

plains. The thickets are composed of several kinds of mangroves (mangliers or paletuviers), which are called red mangrove (manglier rouge or manglier chandelle), gray mangrove (manglier gris), and black mangrove (manglier noir). These trees supply firewood and tan bark.

Among the plants and trees that are conspicuous on beaches where there are no mangrove thickets are seaside grape (raisinier bord-de-mer), seaside potato (patate bord-de-mer), and manchineel tree (mancenillier), which has a poisonous fruit.

## ECONOMIC GEOGRAPHY.

### POPULATION.

#### TOTAL POPULATION.

The favorable climate and the productive soil of the island have brought to it a dense population throughout most of its known history, which begins with its discovery by Columbus in 1492. At that time the number of aboriginal Indians in the whole island was estimated at from 1,000,000 to 2,000,000, the lower estimate probably being more nearly correct. Under Spanish rule, within a few decades after the island was discovered, this population was practically annihilated by war and slavery and was replaced gradually by African negroes, who were imported in great numbers in the eighteenth century, particularly by the French, who had taken possession of the western part of the island—the part that now constitutes the Republic of Haiti. Moreau de Saint-Méry,<sup>1</sup> the most trustworthy historian of the colonial period, estimates the total population of the French colony in 1788, near the close of the colonial era, at 520,000, of whom 40,000 were white, 28,000 were “people of color” (“gens de couleur”), and the remaining 452,000 were black. This population inhabited an area smaller than that of the present Republic, as the Central Plain and adjacent mountain slopes were then Spanish territory.

No reliable census of the Republic has ever been taken. War and famine and the exodus of the whites reduced the population considerably in the years during and immediately following the Revolution. Tippenhauer<sup>2</sup> regards Humboldt's estimate of 375,000 people in 1802 as reliable and considers conservatively some later estimates. Even the best estimates, which are probably those made by the clergy for church use, he regards as generally rather large. The clergy estimated the population in 1876 at 960,000 and in 1887 at 1,017,000, which Tippenhauer would reduce to 800,000 in 1880 and 900,000 in 1888. The latest ecclesiastical estimate in 1905 was 1,425,000, and more recent estimates range from 1,500,000 to 2,500,000. The former figure probably is more nearly correct.

<sup>1</sup> Op. cit., vol. 1, p. 5.

<sup>2</sup> Tippenhauer, L. G., *Die Insel Haiti*, pp. 420 et seq., Leipzig, 1893.

## PRINCIPAL CITIES AND TOWNS.

Port-au-Prince, the capital, which is by far the largest city of the Republic, had a few years ago a population that was conservatively estimated at 100,000. Very recently the population has grown so rapidly that it is now estimated by some of its inhabitants as high as 200,000, but perhaps 125,000 is a safer figure. Fortunat<sup>1</sup> placed the population in 1888 at 60,000, probably including all the commune, which, however, would not greatly increase the total for the city. The capital has not always been the largest city of the Republic, for in colonial days it was greatly overshadowed by Cap-Français (Cap-Haïtien). The population of Port-au-Prince in 1789, according to Moreau de Saint-Méry, was about 6,200, to which he adds a transient population of 3,200 sailors and soldiers. Cap-Français was about twice as large.

Cap-Haïtien, called Cap-Français in colonial days and Cap-Henri during the reign of Christophe, had 12,151 inhabitants according to the official census of 1788. Moreau de Saint-Méry thought this figure too low and estimated the resident population at 15,000 and the transients (soldiers and sailors) at 3,550. At all events the Cap was the largest and busiest city of the colony. At present it is not a great deal larger than it was then, for a census taken in December, 1918, is said to have shown 14,000 people. Conard,<sup>2</sup> however, thought the population was nearer 20,000. Fortunat gives 29,000 for the whole commune in 1888, but this appears to be rather high for the city proper.

Les Cayes, frequently called Aux Cayes in English literature, was the third largest city of the colony and probably still retains that position. In 1789, according to Moreau de Saint-Méry, it had 4,550 permanent and 1,100 transient inhabitants. The figure given by Fortunat for 1888 and still published in recent encyclopedias is 25,000, but this represents the population of the whole commune and includes many residents of the Cayes Plain. The population of the city proper probably is not over 15,000.

Conservative estimates of the population of other larger cities of the Republic are : Gonaïves, 12,000 ; St. Marc, 10,000 ; Jacmel, 10,000 ; Port-de-Paix, 7,500, and Jérémie, 7,500. All these cities are busy open ports. Among the other ports that have a population ranging from 500 up to a few thousand are Petit-Goave, Miragoâne, Anse-à-Veau, Dame-Marie, Aquin, St.-Louis du Sud, l'Arcahaie, Môle St.-Nicolas, and Fort-Liberté.

Among the inland towns whose population ranges probably from 5,000 down to about 1,000 are Mirebalais, Croix-des-Bouquets, Petite-Rivière de l'Artibonite, Grande-Rivière du Nord, Léogane, Gros-Morne, Hinche, St.-Michel de l'Atalaye, Las Cahobas, and Jean Rabel.

<sup>1</sup> Fortunat, Dantès, *Nouvelle géographie de l'île d'Haïti*, p. 349, Port-au-Prince and Paris, 1888.

<sup>2</sup> Conard, R. A., *Report on water supply of Cap-Haïtien to Engineer in Chief of Republic of Haïti*, April 2, 1919.

## COMPARISON OF URBAN AND RURAL POPULATION.

The estimated population of the larger cities as given above is summarized as follows:

Port-au-Prince .....	125,000	Jacmel .....	10,000
Cap-Haïtien .....	20,000	Port-de-Paix .....	7,500
Les Cayes .....	15,000	Jérémie .....	7,500
Gonaïves .....	12,000		
St.-Marc .....	10,000		207,000

Probably the people who live in other towns having a population of more than 1,000 would increase the total urban population to about 225,000, possibly even to 250,000. If the total population is 1,500,000 the percentage of city dwellers is about 15 to 17, figures which show that the population of the Republic is essentially rural and that agriculture is the chief industry.

Although the population is so largely rural and depends for its living mainly on the soil, much of it is concentrated in small villages and rural communities of a hundred people or less rather than in detached houses occupied by one family. Whenever possible the Haitians live in little communities, some of them consisting of only three or four families, and as each of these communities has a distinctive name, an almost infinite number of place names appear on the maps and in the literature.

## DENSITY OF POPULATION.

The area of the Republic is about 27,700 square kilometers. This figure includes the islands of Tortue, Gonave, and Vache, which belong to the Republic and are closely related to the main island geographically. If the total population is estimated as 1,500,000 or a little more the average density of population is about 55 to the square kilometer, but if the city population is omitted the average density for the rural regions is about 45 to the square kilometer. The rural population is, however, very unevenly distributed, and large areas that have unfavorable climate, soil, or surface features are virtually unsettled. The whole of Tortue Island, for example, is sparsely inhabited. Gonave Island has a small population, probably considerably less than 10,000, which is concentrated in little coastal villages and on small bodies of good agricultural land in the eastern half of the island. Ile-à-Vache and Grande Cayemite Island also have a relatively thin agricultural population.

The density of population in fertile, thickly settled parts of the Republic is undoubtedly double the figure given, or at least 100 to the square kilometer. The average density of population per square kilometer in France in 1910 was 78, in Germany 124, in Great Britain 154, and in the United States 12.

## GEOGRAPHIC FEATURES INFLUENCING DISTRIBUTION OF POPULATION.

There is a very natural concentration of the population on the long, crooked coast. All the larger cities are ports, which depend in great measure upon foreign commerce. Many smaller towns on the coast are not open to foreign trade, but they have extensive coastwise commerce, particularly as feeders for the larger ports. The almost impassable mountains and the general lack of roads greatly increase the volume of ocean travel and transportation. Moreover, many of the alluvial plains that constitute the bulk of the agricultural land border the shore and favor the concentration of population near the sea. Fishing also is an industry that provides both occupation and sustenance for a large number of the inhabitants of the coast. Some long stretches of coast, however, are unapproachable even by small boats and are unfit for cultivation, and are therefore very thinly inhabited.

Over the strictly agricultural regions the density of population is closely proportioned to the productivity of the land in articles of food and in the few staple export crops—coffee, cotton, sugar, and cacao. Although the forests at times supply a large part of the exports they are worked for the most part by labor drawn temporarily from near-by towns or agricultural regions.

The productivity of any part of the land depends on the surface features, the climate, and the soil. Closely related to the surface features is accessibility to markets. Some small areas that have good soil and favorable climate are isolated by so many nearly impassable mountain ranges that they are not thickly settled or carefully tilled. Such areas are found on the heights of the Massif de la Selle and the Massif de la Hotte. Many other areas, especially places on the mountain sides, are so steep, rocky, and unapproachable that they are left in forest and serve only as pasture for cattle, goats, and hogs. Good examples are the rugged slopes of the Morne du Cap and of the Montagnes Noires.

In both mountain and plain the climate, especially the rainfall, greatly influences the productivity of the land. Large areas that stand in the lee of mountain ranges and that are thus cut off from the life-giving east or northeast rains are arid and sterile. Without irrigation they can support only a scanty population. Among these barren areas are the Arbre Plain, the lower part of the Artibonite Plain, much of the Central Plain, and many small plains of the south coast. The upper part of the Artibonite Plain, the Arcahaie Plain, the Cul-de-Sac Plain, and other areas are saved only by irrigation. The lower southwest slopes of the high mountain ranges generally are not susceptible of reclamation.

Not the least essential requirement for successful agriculture is a good soil, for only where the soil is deep enough and fertile enough to produce crops year after year can a dense population be developed and maintained. The composition and texture of the soil is closely related to the areal

geology and is more fully discussed in Part II. The soils of the Republic may be classified briefly as alluvial soils, soils residual from limestone, and soils residual from igneous rock. The alluvial soils cover the surface of most of the larger plains and many similar but smaller valleys and plains. Although they constitute probably less than 30 per cent of the total area they support perhaps more than 50 per cent of its population. The greater productivity of these plains is due not entirely to the nature of their soil but in part to their smooth surface and their superior accessibility.

The limestone that covers so large a part of the Republic yields on weathering a red clayey soil which is very fertile and which for some crops is superior to the alluvial soils. Areas in which the surface is smooth enough to permit the retention and cultivation of this soil are well cultivated and thickly settled. Many small bodies of such land are scattered through the mountains, especially on the summits of the ranges. Examples are the Bombardopolis Plateau, the crest of the Chaîne des Mateux, the mountains of Dame-Marie and Jérémie, and the interior plateaus of Gonave Island.

The soils derived from igneous rocks are generally thin and poor and support only a scanty population. Some of the granitoid rocks of the north-eastern part of the Republic, such as those at Vallière and the volcanic rocks of Plaisance and Terre-Neuve are an exception to the rule. These rocks yield a fairly deep and fertile soil, which with sufficient rainfall is highly productive, and the areas so favored are well settled.

## AGRICULTURE.

### GENERAL FEATURES.

Agriculture has been the basic and dominant industry under both the colony and the Republic. About 80 per cent of the people (see p. 67) live in the rural districts and get their living from the soil. In this description the leading agricultural and live-stock products are divided into two distinct classes—those grown for export and those grown for local consumption. The first class includes coffee, cotton, cacao, sugar, honey, and hides and skins. The second class includes live stock and a great number of grains, vegetables, and fruits. As any discussion of the present state of agriculture inevitably leads to comparisons with that in the French colony, which was in its day the most productive and prosperous region in the New World, a brief review of the state of agriculture in colonial times is given with the description of its present state. Most of the information regarding colonial agriculture other than statistics of exports is taken from the work of Moreau de Saint-Méry, to which reference will be made by volume and page wherever direct credit seems to be necessary.