain districts wagon travel during the rainy season.

The ordinary clothing of men consists of a palm leaf hat, a shirt and a pair of trousers; of women it consists of a loose chemise, a cotton skirt and a silk shawl or rebozo worn over the shoulders. All go barefooted, except the Indian, who uses sandals. The higher class of Ladinos imitate European usages and try to keep up with that style. The national drink may be set down as *tiste*, or a mixture of pulverized roasted cacao, corn meal, sugar and water.

Social life is monotonous. There are no clubs, coffee houses, theatres, promenades or other places of amusement

or of pleasure. The wealthy people, with few exceptions, live in patriarchal simplicity. The taste for music and other fine arts, for books and education is but slightly developed. There are a few comfortable and well furnished houses, but the greatest luxury consists in having many servants. The National Library, with about 8,000 volumes, is the only institution of the kind in the land. The national literature is small, and the number of books sold by different commercial houses is very limited.

The government commands inadequate respect. Its work goes on very slowly, and only a few sufficiently qualified men of social standing are in office. Slower still, it is said, are the proceedings of the judiciary of the country.

The tendency to outbreaks of political factions seems inveterate, and the government palace, as well as the dwelling house of the President and his family, is so guarded as to present the aspect of a barrack.

In a previous chapter it has been stated that the government aims to promote agriculture by giving premiums for plantations of coffee, rubber, cacao, indigo, textile plants, wheat, etc., also by giving certain privileges to planters and laborers engaged in such work, and to promote immigration by facilitating the acquisition of land. As to the latter, there is a degree fixing the purchase price of land. Under it there are charged 2 pesos for each manzana (about 1.79 acres) of national land suitable for stock raising, 3 for each manzana of agricultural land, and 5 for each manzana if well watered. One peso more is added for each manzana if useful timber stands on it. Two-thirds of the purchase must be paid in cash, the rest may be paid in documents of public credit. There is no tax on land, but there is a municipal tax of five mills per pesos on net income in some of the Departments, and also an export duty on coffee of 2 pesos per 100 pounds.

Agriculture in Nicaragua has been impeded by a lack of roads and of a proper skill and knowledge. Many inexperienced and incompetent capitalists have invested in plantations and mines only to lose.

The greatest difficulty agriculture encounters is the condition of labor. Nicaraguan laborers wish to be treated as

hidalgos, and are full of tricks and the resources of deception. In other countries, as in Guatemala and Mexico, after the suppression of the so-called "encomiendas" and of forced labor, and after the abolition of the costly African slavery, a sort of peonage was invented. In this system poor families were allowed to dwell on the vast estates of the rich for a rental payable only in labor. This mode of payment was extended afterward to all debts for commodities advanced by the land owner or contracted in any other way.

In Nicaragua the people have had complete liberty, but there is now some restriction on it. There is an agricultural law which practically establishes the peonage system just described. The laborer is free to go where he likes and to work when he likes, provided he is out of debt. But as soon as he contracts a debt, it may be in receiving only a few pesos of his wages in advance, he immediately loses his liberty. He is now bound to work out this debt in labor, as also every other debt he may contract subsequently for money or goods furnished to him. His legal wages are 50 centavos per day (about 20 cents). As this labor is substantially the only kind to be obtained, the land owner uses every means to keep his laborers in constant debt. Every workman must be in possession of a special document showing where he works, but his landlord can transfer his claims to any one else who will pay the man's debts.

It has already been stated that there are no roads passable all the year around. In the mountainous region there are no cart roads at all, and the horse paths traversing the country are so bad during the rainy season that no transportation of goods can be attempted. It is clear that under such conditions freights will be so high as to put an end to the exchange of products, and especially of those of little value.

There are no agricultural societies nor other organizations through which these detrimental conditions can be considered and a change in them promoted. As there is no official register or record of titles (cadastre), and as there are no agricultural statistics, nor maps of detailed survey, it is difficult to establish an agricultural mortgage bank, an agency which would be of very much advantage, especially to the large planters of cacao, coffee, etc.

Nearly all men have commercial abilities in Nicaragua. But general as these qualities are, they go with a lack of spirit of association and enterprise, which also holds the country back in its economic and industrial progress. The same effect arises too from the prevalence of short-sighted jealousy, which is shown especially to men in public life. It is a great hindrance to industrial enterprise, to the development of personal talent and influence, to the acquisition of larger fortunes and to the elevation of men.

Mr. Levy, in his highly interesting work published in 1871, said truly that much of the existing defective conditions of this country were due to the trade restrictions of the Spanish colonial system. There was also a time when, for fear of pirates, everything from Central America had to go by way of Granada through the Great Lakes and the San Juan River to Cartagena, Colombia, and this traffic brought prosperity to Nicaragua. It induced its people to produce flour, achioté, cochineal, wine, precious woods, resins, fibres, etc., for exportation. This production ceased when Charles III in 1778 established free-trade between the colonies, and created a navy adequate to protect them from the invasion of pirates. Still later, the achievement of independence in 1821 almost completely extinguished the former prosperity. It was followed by ceaseless internal dissensions and revolutions, which diminished production in an extraordinary manner. As Mr. Levy says again, commerce was reduced to the sale of cacao, cheese, and articles of household industry to the neighboring countries, which commerce still exists, and to the importation of a very few articles from Europe. All the old capital disappeared with the Spaniards, and it is chiefly due to English merchants and bankers that Nicaragua continued to figure in the commercial world.

The connection with England came principally with the use of steamers in oceanic trade. Naturally, in order to open an exchange of products with a country exceedingly rich in resources, but not producing much, long credits have to be given, and to-day Nicaraguan commerce subsists almost wholly on the extended credits opened by European houses, by which practically they receive its coffee, hides, rubber, etc., in payment.

It can be said that Nicaragua, after a long stagnation, came again into commercial activity when the gold fields of California were discovered in 1849. Then an American Transit Company was organized, which brought the gold seekers and a current of emigrants through Nicaragua, *via* the San Juan River, the Great Lake and the Isthmus of Rivas, on their way to California. Many supplies were profitably sold to them, as also was afterward done when the Panama railroad was opened in 1858, and a regular steamship route to California established, which touched the Nicaraguan port of Corinto. The result of this was a general large increase of production and a sudden considerable augmentation of imports.

The subsequent economic history of Nicaragua, for want of better data, may be indicated by the following table of national rents taken from a pamphlet prepared by the Minister of Fomento in 1894.

Years.	Pesos	Years	Pesos.
1858	216,405	1875 and 1876	2,324,998
1859 and 1860	798,260 25	1877 " 1878	2,537,005.80
1861 " 1862	809,182 05	1879 " 1880	3,042,967.10
1863 " 1864	1,118,231	1881 " 1882	3,535,642.88
1865 " 1866	1,478,724 15	1883 " 1884	3,905,123.09
1867 " 1868	1,229,181.25	1885 " 1886	3,569,414 46
1869 " 1870	1,367,092.16	1887 " 1888	3,070,069.01
1871 " 1872	1,732,760.06	1889 " 1890	4,406,888.98
1873 " 1874	2,011,670.25	1891	2,847,729.08

In the chapter on commerce the articles of actual export and import have been indicated. In order to deal successfully with the merchants or consumers of Nicaragua, and to take advantage of the resources and opportunities there opened, it is necessary that one's knowledge of the country should be exact and detailed. Therefore, this monograph brings together the most authentic facts concerning the geographical character of the country, its means of communication, its population and customs, statistics of production and consumption, its economic, financial, political and social condition, and its resources in general.

The importers, of whom lists have been given in the chapter on commerce, sell to the retail merchants on a cash basis, but on long credits; if the same men export they buy

their goods direct from the producers, often making advances on the crops in articles of daily constmption, but using little money.

Small producers sell their own products in the local markets, where such facilities are provided, as in Leon, Managua, Masaya, Granada, or in the public plazas. Nearly every importer and merchant engages in a general trade; not seldom they also sell beans, cereals and other agricultural products of daily consumption.

Among the first requirements for doing business in Nicaragua are to sell cheaply, and to have a great variety of designs, colors, etc., but always in accordance with the tastes and usages of the natives. It is further important that goods should be put up with constant uniformity as to length, width and sizes; also to be punctual and exact in filling orders; to have the merchandise well and neatly labeled; to have it properly packed to suit the conditions of Nicaragua traffic, as for example, in small and strong boxes with the gross weight not exceeding 200 pounds, often with tin lining when they are to go by canoc, boat, or on mules' backs into the interior.

There can be no doubt that trade in Nicaragua will be a risky business so long as wholesale dealers grant long credits. The retail merchant, in turn, is often obliged to make the same concession in order to sell at all. The risk in later years is still greater, because of constant révolutions carried on with forced loans and voluntary or involuntary contributions, in connection with compulsory closing of stores or with selling goods at any price in order to cover the amount of dictated contributions.

In view of such abuses no commercial relations with native merchants can be recommended, and nobody knows whether the foreign houses will not also suffer. The English consul says that it is a safe rule not to rely upon the continued existence for twelve months of even the apparently good and strong houses under these circumstances.

History in Nicaragua really begins with the conquest by Gil Gonzalez de Avila in 1522, and his arrangements with the cacique, Nicarao, whose capital stood on the shore of the

lake, then called Cocibolca, not far from the point where afterward rose the Villa of Nicaragua, now the city of Rivas.

The first Spanish governor of Nicaragua was Hernandez de Cordova, the founder of the cities of Granada, old Leon and others. The last governor was Miguel Gonzalez de Saravia.

After the year 1570 Nicaragua formed a part of the Capitanía General de Guatemala. Public affairs were then in the hands of a "Concejo" or "Audiencia," called "Real Cancillería," whose president was the head of the "Reino" or "Capitanía General."

The limits of this monograph permit only a short relation of the principal historical events in Nicaragua. During the sixteenth and seventeenth centuries negro slaves were imported. Great earthquakes occurred, which changed the bed of the San Juan River. Pirates devastated Segovia, Granada and other parts of the country, and the fortresses of San Carlos and El Castillo on the San Juan River had to be built. In 1610 there was a great eruption of the volcano Momotombo.

During the eighteenth century there were continued invasions of the pirates, to which were added forays of the Zambos along the coast. The inhabitants of Segovia, Matagalpa, Jinotega and Sébaco were compelled to forsake their cities.

In 1762 the English governor of Jamaica invaded Nicaragua, penetrating the country along the line of the San Juan River, but he was killed.

On the 15th of September, 1821, the independence of Central America was proclaimed and Nicaragua as a State, entered the "Republica Federal de Centro-America," after a short connection with the Mexican Empire in 1822. This connection was formed by General Iturbide, but it was destroyed by a revolt led by Cleto Ordoñez, of Granada.

In 1838 the Federal Republic, which had only two presidents, Manuel José Arce and General Francisco Morazan, broke up, and Nicaragua became an independent republic. Now followed a government of twenty successive Directores Supremos, of whom the first was Pablo Buitrago and the last Fulgencio Vega. On the organization of the Republic the

Director received the title of President. The succession of Presidents is as follows:

Frutos Chamorro.....	1854
Tomas Martinez	1859
Fernando Guzman.....	1867
Vicente Quadra.....	1871
Pedro Joaquin Chamorro.....	1875
General Joaquin Zavala.....	1879
Dr. Adan Cardenas.....	1883
Col. Evaristo Carazo	1887
Roberto Sacasa.....	1889
General Santos J. Zelaya.....	1893

Following the declaration of independence there were numerous civil wars, interrupted by an invasion of filibusters from the United States. In 1835 a tremendous eruption of the volcano Coseguina occurred.

In 1850 Spain recognized the independence of Nicaragua, and in the same year the first steamers, the "Director" and "Nicaragua," ran up the San Juan River, making a connection between the port of La Virgen on the Great Lake and the Atlantic Ocean, while from the port of La Virgen an over-land transportation line to the Pacific Ocean was established.

In 1846 the culture of coffee was introduced; in 1847 occurred a British invasion; in 1851 Managua was made the capital of the Republic; in 1855 William Walker landed a filibustering expedition in Nicaragua and devastated the country for several years; in 1858 the boundary question with Costa Rica was settled; in 1876 the first telegraph line was established; in 1878 work on the national railroads began; and in 1894 the Mosquito Coast was incorporated.

In closing these brief statements it should be said that, after a revolution, the Liberal Party came into power in 1893. with which event the aristocratic type of government apparently disappeared, a type in which, like those of old Venice and of Greece, public affairs are directed wholly by large proprietors and capitalists, the people having little or no recognition. Whether this change is to the advantage of the country the future only can show.