

CHAPTER VIII

THE REPUBLICS OF THE ANDES—ECUADOR

The republic of Ecuador is the smallest by far of the sisterhood of the Andean countries, but it shares with them the striking topographical features which distinguish the Pacific states of South America. The series of colossal snow-crowned volcanoes of this part of the continent, which overlook the equator-city and plateau of Quito, form the culminating orographical features of the Cordillera: the imposing mountain edifices which, built up of subterranean fires, have been sculptured by the perpetual snows which lie upon the Andes of the equator. Ecuador is a land of great contrasts. Above the profoundest gorges arise the loftiest summits: snowfields stretch gleaming above tropical forests, perpetual spring and perpetual winter lie one beneath the other, and bleak steppes alternate with smiling valleys.

The territorial conditions of Ecuador are to a certain extent similar to those of Peru; comprising the Pacific littoral, the mountain and highlands zone, and the Amazon forest region. Due to a difference of climate, however, the coast zone is not arid and waterless, as in Peru and Chile, but is covered with dense vegetation. The portion of Ecuador extending into the Amazon valley does not reach the Brazilian frontier; the northern extension of Peru intervening. The cis-Andean or littoral zone has a frontage upon the Pacific coast of about 400 miles, its principal topographical feature being the gulf of Guayaquil and the short navigable Guayas river leading to the port of Guayaquil. The climate of the coast lowlands is hot and moist; and mangrove swamps line the shores of the Guayas

river The gulf of Guayaquil, the only indentation of much importance in the western coast of South America, marks the line between the arid Peruvian littoral and the forested belt of the equatorial region. In the Spanish topographical nomenclature elsewhere described, the zones of varying altitude are known as the hot lands, the temperate lands, the cold lands, and the snowy lands; and the climatic conditions depending upon altitude are very strikingly marked in Ecuador, as much so as in Peru, and although the country lies upon the equator, from which it takes its name, the principal centres of civilisation and population are in the so-called cold lands of the inter-Andean region, which include the fertile plateau upon which Quito, the capital, is situated, nearly $1\frac{3}{4}$ miles above sea level. The tropical valleys and rivers of the Amazon watershed beyond are possessions of much value to the republic.

The republic is bounded on the north by Colombia, and on the south and east by Peru. Some of these boundaries are in dispute, and the area of the country, estimated at 116,000 square miles, is only approximate. Ecuador forms the westernmost part of South America; which continent, lying as it does almost entirely to the east of North America, brings Quito almost on the same meridian as Washington. The important island group of the Galapagos, lying 600 miles off the coast, upon the equator, forms part of the national territory. North of the gulf of Guayaquil the coast is of cliff-like formation, part of the great fracture-zone of the continent; and the great depths off the coast, and the vast heights of the Andes above, combine to form a great total difference of elevation with tectonic earthquake-producing activity attendant. The strong contrast presented with the Peruvian and northern Chilean coast, in the matters of climate and vegetation, is due to the absence of the great Peruvian current, which is deflected outwards into the Pacific by the bulging northern coast of Peru, and so no longer influences the littoral. Due to this circumstance a total change in the character of the coast is observed. The sandy deserts of the Peruvian seaboard give place in Ecuador to forests coming down to the water's edge, bathed

in moisture and warmth, and extending upwards upon the slope of the country to an elevation of 4,000 feet ; primeval forests with trees of colossal size, and upon these wooded mountains at mid-day during certain seasons a veil of dark mist-clouds hangs. The climatic influences on the coast, however, are not rigid, but are varied by local conditions, and north of the gulf there are some arid desert areas.

The Guayas river at its mouth is nearly two miles wide, and the shores and islands are green with vegetation. Floating islands of matted trunks and palms float downwards on the turgid current, and upon these at times voyaging alligators are observed. Balsas, or rafts, canoes, and steamers ascend and descend the river, and the balsas return upon the flood tide, having discharged their merchandise. The river narrows considerably between Guayaquil and the mouth, and the ocean steamer almost brushes the vegetation on the banks, and temporary stranding on the soft mud shoals not infrequently occurs.

Above the tropical coast lands and lowlands the country slopes upwards rapidly, ascending to the high uplands, or *paramos*. The inter-Andean plateau, the region of the great uplands, lies between the two great chains of mountains which cross the country from north to south : known as the Eastern and Western Cordilleras respectively. The three principal plains, or shallow basins, are those of Quito, Ambato, and Cuenca ; the first having an average elevation of 9,500 feet, the second of 8,500 feet, and the third of 7,800 feet. The Quito plain is fertile, as described, and covered with vegetation, and the others barren ; partly due to the volcanic character of the region. Rising from the plateaux along the eastern and western margins are the main Cordillera summits, culminating far above the perpetual snow-line, which is found in Ecuador at about 15,750 feet above sea level. Nowhere among the mountains of the whole world does there exist so remarkable an assemblage of snow-covered peaks as those which exist around the Ecuadorian tableland. Not only for their height are these remarkable, but for their striking symmetrical disposition in two rows, sometimes in pairs facing each other across the valley.

Around these central plains; almost within sight of each other, are grouped twenty-two such peaks, several of which are active volcanoes; the western chain containing the highest summits, the eastern the greatest number. Among the principal of these mountain peaks are Chimborazo, 20,498 feet elevation, Cotopaxi 19,613 feet, Antisana 19,335 feet, Cayambe 19,186 feet, with three others over 17,000, four over 16,000 feet, and four over 15,000 feet. It is stated that some of these peaks and towns, and places in their neighbourhood have sunk, and others risen, since the time of their first measurement.

The volcano Imbabura, notorious for its destructive eruptions of mud and water, stands between the two ranges towards the north of the plateau, reaching 15,033 feet; and its name was due to a now discredited native story that quantities of fish were discharged from the crater with the mud. Cotopaxi, the unrivalled, is the highest active volcano in the world, and smoke issues unceasingly from its summit. Another peak, Llanganati, bears the tradition that the treasures of the Incas were buried in a lake on its slopes. Tunguragua has a cone-shaped summit like that of Cotopaxi, and, rising direct from the lower elevation, is of the most imposing character. A cataract fed by the melting snows from its snow cap descends 1,500 feet in three leaps; and at its base lies a fertile cultivated valley, that of Baños, with thermal springs. Among the most impressive of these mountains is El Altar, or Capac Urcu, meaning "King mountain," with a summit formed of eight snow-clad peaks which tradition states were once higher than Chimborazo, but which sank under an eruption long ago. Sangay, another of the volcanoes, has been but little visited. It sends forth small outbursts of lava, throwing molten rock 2,000 feet above its summit, and the ashes are carried by the wind into the streets of Guayaquil, far away. On the western Cordillera is the magnificent Chimborazo, the name meaning "the mountain of snow," lying seventy-six miles north of Guayaquil, and forest-covered on the Pacific side to the snow-line, above which it rises for 5,000 feet. Mists and clouds cover the cone of Chimborazo, which is rarely seen

Carahuairazo, or "Chimborazo's wife," so called by the natives, lies immediately north of her mighty consort, but at the end of the seventeenth century, during a great earthquake, her hollow cone collapsed, and left a jagged rim, weird and picturesque. Pichincha is the "boiling mountain," so named for its destructive eruptions which menace Quito, one of which in past centuries covered the city three feet deep with stones and ashes.

The hydrographic and river systems of Ecuador are those of the Pacific and Amazon watersheds. Of the former the Guayas river is the principal; but a considerable number of smaller streams flow westward through the Cordillera to the Pacific, some navigable and of considerable importance; among them the Mira and the Esmeraldas. The largest eastward-flowing river is the Napo, which rises near Cotopaxi. At the village of Napo it is 1,450 feet above sea level; at the confluence with the Aguarico 586 feet, and at its junction with the Marañon 385 feet, and nearly a mile wide. A large part of the region through which the river flows is claimed and occupied by Peru. The Napo is navigable for steamboats up to the mouth of the Coca river above the Aguarico, and in canoes up to the Cando cataract, 3,330 feet above sea level. Its total length is 920 miles. The Napo runs parallel with the now notorious Putumayo, whose possession is claimed both by Peru and Colombia. The Napo and its tributaries are famous as having formed the route by which Gonzalo and Orellana reached the Amazon in early Spanish times, the first white men to traverse those vast and difficult regions.

The remaining affluents of the Amazon flowing through this territory, of any importance, are the Tigre, Pastaza, Morona, and Santiago. The Tigre is 416 miles long, and navigable up to the Cunambo confluence; and it promises to become one of the best river routes of the region. The Pastaza is navigable for steamers of two to four feet draught for 124 miles at high water period, and for canoes for 200 miles beyond. It is, however, subject to furious floods. The Morona is navigable for more than 300 miles by small steamboats. Little is known of the affluents of these rivers,

but the navigability of the main streams is a condition of extreme economic value to the region they traverse, and provides an aggregate of navigable waterway of 1,500 miles. The Marañon, into which these rivers fall, is described in the chapter on the Amazon valley.

The Ecuadorian people are of the general Andean constituents, of white, more or less of pure Spanish descent, mestizos, and Indians; and the total population is estimated at 1,500,000 to 2,000,000, but no census of a reliable nature has ever been taken. As in Chile especially, the whites form an exclusive governing class, who to a large extent monopolise the land and arrogate to themselves all governmental powers. This class is estimated to number about 120,000 or 150,000; but it includes a certain proportion of mestizos. The mestizos in Ecuador number 300,000 to 500,000, and constitute about a quarter of the population. They are, as a class, backward, and in certain districts ignorant and slothful; but these conditions cannot altogether be ascribed as their fault. The system of land monopoly by the ruling class and the pride of European caste which these exhibit keep the people of mixed race under, and they have few opportunities of improving their condition, and the constant political turmoil tends to arbitrary methods. In the more remote districts the mestizos tend to revert to the Indian type. The Indians of Ecuador represent about two-thirds or more of the population, and are in the main the descendants of the ancient people under the Caras and the Incas. They were subjected to grave abuses under the Spaniards, thus sharing the grievous history of their brethren of Peru, and became much reduced in numbers at that period. Furthermore, the system of peonage, or debt-bondage, which controlled the natives under the colonial rule, and which was little better than slavery, practically exists at the present time, as regards the agricultural classes. Regarding their intellectual advance, the primary schools of Ecuador, like those of all Latin American countries, are free, but they are insufficient for the population, and education by the poorer classes is regarded with indifference; and only a small proportion of the people read and

write The Indians of the Ecuadorian Oriente, or eastern region, are, like those of Peru, largely composed of tribes of *infieles*, or infidels ; that is, people who are under neither civil nor religious influence. The principal Indian tribes dwell on the headwaters of the Napo and other rivers, in some cases cultivate the soil, and have developed some primitive manufactures ; but in others they exist in a state of absolute savagery. These tribes are distinct from the Christianised Indians of the uplands, of whom the mestizo race has been formed, as in the case of Peru and Bolivia.

The negro element in Ecuador is principally confined to the coast, due to the warm moist climate in part, which the black race prefers. They are numbered at about 8,000, with 35,000 or more of Zambos, or people of mixed negro and Indian blood. Of Europeans and North Americans in Ecuador there are but few, numbered at about 1,000. A number of Chinese have settled in the coast lowland, more or less insidiously, as their entry into Ecuador is forbidden by law. They are engaged in shopkeeping mainly, but they do not obtain much foothold in the highlands. In certain places there is a strange admixture of Chinese, negroes, Spaniards and Indians.

The upper class Ecuadorians present characteristics similar to those of their neighbours of Peru, Bolivia and Colombia, to a large extent, except that they endeavour to preserve certain caste or colour distinctions to a greater degree. They are a people of excellent ideals and theories, hospitable and courteous, and in Quito draw certain vigorous characteristics from their bracing mountain environment ; but they are much influenced by political partisanship and ruthless in their methods when their antagonisms are aroused, like their brethren of Peru. The progress of the republic is often hampered by the turbulent political element ; and the series of political murders which have marked its history have injured the country severely in foreign estimation.

Ecuador is divided into fifteen provinces and a territory, and the Galapagos islands, which latter are under the

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administration of a *jefe* territorial appointed by the executive
These provinces are as follows .

PROVINCE	AREA	POPULATION	CAPITAL	POPULATION
	Square miles.			
Carachi ...	1,495	4,000	Tulcan	5,000
Imbabura ...	2,416	68,000	Ibarra	5,000
Pichincha ...	6,219	205,000	Quito	80,000
Léon ...	2,595	109,600	Latacunga	12,000
Tunguragua ...	1,686	103,000	Ambato	8,000
Chimborazo .	2,990	122,000	Riobamba	12,000
Bolivar ...	1,260	43,000	Guaranda	6,000
Canar ...	1,519	64,000	Azogues	4,000
Azuay ...	3,874	132,400	Cuenca	30,000
Loja ...	3,707	66,000	Loja	10,000
El Oro ...	2,340	32,600	Machala	3,200
Guayas ...	8,216	98,100	Guayaquil	60,000
Los Rios ...	2,296	32,800	Babahoyo	3,000
Manabi ...	7,893	64,100	Portoviejo	5,000
Esmeraldas .	5,465	14,600	Esmeraldas	6,000
Oriente Territory	unknown			
Galapagos Is.	2,865	2,000		

The government is a centralised republic, whose constitution embodies the common Latin American system of Executive, Legislative, and Judicial control. The executive consists of a president, vice-president and cabinet of five ministers; the legislative of the congress of senators and deputies; and the judicial of a supreme court and five superior courts. Theory and practice have clashed greatly in Ecuador in the country's governance, and between 1830 and 1909 the constitution was changed no less than eleven times. The five ministers are of the departments of foreign relations and justice: interior, and public works: finance: war: public instruction, posts and telegraphs. The provinces are administered by governors, the departments by *jefe políticos*, and the municipalities by *tenientes políticos*—political chiefs and lieutenants respectively, all appointed by the executive. The senate contains thirty-two members, two for each province, one-half being renewed each two years; and the chamber of deputies of forty-two members, one to each 30,000 inhabitants. Suffrage is restricted to literate male adults.

Educational conditions are backward in Ecuador. Education is compulsory and free as regards primary instruction,

but a considerable part of the population is unprovided for. In 1900 there were 1,300 primary schools and 80,000 children in attendance; 37 secondary schools and 4,500 pupils. For higher education there are the technical and professional schools and the three universities of Quito, Guayaquil, and Cuenca, and six schools of "trades and professions." The Quito university has a staff of thirty-two professors, with five faculties; and there is in the capital a school of agriculture, observatory, botanical garden, museum, military school, and at Guayaquil a naval school.

As regards religion Ecuador has always been a stronghold of the Romish church, and the constitution of 1884 enacts that all other creeds are excluded. The government at times has been practically a theocracy, but in 1904 reforms were made and the church placed under state control, which forbade the foundation of religious orders and changed other matters pertaining thereto, ensuring greater liberality.

The railway from Guayaquil to Quito now gives access to the plateau-interior, and is some 290 miles in length. It was built by American engineers with British capital. The total length of the railway lines in the republic is scarcely more than 800 miles; and the roads, with the exception of one of two highways built for vehicles on the coast, are only the ordinary difficult mule-tracks of the Andean countries. The general appearance of Guayaquil from the water is attractive. The harbour is a good one, two and a half miles in length, with extensive quays, and the town is a busy centre with factories, steam saw-mills, machine shops, and breweries, evidences of modern activity, in contrast with the mediæval Spanish cathedral and plaza. The city, which contains 80,000 inhabitants, stretches along the bank of the river for two miles towards a range of picturesque, wooded low hills, and the numerous craft lying before it, and at night the many lights, give the seaport a pleasing aspect on approaching it, which is not fully borne out upon entering. The streets are regular and wide, and the better parts of the town clean, but roughly paved and noisy: and in the poorer quarters are unpaved; and during the rainy season these streets become pools of stagnant water in which refuse

from the houses is thrown, forming breeding-grounds for mosquitoes, yellow fever, and malaria. Thus it is that the seaport of Guayaquil is notorious for its unsanitary conditions, which have always constituted a serious menace to ships calling there. During the years 1909-1912 more than 1,000 persons have been attacked by yellow fever in the town, and twice as many by plague: whilst smallpox and other epidemics were far more numerous. Vessels frequently neglect the port in their itinerary from Panama to Callao, as the enforced quarantine after leaving the place involves loss of time. The prevalence of disease is due mainly to the dirty and unsanitary mode of life of the poorer part of the population, their squalid vermin-infested habitations, and the neglected areas in the vicinity of the town, rather than to any irremediable climatic conditions. Following upon the improvements of Panama, however, the sanitation of the port has been greatly extended, with better conditions. Improvements had long been projected by the government and municipality, but indolence, lack of funds, and political disturbances prevented these from being carried out. Apart from these matters the town is an important place; its best streets are good, and in the many fine shops almost any article can be purchased. There is a modern electric tramway system in the town, and electric light, driven hydraulically from turbines; and power is also supplied to some of the sugar estates. Guayaquil is the principal distributing point for the whole republic.

The average daily temperature of Guayaquil is 76° F.; the highest monthly, in February and March, 77° throughout the 24 hours. The heaviest rainfall is in the same months, and was in 1911, 2,289 litres per square metre. There is no rain generally from May to November.

The other principal port of Ecuador is Esmeraldas, the name being derived from the old emerald mines in the vicinity; and there are various minor ports.

The terminus of the Guayaquil and Quito railway is at Duran, across the river, reached by the railway steamers. The Guayas river at this point is some three-quarters of a

mile wide, with a swift current and a tide with a fall of 12 feet. The line passes through lands cultivated with sugar cane, coffee, cacao, and bananas, and some rice, for which product the district offers great possibilities, and Guayaquil might become the most important rice-producing centre on the Pacific coast. There are a number of sugar mills, and the country in the vicinity of the line, before entering upon the ascent of the Andes, wears a more prosperous appearance. The railway enters the Chan-Chan valley, which is threaded by a roaring torrent, crossed and re-crossed by the line, and the heavy gradients and sharp curves attest the difficulty of its construction; landslides and washouts have frequently occurred. As the line ascends, fine healthy sub-valleys are reached, and at Huigra are the headquarters of the railway staff and a hospital, which is above the yellow fever zone. On the higher reaches beyond the land is of a barren aspect, but many fertile patches are cultivated, every available space of arable land being tilled, even on hill slopes so steep that such would seem impossible. The town of Riobamba lies at 9,000 feet elevation and is lighted electrically from a mountain stream, and beyond a full view of Chimborazo opens, when clear of clouds, with its immense double peak and snow-clad crest outlined against the blue of the upland sky. It is from Riobamba that most of the revolutionary element of Ecuador has proceeded. The plateau has one of the finest climates in the world, on the authority of Humboldt. A considerable increase in grain-growing in this region has resulted upon the construction of the railway. The highest point on the line is at the summit of the Chimborazo pass, at 11,841 feet, and thence descent is made to Ambato. In this vicinity strawberries, pears, apples, and peaches are produced, and grain, corn, potatoes, and alfalfa along the Latacunga valley, which is comparatively level and about ten miles wide; cattle and horses abound, and the rich pastures are intersected by irrigation ditches. Dairy products, good cheese and butter, are made as a result of agriculture in this high valley. Beyond, the base the giant cone of Cotopaxi is crossed by the line, and the thin smoke-wreath of the volcano hangs in the atmosphere

above; and thence the fertile valley of Machachi, one of the most attractive in the republic, is descended. The rows of volcanoes, clothed in green to the snow-line, which guard this valley are of extreme beauty, as elsewhere described. The people in this region dwell in great *haciendas*, and the relation between the workers and the owners is almost that of lord and serf: feudal in its character, as is the general life and environment, although not without elements of simplicity and rural contentment. There is much of picturesqueness and colour about the native dress and manners in the uplands, but conditions of life are unsanitary. Visible from the line, but at a much lower elevation, is the Chillo valley, with cotton and woollen mills, actuated by water-power from the river, and supplying a large proportion of cheap cloths for the natives. The railway then enters the valley of Quito.

Quito is a city of picturesque character, with houses covered with red-tiled roofs and built in the quaint style of old Spanish colonial or Moorish architecture typical of the Andean capitals. The streets are thronged at times with the Indian element, who enter the city on feast days and market days, and whose bright-hued and vari-coloured ponchos lend animation to the scene. The contrast which this element presents in its general poverty and primitiveness, however, with the dress and demeanour of the upper class, the imported frocks and Parisian hats of the ladies and the correct black coats of the official class, is perhaps more marked than in any other of the Andean towns: for Quito is the centre of a well-populated agricultural country, and at the same time is the centre of Ecuadorean government and society. The population of the city is about 80,000.

The city is traversed by two deep ravines, one of which is arched over with a stone viaduct, and is laid out in rectangular squares with the streets oriented. The buildings are generally of adobe, with the better class houses stuccoed. Upon the Plaza Mayor, or principal square, occupying the south side, is the cathedral, with the archbishop's palace on the northern side, and the finest building in the city is

the Jesuits' church with a façade covered with elaborate carving. Thus the ecclesiastical element dominates, architecturally, as it long did in other ways. On the other sides are the government or national Palacio, or state building, with a long handsome row of columns, and the municipal hall. The main plaza is thus the centre and pulse of civil and ecclesiastical government, a method common in civic economics and town planning in the older Latin American republics. Among other notable institutions is the university, which occupies part of the old Jesuit college, and eleven large monastic establishments, six of which are nunneries, and one, the convent of San Francisco, covers a whole rectangular block, and is among the largest of this kind of institution in the world. There are no large commercial houses in Quito, and the export trade therefrom, consisting mainly in hides and forest products, is small. The city derives its name from the Quitus people, the original inhabitants in pre-Colombian times, who were associated with and overcome by the Incas. A number of interesting monuments and ruins exist in various parts of Ecuador, remnants of both the earlier peoples. The temperature of Quito is equable, having a mean of 58° , and a diurnal variation of 10° , with an annual maximum of 70° and minimum of 45° . Pulmonary affections are almost unknown at the elevation of Quito, which is 9,345 feet above the level of the Pacific. The city has frequently suffered from earthquake shocks, when great damage has been done. Quito is entitled to the gratitude of the world in one respect—it was in its neighbourhood that the potato was first brought to the notice of the Spaniards, and so given to the world, the natives having developed it from a wild variety.

The natives of the Ecuadorian highlands, especially around Quito, show the same talent in textile arts that characterises the Peruvians and Bolivians. Hand-wrought laces of exquisite workmanship are made, especially by the women, and superior hand-woven carpets, also ponchos, woollen and cotton cloths and carpets. The Quito artisans are skilled in wood carving and gold and silver work; and with other matters these are carried out as cottage indus-

tries. The so-called Panama hats are largely a production of Ecuador, Colombia, and the north of Peru; and the native power of weaving in fibre in these countries is a veritable fine art. In Ecuador the work is a valuable national industry. The annual value of the export of straw hats is about £260,000. Of manufacturing industries there are none beyond those of primitive or local importance, including some cotton factories, a few sugar mills, one or two with modern machinery, and various distilleries.

The mineral resources and industries of Ecuador are but little developed, and cannot compare with those of Peru and Colombia. Gold, quicksilver and emeralds are found. In the gold mines a good deal of British capital has been expended, but without commercial results; but some returns in mining have been secured by American enterprise, and shipments of gold effected. These from the Zaruma mines, in 1910, were of a value of £50,000. Iron, lead, platinum, and quicksilver are other minerals which exist, also salt. There are some deposits of good coal on the coast, which have not yet proved successful commercially as sources of fuel; but which it may be possible to develop in some cases, and petroleum is found at Santa Elena, and a small refinery has been erected.

The various coast rivers of Ecuador afford some 200 miles of navigation, which serve the plantations and small merchants. Upon these lowlands depend almost the entire agricultural industries of the country as concerns export. Among these industries the production of cacao, or chocolate, is the principal; and at the end of the last century Ecuador furnished nearly a third of the world's supply of cocoa beans; but the present proportion is considerably less. This valuable product, which has been described as more valuable than gold mining, might be increased considerably in Ecuador; but absentee landlordism is a contributory factor in large part responsible for the lack of development and enterprise in agricultural matters, as the owners of the cocoa and certain other estates are content with the yield of their monopolies and possessions, and spend their time in a life of leisure in Europe. On the hot lowlands coffee is also

produced, and exported for consumption in Chile. Cotton, sugar, tobacco, rice, and sweet potatoes are other products of the coast, although relatively small in quantity. Much of the sugar-cane produced is used for the manufacture of rum, which, as in Peru and Bolivia, is consumed in the interior, to the serious detriment of the mestizo and Indian classes. The production of sugar in 1910 was 8,750 tons, but it did not meet the home demand. The tobacco grown in Ecuador is of excellent quality. The vegetable ivory nut, or "tagua," is the exported product most valuable after the cacao, and Ecuador forms one of the principal sources of the world's supply of this article, of which some 19,000 tons annually are exported. In the uplands, notwithstanding the latitude, cereals are grown, wheat, maize, oats, and barley, but the production is insufficient for home requirements. In the temperate valleys grapes are cultivated, both for fruit and wine, and on the grazing-lands of the plateaux and slopes of the Cordillera, cattle, horses, and mules are bred, and the last-named exported in small quantities. Sheep are also reared for meat and wool, which latter is used in the domestic manufactures. Sheep farming is an industry capable of extension in Ecuador. Of forest products, cane for building purposes, the well-known caña de Guayaquil, and fibre, rubber, and chichona bark, or quinine, are among the principal. Rubber gathering is a comparatively new industry, and is derived from the *Castilloa*, not the *Hevea* tree, which does not grow on the western side of the Andes. In 1910 552 tons were exported.

There are still vast tracts of land in Ecuador, both on the lower west coast region and in the interior, capable of extensive cultivation; especially in the coast region as concerns the production of cocoa, coffee, and rubber. Industries of the cultivation of hat and hammock fibres and straws, henequen or sisal hemp, maguey, the tagua, or ivory nut, and many valuable timbers and plants and products, both known and unknown to commerce at present might flourish more extensively. But the conditions of the law, the unsanitary state of the principal seaports, and even of some

agricultural regions, and the character of the natives, who are somewhat jealous of the foreigner, are factors against immigration, and the present labour supply, although poorly paid and extremely backward, is sufficiently occupied. With added labour and effort the exports could be increased many times ; and great areas of land suitable for the growth of cereals, potatoes, fruit, vegetables, fodder, and cattle be brought into cultivation ; and instead of the meagre population of some 2,000,000 the country might support twenty times that number. The value of the Ecuadorian agricultural resources has increased nevertheless from £1,500,000 in 1900 to more than £3,000,000 at the present time.

The Galapagos islands may, in the future, be of some considerable strategic value, lying as they do in the direct path of vessels approaching Panama from across the Pacific ocean from the south-west. They include five large and ten smaller islands, lying exactly under the equator, the nearest being 580 miles from the mainland ; the total area being about 2,800 square miles. They contain a large number of volcanoes or craters, some active, and their name is derived from the Galapago, a species of giant tortoise which abounds there. The shores are fringed with mangroves, and thick vegetation covers parts of the interior, but generally the land is parched and rocky. The temperature is modified by the cold Peruvian current somewhat. From their remarkably isolated position, and their natural history never having been interfered with, they possess a peculiar flora and fauna. The guano and orchilla moss are products of some value to Ecuador, and there is a penal settlement on Chatham island.

Foreign enterprise in Ecuador is represented principally by the railways, electric tramways, and gold mines ; and there are two German and one British enterprise controlling large cocoa estates, with rubber plantations. The Tenguel plantation, under British control, is an important estate, and farm hands have been brought in from Colombia.

The value of the foreign trade of Ecuador, like that of some others of the smaller South American states, does not fluctuate greatly, and for a number of years has varied

from twenty-five to thirty-five million sucres per annum for the exports, and somewhat over half that amount for the imports; that is, exports to a value of two and a half to three and a half million pounds sterling, the sucre being equivalent to two shillings. The British pound sterling is legal tender in Ecuador (as in Peru), its value being ten sucres. The imports consist mainly of textiles, hardware and machinery, from France, the United States, and Britain; also Germany. Ecuador broke off relations with Germany during the war. In the year 1921-2 the petroleum fields—the Anglo-Ecuadorian Company—began to give greater promise of oil production. The principal shipping interests on the coast, at Guayaquil and other ports, are British, Chilean and Peruvian, each of which now maintains coastal liners between Panama and Valparaiso.

The national revenue of Ecuador fluctuates around 20,000,000 sucres. There is constant difficulty in meeting expenditure and the service of the Foreign Debt.

The future of Ecuador is bound up with the upraising of its working-class and Indian folk, and no real progress is attainable as long as these remain ignorant or exploited. There are excellent elements in the country among both the upper and the lower strata of its society, and it is time that a wholesome and genuine forward movement were made—in a land which Providence has dowered with more than a sufficiency of natural resources. It is time that the ruling class should forget their political strife and personal ambitions, such as have been so marked a feature, often a terrible one, of the national history. The development of agriculture on the one hand, and of small manufacturing and local or even cottage industries, for which the native aptitude is considerable, on the other, are needful elements in the desired progress.