# A DESCRIPTIVE CATALOGUE OF THE VENEZUELAN DEPARTMENT AT THE PHILADELPHIA INTERNATIONAL EXHIBITION, 1876

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A Descriptive Catalogue of the Venezuelan Department at the Philadelphia International Exhibition, 1876 by Adolphus Ernst



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ADOLPHUS ERNST

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Trieste

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# THE VENEZUELAN DEPARTMENT

AT THE

## Philadelphia International Exhibition,

## 1876.

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# GENERAL INTRODUCTION.

The United States of Venezuela are situated in the most northern part of South America, between 1° 8′ and 12° 16′ north latitude, extending from 60° 36′ to 75° 38′ longitude west from Paris. The Republic is bounded north by the Caribbean Sea, from Cape Chichibacoa on the peninsula Goajira eastward to Cape Paria; northeast by the Atlantic Ocean as far as the mouth of the River Pumaron; east by British Guayana; south by Brazil; and west by the United States of Colombia, formerly called New Granada.

The length from east to west is about nine hundred miles; its greatest breadth from north to south is nearly seven hundred miles. The area of Venezuela is estimated by the distinguished geographer, A. Codazzi,* at thirty-five thousand nine hundred and fifty-one square leagues (twenty leagues is one equatorial degree), or three hundred and twenty-three thousand five hundred fifty-nine square miles, or somewhat more than Texas and Louisiana together.

The total boundary line measures three thousand eight hundred and forty miles, of which, one thousand five hundred and twenty-four miles are oceanic coasts with a great number of excellent harbors, the most notable ones being Cumaná, Carúpano, Barcelona, La Guaira, Puerto Cabello, La Vela de Coro, and Maracaibo.

Ciudad Bolivar (formerly called Angostura) is a well known harbor in the river Orinoco, about three hundred miles from its mouth.

No fewer than seventy-one islands fringe the coast, the largest being that of Margarita, which constitutes one of the Federal States, officially called New Sparta. The others constitute the territory called *Colon*, by decree of August 22d, 1871. On some of them (Orchila, Los Roques, Tortuga, Testigos, Aves) there are considerable deposits of phosphate of lime and phosphate of alumina,

* Codazzi published *Resúmen de la Geografía de Venezuela*, Paris, 1841, 8vo. 348 pages; *Mapa físico y político de la República de Venezuela*, 1840, Paris (scale 1-120,000), and, *Atlas físico y político de la República de Venezuela*, Paris, 1840, 19 maps, large in-folio.

samples of which are exhibited in the mineralogical part of the Venezuelan collection. The Orchila deposit is worked by an American company; the Los Roques mineral (phosphate of alumina) was contracted by Mr. P. Spence of Manchester; it appears however, that its utilization presents some great difficulties, on account of the iron it contains.

The vertical development of the country is far less favorable than its horizontal formation. About eighty thousand square miles are occupied by mountains, forming three separate systems. The first is a ramification of the Colombian Andes, the second comprises the Venezuelan coast chains, running in a northeasterly direction and forming a gigantic wall between the extensive plains of the interior and the narrow strip of land washed by the waves of the Caribbean Sea, and the third is the Sierra Parima in Guayana on the Brazilian boundary. The Venezuelan Andes reach their greatest height in the snow-topped *Sierra Nevada* of Merida (four thousand five hundred and sixty metres over sea level); in the coast chains are the culminating points, the *Silla* (*i. e.* Saddle) of Carácas (two thousand six hundred and twenty metres) and *Naiguatá* (two thousand eight hundred metres). The Sierra Parima is very little known.

The coast chain is undoubtedly a great obstacle to inland communication; it is however, already crossed by several good cart-roads, (namely, from La Guaira to Carácas, and from Puerto Cabello to Valencia), and between the first two places, the construction of a railroad has been resolved, the tracing of the most convenient direction being already concluded.

There are generally three chains running more or less parallel, southward of which extend the plains or *Llanos* (pronounced *yanos*) covered by short grass, only occasionally interrupted by isolated clumps of trees, the *palma llanera* (Copernicia tectorum Mart.) with large fan-shaped leaves being the prominent feature of this peculiar vegetation. These plains are the seat of a large number of cattle-farms, which we shall describe hereafter.

Traveling on towards the south, we reach the luxurious virgin forests on the banks of the Orinoco, being an almost inexhaustive treasure of articles, interesting to science and industry, most of them scarcely known by their names.

The geology of Venezuela is pretty well known, since the important investigations of Humboldt and H. Karsten have given impulse to further exploratory studies. The coast chain is, generally speaking, built up of gneiss; in the Andes appears frequently a bluish-

gray limestone, and the Llanos are the dry bottom of a tertiary lake or gulf. A detailed geognostic description would be out of place; it may be sufficient to refer to the list of minerals to be given in the second part of this catalogue. It is, however, necessary to say here a few words on the volcanic phenomena observed in the country. There are no active volcanoes in the Republic, but earthquakes are not uncommon, although they are very seldom of so disastrous an intensity as that of 1812, when Carácas and many other towns were ruined, and that of May 1845, when some towns in the western part of the Republic, especially San Cristoval, capital of the State of Táchira, suffered considerably.

Venezuela enjoys a highly developed system of river communication. The interior trade is most admirably facilitated by the River Orinoco and its numerous tributaries which bisect and traverse the Republic for nearly its entire length and breadth, thus giving to the producing centres the means of easy and rapid communication with the sea-board, and from thence to the markets of the world.

Ciudad Bolivar, on the right bank of the Orinoco, has therefore a large and active commerce, supplying the country on both sides of this majestic stream with merchandise of every description, and sending down various and highly valuable productions of the interior country. It is situated in 8° 8′ 11″ north latitude and 18° 16′ 17″ longitude east from Washington. The river at this point is somewhat narrowed, forming a strait, which is, however, about one mile broad, while the mean height of the water over sea level is said to be one hundred and fifty feet.

At a distance of about one hundred miles above Ciudad Bolivar, the channel of the Orinoco makes two abrupt curves, forming a somewhat S-shaped figure, from which this point has derived the name "*El Torno*," or "*The Turn.*" The river here contains many rocks, islets, and three larger islands, and between them there are four distinct channels, the one nearest the right bank being the best. The water moves through these channels with considerable velocity, forming the rapids, called *Raudal de la Camiseta*. There is, however, no danger in passing them. The highest part of the rapids is called *Boca del Infierno* (*i. e.* Mouth of Hell), a name that was given it by the early Spanish explorers, whose heavy and imperfectly built brigantines were ill-constructed to overcome the strong current encountered at this place. From this point the river resumes the direction W. N. W. for one hundred miles, and after hav-

ing passed between Caicara on its southern bank and Cabruta on the right, it turns suddenly at almost right angle towards S. S. W., receiving at this inflection the waters of the river Apure.

Between Ciudad Bolivar and the Apure, the fall of the Orinoco is about three and a half inches per mile, and one is surprised at the force of the current on so slight a fall, but this strong current depends less on the difference of the level, than on the immense accumulation of the higher waters, a circumstance which is likewise noted in the Mississippi. Navigation by sailing vessels ascending the Orinoco is therefore at all times a most difficult and toilsome undertaking. It will not be out of the place to give a short description of the system generally employed. The current being strongest in the middle of the river, the sailing boats are obliged to remain as close as possible to the banks, and in periods of high water they not unfrequently pass over the tops of saplings and trees; oars are of no avail; the sailors use a strong rope or cable, made of Chiquechique fibres about one inch thick, and several hundred feet long, (a sample is in the collection). The Chiquechique is a kind of palm-tree (*Attalea funifera Mart.*), which grows abundantly on the swampy banks of the upper Orinoco and its tributaries. This rope is fastened to the fore part of the vessel, and is then drawn into a boat, two men row ahead of the vessel, and at a convenient distance fasten the other end of the rope to a long tree or rock; they then return on board, and the rope is hauled aboard, until the vessel is drawn up to the point where the cable is attached. This operation is repeated until the passage is completed, progress being extremely slow and laborious. This mode of navigation is called *á espía y garabato*. It frequently happens that boats from Ciudad Bolivar, going up to Nutrias, a town on the Apure, are three months on the passage. Now steamers are running on those waters, as will be stated farther on.

The river Orinoco rises after the vernal equinox, and usually continues until the middle of April, when a slight decrease is observable, continuing until about the middle of May, when the river rises very rapidly, reaching its maximum height during the month of August, where it commences slowly to recede, reaching low water mark in January, and thus remaining until the middle of March. At Ciudad Bolivar, from actual measurement, the river at low water is about sixty feet deep, while at high water it measures 140 feet, thus giving a range of eighty feet.

Very little has been done hitherto to facilitate navigation on its waters. The mighty stream is to-day certainly not in the same con-

dition in which it was found by the daring adventurer Diego de Ordaz in 1531, who first ascended it as far as the mouth of the Meta; nature itself has effected many changes, and does so continually. The time, however, has come, when Venezuela and her enlightened rulers comprehend the important fact, that the Orinoco is the great artery of commercial life for the nation, and engineering skill will be applied for the removal of all the obstacles which have hitherto obstructed the navigation of this great river and its tributaries.

From the mouth of the Apure the Orinoco continues southwest to the mouth of the Meta, its most important affluent. It descends from the eastern slope of the Colombian Andes, in the vicinity of Bogotá, and passes through vast grassy and fertile plains, not unlike the prairies of Kansas and Western Missouri. It has been ascended by steamboats as far as Cabuyaro, within sixty miles of Bogotá.

The upper Orinoco, between the mouth of the Meta and that of the river Guaviare, contains the rapids of Atures and Maypures. They are obstacles to navigation, although by far not so dangerous as some sensational travelers have described them. Near the mouth of the Guaviare is situated the town of San Fernando de Atabapo, and the shortest glance at any map of the upper Orinoco must impress every one with its admirable situation.

Three mighty rivers unite in its immediate vicinity: the Atabapo, Guaviare, and Orinoco. The Orinoco presents, at this place, a very great inflection, so that its upper part comes from the east, and its lower part runs almost to the north. It would be difficult to find any other town situated at the point of junction of four large river channels, and yet with these advantages the town is comparatively small, and its commerce insignificant. The reason is obvious. It requires communication with the outside world. Fortunately, the time is approaching when a regular line of steamers will change this state of things, and then San Fernando will become the great staple centre of the upper Orinoco, where all the productions of that virgin country will accumulate.

Further to the south we have the bifurcation of the Orinoco, which sends into the Cassiquiare a large portion of its waters southwest to the Rio Negro. Hitherto, this fact has been more interesting to geographical science, than important to commerce, but the day must come when those now silent waters will be ploughed by swift steamboats, and their smoke will rise up to the majestic crowns of the forest giants shading its mysterious banks.

Ascending one hundred and thirty miles, we reach on the banks

of the Rio Negro the frontier between Venezuela and Brazil, and floating down for many miles past many flourishing towns, we salute at last the rolling waters of that king of rivers, the mighty Amazon, which from the lofty heights of its Andean birth-place, crosses the South American continent in its widest part, forming the largest and grandest fluvial system in the world, where Martius, Spix, Bates, Wallace, Spruce, Orton, Agassiz, Herndon, Gibbon, and many others, have discovered precious treasures for science and industry, that must be matters of commerce and curiosity for centuries to come.

We have entered into these details because of our thinking them of interest to the mindful reader who is aware that the large streams are the best and cheapest channels for the civilizing influence of commerce. Venezuela is unquestionably highly favored also in this respect, and if it should be her happy destiny to enjoy, in undisturbed peace, the great blessings of liberal and enlightened governments, as it fortunately does actually, its fluvial system will be soon one of the most efficacious means of progress and development.

The climate is of course very different in the different parts of the country; some general observations referring to it will be made further on in the chapter dedicated to agriculture.

The vegetation is rich and luxurious as in all tropical countries. Even a most condensed description would be by far two extensive for the limits of this pamphlet, and to our great regret we must refer our readers to the special works of descriptive botany by Humboldt, Karsten, and others.

All the domestic animals of the temperate zone are also found in Venezuela, and on the plains cattle-farming is the almost exclusive occupation of the inhabitants. We shall return to this subject in a special chapter of the second part.

Wild animals are already scarce in the cultivated parts of the country. Amongst them we have twenty-five species of monkeys, a great many bats, one species of bear, (*Ursus ornatus*), foxes, several representants of the weasel-tribe, the jaguar, and some other large cats, about a dozen species of oppossums, a considerable number of rodentia, (amongst them some very interesting species, as the *Chigüire* or water-hog; the largest animal of this order), porcupines, ant-eaters, three species of sloths, armadilloes, the tapir, and two species of wild pigs, called *saquiras*, several deer, and finally the manati and some other cetaceous animals.

Our woods are the home of a great number of beautiful birds, displaying all the colors of the rainbow, and some of them (viz., the