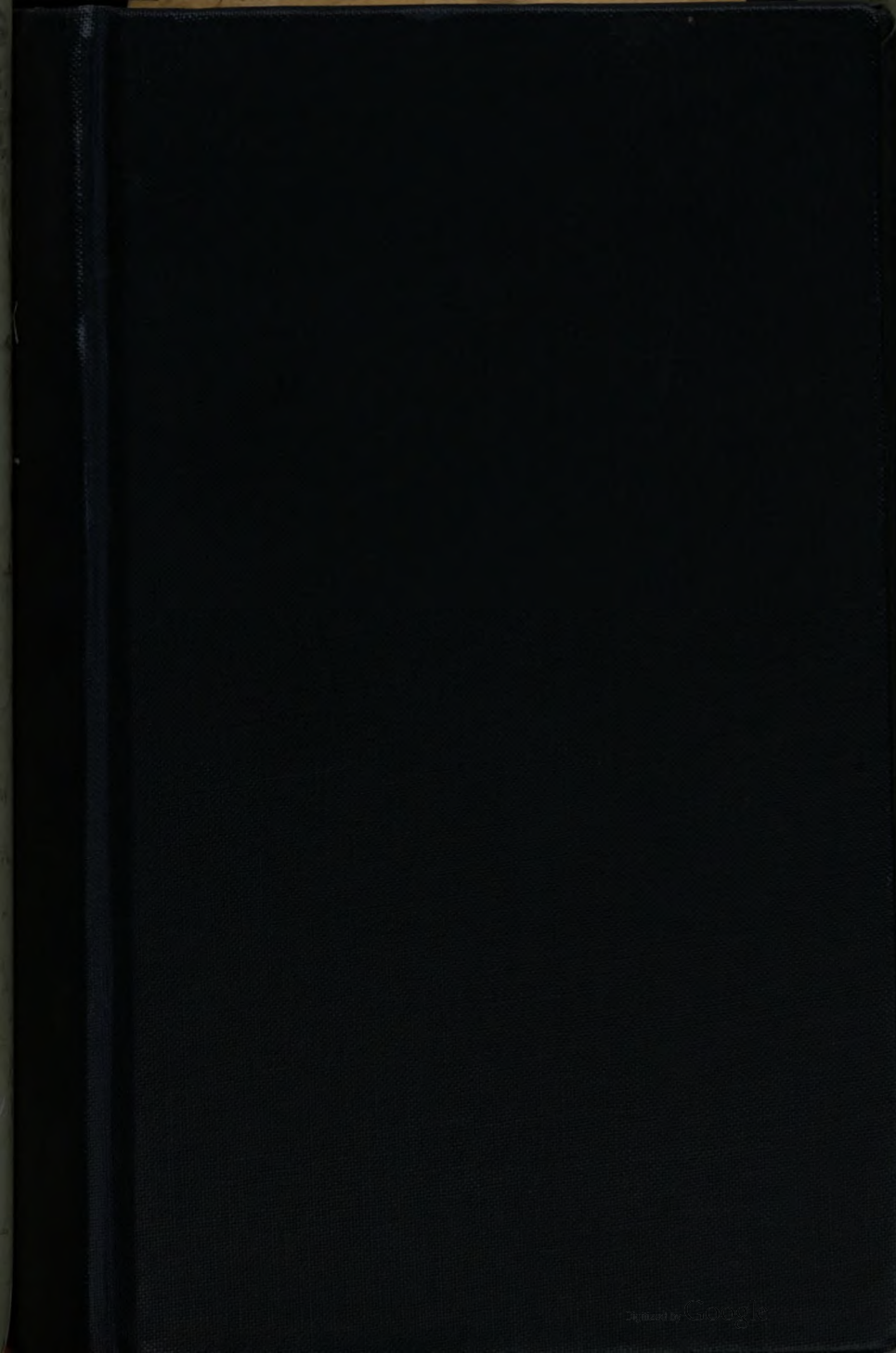
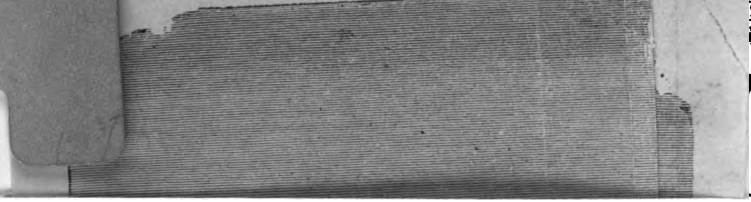

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HANDBOOK
OF
B R A Z I L

BY

M. G. & E. T. MULHALL,

(EDITORS OF THE "STANDARD")

BUENOS AYRES

1877.

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I.

THE EMPIRE OF BRAZIL

Consists of 20 provinces, any one of which is as large as an ordinary European kingdom; for example Matto Grosso is ten times the size of England. The coast-line on the Atlantic is 4,000 miles long, and a line drawn from the seaboard to the frontier of the Peruvian Andes would be 2,630 miles from east to west. Forests never yet trodden by the white man extend from the banks of the Amazon to the borders of Bolivia, inhabited by Indian tribes supposed to represent half-a-million of population. The only towns of importance are on the sea-coast; so dense are the intervening woods that no other communication exists between Rio Janeyro and the northern or southern ports

than by water. Numerous mountain ranges traverse the interior; the highest is Serra Itatiaia, over 10,000 feet in elevation. The system of rivers is unrivalled: the Amazon receives 200 tributaries, some of which are 1500 miles long; steamboats navigating these waters for thousands of miles.

Brazil was discovered in April 1500 by Pedro Alvarez de Cabral, a Portuguese who was making a voyage towards the Cape of Good Hope and India, when the trade-winds drove him on these shores at a place called Porto Seguro. He gave the country the name of Santa Cruz, which was afterwards changed for Brazil on account of the quantity of red wood growing here. It became a colony of Spain in 1580, but passed into the hands of the Dutch in 1624, and was restored to the House of Braganza in 1640, remaining a colony of Portugal till 1822: in the latter year it became an independent empire under Pedro Primero. The most important events in the reign of Pedro Segundo, the present enlightened monarch, have been the introduction of railways and steam-navigation, the multiplication of public schools, the system for gradual abolition of slavery, and the completion of the cable to Europe.

The form of government very much resembles that of the U. States, being a kind of Federal Republic under an Emperor. Each province has its

own Legislature and budget, the President or Governor being appointed by the Cabinet of Rio Janeiro. The imperial parliament at Rio consists of 58 Senators and 122 Deputies elected by the various provinces; the Senators sit for life, the Deputies for 4 years. The imperial budget is made up of import and export duties collected at the various ports. The standing army numbers 16,000 men, besides 741,000 Nat. Guards. The navy comprises 95 war-vessels, including 19 iron clads and 52 gun-boats, manned by 10,000 officers and sailors. The religion is Roman Catholic, the language Portuguese; the laws ensure the fullest civil and religious liberty to natives and foreigners alike.

Staple products are coffee, sugar, cotton and tobacco, which with minor articles make up an export trade of £23 millions sterling, being so invariably in excess of imports that every year shews a balance of four or five millions sterling in favor of the country. Although the Paraguayan war (1865-70) cost 100,000 men it nowise affected the producing powers of the country; as will be seen on comparing the exports of 1864 and 1873 (see next chapter).

Trade returns for late years shew a progressive increase notwithstanding the gradual abolition of slavery; this is partly explained by the introduction of European colonists; the trade relations

with Great Britain are equal to those with all other countries collectively. The duties on imported goods are very high, varying from one-third to one-fourth of the value; export dues are of two kinds, those levied by the Imperial Government and those by the Provincial Legislatures.

Numerous lines of trans-Atlantic steamers maintain almost daily communication between Rio Janeiro and Europe, as well as to the R. Plate: there are also monthly mail-boats to the U. States, fortnightly to Chile, and regular Brazilian coasting steamers to the furthest parts of the empire. The latter keep up communication with Paraguay and Matto-Grosso on one side, and with Tabatinga on the Amazon head-waters on the other; either of these places is nearly 4,000 miles from Rio Janeiro. There are, moreover, English lines of steamers connecting Liverpool with the Amazon in the north, and San Paulo in the south.

The finances are in a healthy condition. The budget for 1876 amounted to £11 millions sterling.

The imperial revenue has grown ten-fold since the accession of the present emperor, in 1832. It has more than doubled since 1860. Compared with population it is a little over £1 sterling per head, against £2 per head in the River Plate or in England. The public debt amounts to £72 millions sterling; previous to the Paraguayan war it was

only 30 millions, chiefly expended in railways and public works. The 5 years war cost 39 millions £. Recently a loan of 5 millions was made in London (1875) to further railways and immigration. The ratio of public debt is only £8 per head, or one-third what it is in England. It is three times the amount of annual exports, the same as in England.

There are 33 Banks in Brazil. No fewer than 53,000 commercial houses pay license annually, of which 29,000 belong to Brazilians, 18,000 to Portuguese settlers, and 6,000 to foreign residents of various nationalities.

Railways in actual traffic make up nearly one thousand miles, besides six lines in course of construction.

Telegraphic communication exists with Europe since 1875. The cable cost 2 millions sterling, the concessionaire being Viscount Mauá, who carried it through after several others had failed: branch cables extend southward to the River Plate, and northward to the West Indies. There are also land-wires in many of the provinces, but frequently interrupted by trees falling on the wires, in traversing the woods of the interior.

Colonies, principally of Germans, flourish in the southern provinces, such as Rio Grande, Santa Catalina, San Paulo, Paraná, Espiritu Santo and

Minas Geraes. The number of colonists exceeds 100,000, Rio Grande do Sul possessing more than half that number. At present the imperial and provincial governments spend large sums in bringing Germans from Europe and establishing them on free land-grants; attempts to found English colonies have mostly failed. The Government usually pays £6 per head to shipping agents for colonists brought from Hamburg or Antwerp. The exports of 36 agricultural colonies (not including San Leopoldo in Rio Grande) amounted in 1873 to £267,000.

Public instruction has made unprecedented progress of late years, owing to the impulse and example of Dom Pedro and his Ministers in creating schools, lyceums, public libraries and literary institutions. There are 5,890 schools, the great majority supported by the State, the aggregate number of children attending same amounting to 191,173, of all colors and ranks in society, four-fifths being boys. All the large cities and towns have night-schools for artizans, and free public libraries. Last year 29 such libraries received subsidy from Government, besides 42 others entirely supported by local subscription or donation. There are 4 Universities, at Rio Janeyro, Bahia, Pernambuco and San Paulo, which confer degrees in Law and Medicine: also a Polytechnic school and Imperial Institute at

Rio Janeiro, and sundry schools of a charitable nature for blind, deaf and dumb, &c. Military schools are attached to the various arsenals in all the seaports.

Public instruction is, of course, more advanced in the large cities of the seaboard than in the interior; and more in the metropolis than in other cities: thus we find 48 per cent of the inhabitants can read at Rio, against 26 per cent at Bahia and San Paulo, 24 at Pernambuco, and 15 per cent in Minas.

Newspapers, between dailies and periodicals, reach the number of 299, one-fourth of which are published at Rio Janeiro. There are 48 literary associations, the most important being the Historical Society, of which the Emperor is President, the members holding meetings at the imperial palace every fortnight. Much attention is devoted to surveys of the rivers and forests of the interior: the most remarkable explorations in recent times have been made by Haffeldt and Burton in the Rio San Francisco; Professor Agassiz, Marcoy and Biard in the Amazon; Joseph and Francis Keller in the Madeira; Vignolles in the province of Sergipe; Rumbelsperger in the Ivahy; Dodt in Ceará; and Capt. Palm in the forests of San Paulo and Matto Grosso.

Agriculture gives splendid returns in such dis-

districts as San Paulo, Santa Catharina, Rio Grande and Paraná, where the climate and soil are alike suitable for colonies. It is no less profitable in the northern provinces, but these must mostly depend on negro labor, as being too hot for white people. In the former it is found that a man can easily cultivate 5 acres of coffee, which will give an ordinary yield of 3 tons, worth about £130; even slave labor gives a crop worth £70 per head, including the women and children of a 'fazenda.' Sugar-cane is still more profitable, as a man cultivating 5 acres will produce £160 worth per annum. Small farmers usually prefer cotton, because it requires little or no capital, and a man can raise on 7 acres about 7 tons ungiuned, which readily sells in the nearest village for £90 sterling say 1½ pence per lb. Brazil stands first as a coffee-producing country, and second for cotton; the latter crop reaching 800,000 bales or nearly one-fifth of the United States crop, being double that of Egypt and rather above the annual export from India.

Although slavery is rapidly disappearing, as all children of slaves are now born free and no more slaves can be imported, there are still a million slaves, say one-tenth of the population.

The extent and population of the various provinces are set down as follows—

THE EMPIRE OF BRAZIL

9

	Sq. miles	Pop.
Rio Janeiro.....	42,370	1,002,548
Bahia.....	258,500	1,283,141
Pernambuco.....	77,830	841,539
Pará.....	696,800	259,821
Amazonas.....	1,150,000	57,610
Maranhão.....	278,800	359,040
Piauí.....	182,960	202,222
Ceará.....	63,200	721,686
Rio Grande do Norte	34,840	233,979
Paraná.....	45,300	361,557
Alagoas.....	35,460	348,009
Sergipe.....	23,700	161,307
Espírito Santo.....	27,200	82,37
Minas Geraes.....	348,480	2,009,023
Goyaz.....	453,040	160,395
Matto Grosso.....	836,400	60,417
San Paulo.....	176,400	837,354
Paraná.....	134,200	126,722
Santa Catalina.....	44,960	159,802
Rio Grande do Sul..	142,800	430,878
	<hr/> 5,053,240 <hr/>	<hr/> 9,700,187 <hr/>

Nothing is more admirable than the number and munificence of the charitable institutions, especially hospitals, throughout the empire. There are over 70 institutions of this kind, some supported by the State, others by religious or beneficent societies. As regards the religious jurisdiction of Brazil the primate is the Archbishop of Bahia, besides whom there are 11 other Bishops, the whole empire being subdivided into 1473 parishes. Each diocese has an ecclesiastical seminary. There are 56 convents and monasteries, containing 166 friars and 93 nuns; also 6 Capuchin houses for missionaries to convert the Indians, and 7 societies of the Holy Land for the preservation of the Holy Sepulchre at Jerusalem.

Brazilian waters teem with fish of numberless descriptions. Professor Agassiz in 1867 counted over a thousand new kinds unknown to naturalists. Last year a remarkable fish was taken at Saquarema, near Rio Janeyro, 38 feet long and 29 diameter, over 700 gallons of oil being extracted from its liver.

Among the wonders of Brazilian forest vegetation the Copernicia wax-tree is very remarkable, being thus described by an English scientific explorer—

“The carnahuba palm (*Copernicia cerifera*) is one of the most useful trees in Brazil. In the pro-

vinces of Ceará and Rio Grande do Norte it grows uncultivated in great luxuriance. Perhaps there is no region of the globe where a tree can be found of such varied uses. It resists the most severe droughts, keeping always green and flourishing. The roots possess the same medicinal properties as sarsaparilla. From the trunk are extracted strong, light fibres, capable of receiving a high polish. The wood is used for props, joists, and other building purposes; as also for stakes and fences, and for musical instruments, tubes and pumps. The inner rind of the young leaf, when fresh, is used as a highly esteemed and most nutritive food. The tree also affords wine, vinegar, saccharine substance, and a great quantity of gum like sago, possessing the same properties and taste. It has often been the only food of the inhabitants of Ceará and Rio Grande do Norte in times of severe drought. A species of flour, like maizena, is also extracted, and a whitish liquor like the liquid contained in cocoanuts. The soft, fibrous substance in the stalk and that of the leaves, is a perfect substitute for cork. The pulp of the fruit is, moreover, agreeable to taste; and the kernel, which is very oily and emulsive after being roasted and pounded, is used as an excellent substitute for coffee. Of the dried leaves are made mats, hats, baskets and brooms, and the straw is already sent to Europe in

great quantity to be made into fine hats, some of which are sent back to Brazil. From the leaves is extracted a kind of wax used for making candles."

The present work not being of a scientific character we must refer the reader for all matters of flora and fauna to the books written by Prince Max of Neuwied (1834), Professor Burmeister (1856), Dr. Martius of Vienna, and other men of science whose works are briefly noted in the appendix.

II.

TRADE AND COMMERCE.

There are few countries which can shew such an uninterrupted and rapid growth of trade as Brazil, as will appear from the following summary of 38 years, taking the mean annual average in periods of 5 years, viz—

1836-41.....	£ 9,992,0000	annual average
1842-46.....	11,230,000	“
1847-51.....	12,501,000	“
1852-56.....	19,215,000	“
1857-61.....	26,630,000	“
1862-66.....	28,870,000	“
1867-71.....	39,330,000	“
1872-74.....	38,587,000	“

This shews an increase of 8 per cent per annum during 35 years. If we compare the last period of five years with the preceding one we shall see the increase of imports and exports more clearly—

	Annual Imports	An. Exports
1862-66	£ 13,730,000	£15,140,000
1867-71	18,024,000	21,306,000
1872-74	17,237,000	21,350,000

In the five years ending 1871 we have an increase of 33 per cent in imports and 40 per cent in exports. Moreover the balance of trade during 10 years in favor of this country is shewn by £23,400,000 excess of exports over imports. This surplus wealth has been laid out in railways, or rather in paying interest on London loans effected for the construction of such works.

The following table shews the countries that make up the foreign trade of Brazil,

	Imports	Exports
Great Britain.....	30 p £ .	25 p £ .
France	19 "	13 "
United States	5 "	35 "
River Plate	9 "	5 "
Portugal.....	5 "	5 "
Belgium, Germany, &c.	32 "	17 "
	100	100

Coffee is the grand staple of Brazil, the annual crop reaching 260,000 tons, of which 50,000 for home consumption, and 210,000 for exportation: the value exported in 1875 exceeded £12 million sterling. It is computed there are 530 million coffee trees, covering an area of nearly $1\frac{1}{2}$ million acres. The production of coffee has trebled in 30 years, and two-thirds of it is exported to U. States.

Cotton has increased still more rapidly, the exportation in 1874 reaching 54,000 tons, worth £3½ millions sterling, being five times the quantity produced (9,800 tons) in 1861. Yet this enormous development of a new industry in no way checked the other great staple products.

Sugar stands for £2½ millions sterling of exports. The total crop is put down at 280,000 tons, of which almost one-half for home consumption and 153,000 tons exported, being double the quantity shipped in 1861.

Tobacco rose from 4,600 tons in 1861 to 15,000 tons shipped in 1874, the exported value being £770,000 sterling.

India-rubber is exported from Pará to the quantity of 5,600 tons, worth £1,120,000, per annum.

Hides, dry and salted, formed £1,336,000 of exports, the gross weight being 28,000 tons. It is supposed there are 20 million horned cattle

in Brazil, but the estimate seems considerably above the reality. Rio Grande do Sul is one of the largest exporters of hides, and the saladeros there kill every year a large proportion of cattle from Banda Oriental and Corrientes.

Yerba-mate is grown in Rio Grande, Santa Catalina and Paraná: the exportation in 1874 reached 16,000 tons, worth £400,000 sterling, an increase of 120 per cent as compared with the returns of 1861. This article, better known in Europe as Paraguay-tea, is much used in the River Plate.

Cocoa grows spontaneously in the forests along the Amazon, forming an important item in the trade of Pará. The exportation has slightly increased in ten years, and averages 4,600 tons, worth £244,000 sterling.

Rum, fariña, timber, wool and sundries make up over one million sterling. This includes an item of £300,000 per annum for diamonds and gold, a decline of 50 per cent since 1861, when the value exported was £615,000.

The trade-returns of the various ports shewed as follows, according to the Imperial blue-book of 1874.

	Imports	Exports
Rio Janeiro. £	8,366,000	12,020,000
Pernambuco.	3,243,000	2,446,000
Bahia	2,495,000	1,980,000
R. Grande do Sul.....	418,000	1,310,000
Pará	845,000	1,260,000
Maranhão..	447,000	420,000
San Paulo ..	310,000	2,350,000
13 other provinces	546,000	1,872,000
	<hr/> £16,670,000	<hr/> 23,658,000

The average of yearly exports between 1869 and 1874 was as follows:

	Tons	Value
Coffee	165,114	£ 10,190,000
Cotton	54,435	3,670,000
Sugar	153,285	2,680,000
Hides	27,932	1,410,000
India-rubber	5,582	1,150,000
Tobacco	14,975	750,000
Yerba	15,717	410,000
Sundries ...	—	1,000,000
		<hr/> £21,260,000

The trade relations of Great Britain with Brazil in 1875 shew an increase over the previous year

Exports to England

	1874	1875
Coffee.....	£896,534	961,286
Cotton.....	2,661,820	2,338,680
Sugar.....	1,633,109	2,298,845
Hides.....	448,041	310,854
	<hr/> £5,639,504	<hr/> 5,909,671

Imports from England

	1874	1875
Cotton goods	£2,954,480	3,309,188
Coal.....	396,648	294,288
Iron.....	724,774	582,561
Machinery..	95,379	66,417
Woolens...	171,877	162,366
Linens.....	196,966	196,103
	<hr/> £4,541,864	<hr/> 4,610,837

Thus the total trade with England rose from £10,181,366 in 1874 to £10,520,528 in 1875. The balance of trade for the two years in favor of Brazil amounted to £2,400,000. This partly ac-

counts for the influx of gold in 1875, which also arose in part from the new loan negotiated in England.

The Government has begun improving the ports of Pernambuco, Maranhão, Ceará, Pará, Bahia and Rio Grande do Sul after plans and estimates made by Sir John Hawkshaw. The works will occupy in some cases five years, in others ten, and the total expenditure is estimated at £3,180,000: for the first five years the annual outlay is to be £416,000, and for five succeeding years £220,000 per an.

The coasting-trade of Brazil represents a value of 14 millions sterling, and is carried on by 10,900 steamers and sailing vessels, measuring 2,521,000 tons manned by 168,000 sailors.

The internal trade of Brazil is represented by 87,107 houses of business, of which 31,436 are Brazilian, 19,512 Portuguese, and 6,001 foreign.

III.

PUBLIC DEBT AND FINANCES

The public debt amounts to (June 1876) a sum of £72,013,434, made up as follows—

Foreign Debt.....	£19,823,400
Home funded.....	29,000,000
Floating debt.....	23,190,034

£72,013,434

Brazil has 7 loans (all at Rothschild's) in London, which amounted in January 1876 to the following sums—

				Emitted at
1852	4½ per cents.	£1,210,000	95	
1359	5 “	270,000	93	
1860	4½ “	775,000	90	
1863	4½ “	2,690,000	88	
1865	5 “	6,184,200	84	
1871	5 “	3,385,000	89	
1875	5 “	5,301,200	96½	

£19,815,400

The original amount of the above 7 loans reached £23,222,000, shewing that £3,406,000 has been already redeemed.

The Home Debt of Brazil is made up as follows—

Government stocks, four, five and sixes.....	£26,000,000
Gold Bonds, 6 per cent.....	3,000,000
Government notes and Treasury bills.,.....	20,000,000
Orphan fund, &c.....	3,200,000
	<hr/>
	£52,200,000
	<hr/>

The six per cents are always above par, and these include almost the whole funded debt; five per cents only amount to £220,000; and 4 per cents to £12,000. About 81 per cent of the Home debt is held in Rio Janeyro, 3 per cent in Bahia, and 12 per cent in foreign countries—

In Brazil.....	£25,200,000
In England.....	2,100,000
In other countries.....	1,700,000
	<hr/>
	£29,000,000
	<hr/>

The credit of Brazil on the London market ranks almost on a level with France, her 5 per cent stock being usually near par. The home paper-money debt and Treasury bills do not include 4 millions sterling of banknotes not guaranteed by the State.

The Government paper-money of Brazil was only seven millions sterling before the Paraguayan war but it rose to 22 millions sterling in 1869, and since then has been every year reduced; being now under 20 millions sterling, including Treasury bills. Besides the Government paper-money 3 banks have right of emission, viz. Bank of Brazil £3,500,000, including £670,000 at the branches of Pernambuco, Bahia, San Paulo, Minas, Maranhão, Pará and Rio Grandedo Sul.

The Bank of Bahia emits £160,000, and that of Maranhão £27,000; which added to the sum for the Bank of Brazil make up a total of £3,687,000 in bank emission.

The growth of Brazilian revenue in late years is shewn by the following figures—

1864.....	£6,100,000
1868.....	7,830,000
1873.....	12,098,800
1874.....	11,240,000

The budget for 1876 shewed as follows—

Receipts

Import-duties.....	£6,100,000
Export do.....	2,000,000
Pedro II. RR.....	720,000
Stamps.....	2,200,000
New loan ac.....	2,600,000
	<hr/>
	£13,620,000
	<hr/>

Expenses

Int. London debt.....	£1,040,000
Do. Home do.....	1,860,000
Railway and colonies.....	3,240,000
Army.....	1,680,000
Navy.....	1,240,000
Docks and harbors.....	1,200,000
Custom-house.....	1,800,000
Emperor, Parliament &c.....	320,000
Law courts.....	600,000
Churches and schools.....	520,000
Foreign Affairs.....	100,000
	<hr/>
	£13,600,000
	<hr/>

It may be remarked that the sum of £2,600,000 derived from the London loan of last year for £5 millions sterling has been entirely devoted to making new railways.

IV.

RAILWAYS AND TELEGRAPHS

During the last 18 years more than twenty two millions sterling have been expended on railways, one-half directly by the Imperial Treasury, the other by joint-stock companies with guarantee for interest either from the Imperial or Provincial Legislatures. Some lines have given splendid results, as will be seen below; others the contrary. The cost of construction has been heavy, owing to the physical difficulties to be overcome; in many cases it has been over £20,000 a mile, but some of these lines are splendid triumphs of engineering. For example the Pedro Segundo line has 16 tunnels and a number of viaducts. Most of the older lines are 5 feet 4 in. gauge; many of the newer ones are one metre gauge. The benefit of railways in developing the resources of the Empire appears from the fact that exports have doubled since railways were commenced.

In 1867 Brazil had only 427 miles of railway, comprised in six lines; at present there are 22 lines running, over 1,143 miles in length, besides eight

others in construction, representing 1,539 miles more, viz:—

	Traffic	Construc
Pedro Segundo line	320	132
Bahia	78	348
Pernambuco	76	385
Santos, San Paulo &c.	260	190
Port Alegre.....	28	..
San Geronimo	12	..
Mana	12	..
Leopoldina	60	..
Rezende and Aréas	16	..
Santa Ana (Bahia)	30	..
Paraguassu " " .....	..	160
Madeira and Mamoré.....	..	180
Cantagallo	92	..
Nitherhoy and Campos.....	30	100
Campos and Sebastian.....	12	..
Ceará and Baturité.....	20	44
Pernambuco and Caxanga	10	..
Do. to Nazareth.....	62	..
Nazareth to Onda.....	5	..
Jaraguá (Alagoas).....	6	..
Olinda and Bertbebe.....	8	..
Para suburban	6	..
	<hr/> 1,143	<hr/> 1,539

The Pedro Segundo line, begun in 1857, has already cost £7,280,000 sterling, and belongs to the Imperial Government. It is a marvel of engineering skill, traversing the most picturesque country in the world. The traffic returns for 1874 amounted to £850,000 sterling, the line having carried $1\frac{1}{2}$ million passengers and 211,000 tons cargo.

The line has cost about £20,000 per mile, 5 ft. 4 in. gauge; it has more than $3\frac{1}{4}$ miles of tunnels, the longest being 2,500 yards, besides 15 shorter ones. It consists properly of three lines, throwing out one branch of 100 miles to Oachoeira, where it meets the San Paulo railway, while the other starts from Entre Rios along the Parahyba to Porto Novo, and there meets the Leopoldina line of Minas Geraes: the main line is almost up to Juiz da Fora. The enormous goods traffic of the line consists almost exclusively of coffee. No fewer than 20 branches have been conceded and surveyed, one of the most important being that to reach Ouro Preto, capital of Minas Geraes. The imperial budget for 1875 and 1876 set apart £1,950,000 towards prolonging the Pedro Segundo line. The working expenses are usually 45 per cent. of gross earnings; the net receipts of 1874 gave $6\frac{1}{2}$ per cent. on the capital in the portion of line in actual traffic. The traveller ought to visit the workshops at Engenho-

de-Dentro, 10 miles from the city; they cover an area of 5 acres, and employ 350 workmen.

The San Paulo line belongs to an English Co. (Gresham House, Old Broad St., London) which has already expended £2,750,000. There is a Government guarantee of 7 per cent for 90 years (1858) on £2 millions, and the rest consists of debentures. This line pays 10 to 12 per cent dividend, and the shares are usually over 40 premium. The cost of construction was £30,000 per mile, the line being only 90 miles from Santos to Jundiahy, 5 ft. 4 in. gage. Starting from the port of Santos it has to surmount the steep range of Cubatón before reaching the city of S. Paulo. This is effected by a permanent engine and endless chain which draws the train up 4 inclines of about 1 in 10; these inclines varying from 1,200 to 3,000 yards in length. There is a tunnel of 650 yards near Jundiahy: the longest iron viaduct exceeds 500 feet. This main line does a prodigious traffic in coffee, cotton, &c. carrying in 1874 about 115,000 tons, besides 91,000 passengers.

Gross earnings..... £381,700

Working expenses.... 111,500

Net profits..... £270,200

Being equal to 10 per cent. on cost of construction. The earnings have doubled since 1872.

The Santos main line has been prolonged by a native Co. from Jundiaby to Rio Claro, 86 miles, same gauge, at a cost of £1,100,000 stg., with a guarantee of 7 per cent for 90 years from the San Paulo Legislature. The San Paulo and Rio Janeyro Co. have a 7 per cent guarantee on £1,100,000; the line to be 148 miles long.

The junction of the San Paulo and Pedro Segundo lines is at Cachoeira, the works being now so far advanced that through trains are expected to run from Rio Janeyro to San Paulo by New Year's Day 1877; this line is metre gauge. Besides the above lines there are several branches appertaining to the San Paulo railway system, such as.

San Paulo to Ypanema, opened in 1875, to work the iron mines, with Provincial guarantee on £650,000 capital, Brazilian Company, length of line 75 miles.

Jundiaby to Itu, metre gauge, 42 miles, cost £270,000, opened to traffic in 1873.

Mogyana line to Amparo, 60 miles, metre gauge, cost £330,000, opened in 1876, with 7 per cent guarantee for 90 years.

The Bahia line is another English enterprise (New Broad St., London); it does not pay working

expenses, and hence the dividend is under the 7 per cent guarantee, which is for 90 years on £1,800,000. A new concession has been recently given to prolong this line 350 miles, narrow gauge, to the San Francisco, with a 7 per cent guarantee on £3,800,000.

Recife or Pernambuco line, also belongs to an English Co. (Old Jewry Chambers, London); it has a 7 per cent guarantee from Government, but does not pay working expenses, thereby causing a lower dividend; receipts average £5,000 per week. Capital £1,850,000, in shares of £100; below par. One third of the shares are held by Government.

Port Alegre and New Hamburg line (metre gauge) was made by Messrs. Watson and Smith in 1872 (for £280,000) with guarantee of the Rio Grande Legislature, to connect the German colonies with the capital of the province. San Geronimo is a short line in the same province, to open up the coal-fields of Arreyo das Ratas.

Mauná Railway was the first made in Brazil, to connect Port Mauná with the foot of the Organ Mountains, on the way to Petropolis. Mr. Souza of Rio Grande was ennobled for this line, and is known as Viscount Mauná.

Travellers should visit Nitheroy if only to see the Fell railway to Novo Friburgo, opened by the Emperor in 1874. The Fell system begins at Boca

do Matto, 4 miles beyond Onchoeiras, and runs 9 miles with an incline of 1 in 14.

Among the lines recently conceded, some of which are about to be commenced, are the following:—

	Miles
San Paulo to Parahyba.....	410
Itajuba to Minas	220
Port Alegre to Santa Catalina	245
Alagoa Gde. to Parahyba....	90
Ceara to Baturite	75
Parana to Parnagua	40
Pará to Braganza	100
Rio Grande to Port Alegre....	250
Port Alegre to Uruguayana...	260

Surpassing all these in magnitude is a great project of a railway to connect Matto Grosso with the seaboard. Viscount Mau's engineers, Messrs. Palm and Lloyd, completed the survey from Curitiba (Province of Paraná) to Matto Grosso in 1875, but a rival scheme is in the field to prolong the San Paulo line thither. Either undertaking would cost about £10 millions sterling.

Tramways

There are 14 tramway companies, all of local capital, representing an aggregate of £1,700,000, viz:—

San Cristobal.....	£363,000	in	£22	shares
Botanical Gardens	220,000	"	22	"
San Paulo.....	31,000	"	9	"
Pernambuco	132,000	"	22	"
Pelotas	60,000	"	22	"
San Luis Maranhão..	66,000	"	22	"
Port Alegre	66,000	"	11	"
Villa Izabel	200,000	"	21	"
Niteroy.....	66,000	"	22	"
Ceará,.....	90,000	"	2	"
Steam-tram Co.....	264,000	"	22	"
Theropolis.....	3,300	"	2	"
Bahia Steam-tram Co.	22,000	"	5	"
Fluminense	88,000	"	14	"

The most remarkable of the above lines is that to the Rio Botanical Gardens, originally an American Company, the shares of which are usually at 400 per cent. premium. A new English Co. has been recently formed, the Brazilian Street Tram-Co. (35 Moorgate St., London), with a capital of £100,000 in shares of £2 each; the first dividend was $2\frac{1}{2}$ per cent.

Besides the submarine cables connecting Brazil with Europe, West Indies and the River Plate, over 8,000 miles in length, there are 3 main lines of telegraph making up nearly 3,000 miles, viz—

	Stations	Miles
Northern lines.....	30	980
Central and Petropolis....	15	45
Southern.....	38	1,800
	83	2,825

The Northern, from Rio Janeyro to Pernambuco, was commenced in 1866 as far as Nitherohy, and the last section from Pernambuco to Bahia completed in Nov. 1874. The Central and Petropolis lines were made in 1864; the Southern was begun in 1866, and concluded to Uruguayana, on the Upper Uruguay in 1874.

The receipts of the principal stations in 1874 were as follows—

<i>Northern</i>		
	Telegrams Receipts	
Pernambuco.....	2,089	£810
Maceio.....	2,424	500
Campos.....	2,432	560
Macahé.....	1,912	310
San Juan de Barra	1,314	250
Nitherhoy.....	575	150
<i>Central</i>		
City and Suburbs.	16,263	4,200

Southern

Porto Alegre	5,432	1,760
Santos	4,028	1,240
Rio Grande	6,282	1,280
Pelotas	4,233	810
Santa Catarina	2,423	900
Paranagua	2,633	510
San Paulo	1,169	370
Coritiba	1,640	350

Minor stations	23,497	4,810
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	72,346	£18,700
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The working expenses amounted in 1874 to £70,000, leaving a dead loss in this branch of service equal to £51,300; this is independent of an outlay of £60,000 on the construction of new lines.

The Brazilian Atlantic cable, as already mentioned, was successfully carried out in 1874 by Viscount Mauá after several other concessionaires had failed. It is one of the greatest enterprises of the kind and cost nearly two millions sterling, being laid in three sections; from Lisbon to Madeira, Cape Verdes, and Pernambuco, making in all about four thousand miles; with a branch northwards to Pará and West Indies, and another southward to the River Plate. The Western and Bra-

zilian Co. which purchased the Mauá concession is an English company, capital £1,400,000 in shares of £20 each, besides £200,000 in 6 per cent debentures of £100 emitted at 92. Offices, 103 Cannon St., London. Last dividend 5 per cent, stock much below par. The Platino-Brazilian Co. connected with the above line has a capital of £400,000 in £20 shares, and receives a certain portion of the gross receipts on the Western and Brazilian line. The ordinary charge for messages between Brazil and Europe is about £10 for ten words.

V.

JOINT-STOCK ENTERPRISES**Banks.**

There are 33 Banks, including 14 at Rio Janeiro, 7 at Bahia, 3 in Rio Grande do Sul and 9 in other provinces.

Bank of Brazil has a paid-up capital of £3,630,000 in shares of £22 each (usually quoted at 15 per. cent. prem.). Reserve-fund £440,000. The charter is for 28 years, until Dec. 31st 1900. The emission at present reaches 3 millions sterling, and is reduced £110,000 every year. The Bank must always lend £2,600,000 to planters at 6 per cent per annum, and is authorized to issue Territorial bills for 10 years. Last dividend of the Bank was 8½ per cent.

English Bank of Rio, with branches at Pernambuco and Santos, has £500,000 capital paid up in £10 shares (usually at 20 p.c. prem.). Reserve fund £103,000; last divided 12 p.c. This is an English Co., and resides at 13 St. Helen's, Bishopgate, London.

New London and Brazilian, another English enterprise, has a paid-up capital of £450,000 in £10 shares, with £41,000 reserve. Last dividend was 7 p. c. per annum. London offices at 2 Old Broad St.

Rural and Hypothecatory, established in 1853 by native capitalists, to make loans to planters, transferred its charter to the Bank of Brazil, and is now a kind of Insurance or Annuity company. Capital £380,000, stock ruling above par; last dividend 8½ p.c. Reserve £200,000 sterling.

Commercial of Rio, capital £460,000 in £8 shares; reserve fund £145,000; last dividend 12 per cent. Established in 1866.

Industrial and Mercantile, capital £550,000 in £11 shares, with reserve of £50,000. Established in 1872. Last dividend 10 p.c.

Mana & Co., established in 1853, paid-up capital £1,100,000. This Bank suffered so heavily during the crisis at Rio in 1874, and being unable to exact a sum of £2,000,000 claimed from the M. Videan

Government, that it suspended payments, but the Brazilian tribunals granted a 'moratoria' of 3 years to re-arrange its affairs. Besides the house at London there are 13 Mauá Banks in South America, between Brazil and the River Plate. Viscount Mauá was constructor of the first railway in Brazil, father of Amazon steam navigation, founder of the Punta Area arsenal, and introducer of gas into various cities. His last work was the Atlantic cable to Europe, and now he is occupied with the proposed railway to Matto Grosso, over 1,000 miles in length.

National Bank, established in 1871, capital £1,100,000; it succumbed to the crisis of 1874, but obtained a 'moratoria' of 3 years.

German Bank, established in 1873, capital £520,000, shared the same fate as the last mentioned.

Popular Fluminense, founded by Mr. Andrés Lamas of B. Ayres in 1872, counts 11,301 shareholders, with a paid-up capital of £330,000; the capital 'in giro' exceeds £3,500,000.

Government Savings-Bank, established in 1861, receives deposits over £5 or under £400 from the working-classes at 6 per cent per an. Accounts capitalized every six months.

Banco do Comercio, established in 1874, paid-up.

capital £100,000, last dividend 8 per cent. Its chief purpose is to advance money to persons who go into the interior to buy coffee or sugar.

Predial or Building Bank, capital £220,000 in 10,000 shares; established in 1873; last dividend 9 per cent.

Bank of Bahia, with £440,000 paid-up capital. This bank and that of Maranhão are the only ones besides the Bank of Brazil that enjoy the right of emission. The actual emission of the Bank of Bahia is £150,000, the specie reserve £63,000, and the notes are further guaranteed by Imperial stock deposited by the Bank.

Mercantile of Bahia (1859) has £440,000 capital in £11 shares. There are 5 other banks in Bahia, varying from £100,000 to £600,000 in paid-up capital.

Pernambuco Commercial (1872) with a charter for 20 years, has a nominal capital of large amount, but only £100,000 paid up, in £7 shares much below par. Last dividend 5 per cent. Reserve £1,100.

Maranhão Bank (1857) capital £110,000; this bank is one of the 3 which enjoy right of emission in Brazil; but must redeem 6 per cent of its notes yearly.

Bank of Pará (1869), capital £110,000.

Santos Mercantile (1872), capital £100,000 in £10 shares, last dividend $4\frac{1}{2}$ p.c. Reserve £3,300.

Bank of Rio Grande do Sul (1857) had originally right of emission. Nominal capital £550,000, of which £66,000 paid up : charter until 1904. There are two other Banks in Rio Grande.

Gas Companies.

There are 6 English companies engaged in the gas-lighting of Rio Janeyro, Nitherohy, San Paulo, Rio Grande, Pelotas, Port Alegre, Pará and Bahia ; besides native gas companies at Pernambuco, Ceara, Maranhão, Campos, Santos, Campinas, Alagoas, Sergipe, Victoria and other cities.

Rio Janeyro Gas Co., capital £720,000 in shares of £20, is a most successful enterprise, shares ranging at 50 per cent premium. The last annual dividend was 10 per cent. Reserve, £32,000. London offices at 1 Gresham House. This Co. was founded by Viscount Mauá in 1851. The works at Rio cover an area of 5 acres. There are 5,350 street lights in the city and outskirts.

Nitherohy, one of the suburbs of Rio, is also lit by an English Co., whose capital is £75,000 in £10 shares. It has proved a bad business for the shareholders ; no dividend for three years.

San Paulo Gas Co., capital £80,000 in £10 shares, gives an annual dividend of 6 per cent. Offices in Gt. Winchester St., London.

Rio Grande or San Pedro Gas Co. lights the 3 cities of Rio Grande, Port Alegre and Pelotas: the concession was originally to Baron de Ornano, but he sold it to an English Co. in 1871.

Pará Gas Co., capital £175,000 in £10 shares, has offices at 34 Leadenhall St., London; no dividends, stock depressed.

Bahia Gas Co., capital £100,000 in £20 shares, has not proved a brilliant investment; last dividend 3 per cent, shares at a low figure. This Co. has emitted £50,000 in preference shares, some at $7\frac{1}{2}$, others at 10 per cent. Offices, 10 Coleman St., London.

Steam Navigation.

There are numerous companies for internal or coasting steam navigation. The Imperial Treasury grants them annual subsidies to the amount of £378,000 sterling, the various lines representing a total length of 24,500 miles in Brazilian waters.

Amazon Co., founded by Viscount Mauá in 1852, has a superb line of steamers plying between Pará and Tabatinga, 1800 miles. Capital £650,000 in £20 shares; last dividend 7 per cent. Reserve £22,000. Offices at 9 Gresham House; London. See chapters on Pará and Amazonas.

Bahia Steamboat Co., capital £160,000 in £10 shares, much below par. Last dividend 4 per cent. Offices at 9 Gracechurch St. London.

Brazilian Navigation Co., formerly known as Compañía's line, has a capital of £ 440,000 in £20 shares with £10,000 reserve fund. This line runs steamers from Rio Janeyro to Matto Grosso, the head-quarters of the Company being at Montevideo, under the management of Don Antonio F. Braga. It consists properly of two lines; one plying between Rio Janeyro and Montevideo, calling at Santa Catharina, Santos, Rio Grande and other intermediate ports; the other between Montevideo and Matto Grosso, calling at Argentine and Paraguayan ports, and making the trip from Montevideo to Cuyaba in about 18 days. The Co. has a subsidy of £3,000 per an. from the Imperial Government, and carries monthly mails between Rio Janeyro and Matto Grosso. Two fine new steamers have just been built (November 1876) in Scotland for this line, and others are ordered. The accommodation afforded to travellers is admirable.

Brazilian Transatlantic Co., another native enterprise which has proved very successful: last dividend 16 per cent.

Lamport and Holt's line which carries the Brazilian flag and has a postal contract for coast service. The steamers Calderon, Camoens, and Cervantes are fine vessels under English commanders, plying between Rio Janeyro and Montevideo. This company also has a monthly steamer from Rio to

New York. The same owners run 5 steamers monthly between England and the River Plate, carrying mails for the British and Belgian Governments.

Brazilian and North American Mail Company receive a subsidy of £22,000 a year from the Brazilian Government, and runs monthly steamers between United States and Rio Janeyro; fare £50.

Liverpool and Amazon Mail line of steamers receives a subsidy from the Province of Amazonas, plying between Liverpool and Manaos. The service was begun by the steamer Mallard in January 1876.

Maritime Transport Co., a native enterprise, capital £66,000, in shares of £22; last dividend 12 per cent. Reserve, £10,500 sterling.

Campos and Espiritu Santo S. N. Co., capital £58,000 in £18 shares. Dividend, 15 per cent. Reserve, £33,000 sterling.

Paulista Steamboat Co., capital £110,000 in £22 shares, dividend $8\frac{1}{2}$ per cent. Reserve, £10,000.

Union and Nitheroy Steamboat Co. is a kind of ferry-boat enterprise of native capital, in £12 shares.

Steam Ferry of Rio, capital £70,000 in £22 shares.

Besides the above there are 15 steam-boat companies of minor importance, for navigating the

San Francisco, Parahyba, Mucury, Jequitinhonha, Paraguassú, Itajahy and affluents of the Amazon.

Although the various lines of ocean steamers between Brazil and Europe cannot be considered as Brazilian enterprises they have much relation with the commercial development of the Empire, and the subjoined list will be moreover interesting to the traveller or emigrant.

1. Royal Mail Co., from Southampton, 2 steamers monthly, on 9th and 24th, calling at Lisbon, Cape Verds, Pernambuco, Bahia and Rio Janeyro, en route to R. Plate.

2. Pacific Navigation Co. from Liverpool, 2 steamers monthly, calling at Bordeaux, Vigo, Lisbon, Brazilian ports, River Plate, en route for West Coast.

3. Lamport and Holt's line of Liverpool, Brazil and R. Plate steamers, runs 5 steamers monthly from Liverpool and London, carrying mails for British, Belgian and Brazilian Governments.

4. French mail-steamers twice a month from Bordeaux, calling at Lisbon, Dakar and Brazilian ports, en route to R. Plate.

5. Hamburg line of steamers twice a month, calling at Lisbon, Bahia, Rio Janeyro and Santos en route for M. Video.

6. Lavarello's line of Italian steamers from Ge-

nba, calling at Gibraltar and Rio Janeyro, en route for R. Plate.

7. North German Lloyd from Bremen, calling at Antwerp, Plymouth, Bahia and Rio Janeyro.

8. Chargeurs Reunis, or Havre line, calling at Teneriffe, Rio Janeyro and Santos en route for La Plata.

9. Brazilian and North American mail Co. carries monthly mails between U. States and Brazil, calling at W. Indies.

The fares on all the above 8 lines between Europe and Brazil are nearly equal, say £30 first-class, £20 second class; the accommodations are of the most sumptuous description. The voyage, is usually about 20 days.

Mining.

San Juan del Rey, an English Co., one of the most successful in the world, capital £253,000, in £100 shares, has for several years declared enormous dividends; that of 1875 was 45 per cent, previous ones being still larger. It extracts gold in the province of Minas Geraes, and took out last year 70,000 ounces, worth £220,000 sterling. Shares range from £400 upwards. The average of dividends for last 33 years has been 23 per cent per an. on the capital. The net profits at present reach £150,000 per annum. Offices, 8 Tokenhouse Yard, London. See chapter on Minas Geraes.

Don Pedro del Norte another English Co., capital £61,000, also carries on operations in Minas Geraes. Dividend, 6 per cent. Offices, 86 London Wall.

Cazapava Mines, Rio Grande do Sul, capital £80,000 in £5 shares. **Gen. Brazilian Gold Mining Co.**, capital £50,000. **Bossa Grande**, another gold Co., capital £95,000. **Cuyaba Co.** gold and diamonds, capital £88,000; and **Sta. Barbara**, capital £20,000.

There are also English mining companies for working the Candiota and Arroyo das Ratas coal-fields in Rio Grande del Sul; and native companies of gold and diamond mining in Bahia, Matto Grosso and other parts of the Empire.

Miscellaneous.

City of Rio Improvement Co., an English enterprise, capital £850,000 in £25 shares, which are usually at 12 per cent premium. Last dividend 8 per cent. Reserve-fund £14,000. Offices, 11 Gresham House, London.

Drainage and Water-supply of Rio Janeiro. The contract was given by the Imperial Government in June 1876 to Mr. Gabrielli, the celebrated Vienna contractor, for a sum of two millions sterling.

Pedro Segundo Docks, capital £230,000 in £8 shares; this business has not been profitable, last

dividend $2\frac{1}{2}$ per cent; shares 50 per cent discount.

Union and Industry Road Co., capital £200,000 in £33 shares, reserve £20,000. Business has declined since the prolongation of Pedro Segundo railway. This Co. runs very fine mail-coaches and goods waggons from Petropolis to Juiz da Fora and Barbacena, along a good macadamized highway. Last dividend 5 per cent.

Petropolis Co., capital £55,000 in £11 shares.

Rio Janeyro Carriage Co., capital £90,000 in £22 shares, reserve £3,300.

Brazilian Industrial Co., capital £110,000 in £22 shares.

Industrial Union Co., capital £44,000 in £22 shares.

Comercio and Lavoura Co., capital £200,000 in £8 shares, last dividend 9 per cent.

Coffee Co., £110,000 in £8 shares, dividend 10 per cent.

Pastoral Co., £660,000 in £22 shares, dividend 12 per cent.

Commercial Association, £80,000, dividend 8 per cent.

Guanabara Fishery, £66,000 in £22 shares.

Besides the above there are Building, Steam-washing and other companies. Also 8 Insurance companies, varying from £22,000 to £110,000 capital. The Permanente gave 16 per cent last divi-

dend, the *Confianza* and *Garantia* each 12 per cent, the *Providente* and *Popular* 10, the *Fidelidade*, *Argos* and *Integridade* 8 per cent; the largest reserve is that of the *Argos*, £31,000 sterling.

The various Railway and Tramway enterprises have already been described in a separate chapter, page 24.

VI.

PUBLIC INSTRUCTION

During the space of two years the number of schools and school-children increased nearly 20 per cent, viz—

	1872	1874
	—	—
Number of schools.....	4,896	5,890
Children attending same..	167,437	191,172

The public schools in each Province are maintained out of the provincial revenue, usually absorbing one-fourth; the total of such revenues amounted in 1874 to £2,542,000, of which the portion devoted to schools exceeded £575,000 sterling. This gives an average cost of £3 per head annually on the number of pupils, about the same ratio as in the Argentine Republic and Chile. The disproportion of sexes at the public and private schools is very great, say 5 boys to one girl.

The following table shows the number of children at school in each province and the ratio for population—

School-children		Ratio	
Amazonas.....	1,758	1 in	33 inhab.
Parà.....	10,940	1 in	24 “
Maranhão.....	6,443	1 in	56 “
Piauí.....	2,004	1 in	100 “
Ceará.....	10,871	1 in	65 “
R. Gde. de Norte	6,611	1 in	35 “
Parahyba.....	3,900	1 in	92 “
Pernambuco....	9,916	1 in	85 “
Alagoas.....	7,015	1 in	50 “
Sergipe.....	5,651	1 in	29 “
Bahia.....	17,862	1 in	75 “
Espírito Santo..	2,356	1 in	39 “
Rio Janeiro....	49,340	1 in	25 “
San Paulo.....	16,446	1 in	51 “
Paraná.....	3,172	1 in	40 “
Santa Catarina..	3,714	1 in	43 “
Rio Gde. do Sul.	14,551	1 in	30 “
Minas Geraes..	24,104	1 in	81 “
Goyaz.....	2,666	1 in	60 “
Matto Grosso...	1,361	1 in	44 “
	<hr/> 191,170 <hr/>	<hr/> 1 in 51 <hr/>	<hr/> “ <hr/>

Besides the above schools there are 19 colleges with 1368 ecclesiastical students, a large number of military schools or arsenals for orphans in the various provinces, and 1472 naval apprentices.

Among the higher educational institutes are the following—

Polytechnic School, at Rio Janeyro, attended by 400 students, in 26 classes; course of studies 3 years, after which students take diplomas as engineers. Besides the library and laboratory this academy has a fine collection of botany, zoology and minerals.

College of Medicine at Rio, 615 students, 36 professors; course of study six years. Last year 54 students graduated M. D. and 32 took pharmaceutical diplomas. Foreign doctors are not allowed to practise in Brazil until they have passed examination, and before presenting themselves they must hand in diplomas from some foreign college or faculty, duly vised by the Brazilian Consul in that country. The same rule applies to dentists, surgeons and midwives.

Bahia Medical College; 360 students, 21 professors: same course as at Rio Janeyro. Last year 32 students took M. D. and 64 passed as apothecaries. The above two Medical Colleges cost the Imperial Government £24,000 a year.

Pernambuco Law Institute, 260 students, 11 pro-

fessors, course of study 5 years. Last year 58 students graduated as Bachelor or Doctor of Laws.

San Paulo Law Institute, 145 students, 11 professors, same course as above: 25 graduates last year. Each of these colleges has a good library. The Imperial Government spends £19,000 per an. on this faculty.

Commercial Institute of Rio, 57 students, course 4 years, annual expenditure £2,300.

Academy of Arts, 318 students, 27 professors, for study of painting, sculpture, music &c. An annual exhibition is held in the Pinacothek, when the prizes are distributed. The winner of the highest is sent to Rome to pursue his studies 6 years at cost of the State. The Music-hall counts 108 young ladies and gentlemen. The annual cost of the Academy is £4,300.

Science and learning are much advanced by the numerous literary societies, foremost among which is the Instituto Historico, of which the Emperor is chairman; it was founded in 1838, and meets every fortnight at the Palace, publishing a quarterly report of 800 pages, of which 45 volumes have already appeared. The Medical Association, founded in 1829, meets once a week at the Town-hall, and publishes a similar review. The Polytechnic Society, under the presidency of Count D'Eu, is devoted to engineering and artillery. The Law As-

sociation, founded in 1743, publishes a review on matters of jurisprudence. The Typographic Society patronizes the publication of works bearing on Brazil. The School of Cicero devotes itself to cultivating the classics. Besides the above there are 17 other associations of a literary or musical character in Rio Janeyro, while similar societies are found in most of the capitals of provinces.

The Press has attained great development of late years; there are 299 newspapers and periodicals, of which 44 are published at Rio Janeyro, and 245 in the provinces. The foremost paper is the *Jornal do Commercio*, daily issue over 15,000 copies, founded in 1821, and employing 258 persons. The *Diario* is the father of the Brazilian Press, having been founded in 1817; daily issue 5,000 copies. The *Globo* is also an important paper, of recent date, chiefly devoted to telegraphic news. The *Anglo-Brazilian Times* is edited by Mr. W. Scully, and the *South American Mail* by an American gentleman. There are 50 printing-offices in Rio Janeyro, besides 300 in the provinces. The most notable of provincial journals are the *Diario* of Pernambuco, circulation 6,000, and the *Diario* of Bahia.

Free libraries are rapidly multiplying all over the Empire. The Nat. Library at Rio counts 120,000 volumes, the Medical Library, 17,500 volumes; the Polytechnic 6,000; the Naval 19,000; the Museum

9,000; the Benedictine 8,000; the Fluminense 42,000; the Portuguese 52,000; the British 6,300; the German 5,800; the Historical Institute 7,000; the Municipal 14,500 volumes. All these are free to the public, the number of annual visitors varying from 5,000 in some to 15,000 in others, the largest numbers being those of the Nat. Library and the Municipal. There are also 86 free libraries in the provinces, mostly maintained by local contribution, with subsidies from the Imperial Treasury. All the above free public libraries make up a total of 461,272 volumes, consulted last year by 85,044 persons.

VII.

CHARITABLE INSTITUTIONS

In all the cities of Brazil the traveller is struck with the magnificence of the hospitals and charitable institutions, and it has often been asserted that the Hospital of Rio Janeyro is the finest in the world. It was founded as the Holy House of Mercy in 1545, and subsequently endowed by Philip II., who was then king of Spain and Portugal. Last year (1875) this Hospital admitted 14,512 patients, two-thirds Europeans, only 4,985 being Brazilians: the number of deaths was 2,417, say 16 per cent, this heavy mortality being caused in great measure by the Yellow Fever, which carried off 435 patients

before they were 24 hours admitted. Attached to the Hospital is the Lunatic Asylum, containing usually 400 patients. Both establishments are under the care of Sisters of Charity, who have also 4 dispensaries in various parts of Rio, which gave medicine last year to 10,354 applicants; they have also a Foundling House, Girls' Orphan-asylum and the Hospice of St. Theresa. The annual income and endowments of the Hospital and its branches amount to £198,000, and the expenses last year were £180,000, thus leaving a surplus of £18,000 for the funds, which comprise over £100,000 in State-securities for dowers to orphans and such other purposes. A portion of last year's surplus was expended in adding a Protestant wing to the cemetery. The total value of lands, buildings and stock-securities held by the Hospital exceeds two millions sterling. Sailors of all nationalities, and orphans of every creed and color are recipients of the bountiful care of the Sisters of Charity in this institution. There is also a branch-hospital for contagious diseases, which admitted last year 650 Brazilians and 1374 Europeans: there were 416 deaths. Besides the above hospital at Rio each province has similar institutes, for the most part under the care of Sisters of Charity. Rio Janeyro has also numerous hospitals connected with conventual institutions.

Franciscan hospital, founded in 1619, is attached to the church and convent of St. Francis, and has 169 endowments, with an income of £50,000 per annum. It admitted last year 1,013 sick, of whom 52 died.

Carmelite hospital, founded in 1638, has 71 endowments with an income of £8,500; it received last year 1765 patients, of whom 77 died.

Hospital of St. Francis de Paul, founded in 1756, is attached to one of the finest churches in Rio, and has an income of £13,000. It admitted 626 patients last year, of whom 38 died.

The Calvary refuge for old men is not yet open; that of the Immaculate Concepcion, for old women, has 8 endowments besides 50 'apolices' of the Internal Debt.

Candelaria hospital is for Lazars, or persons suffering from Elephantiasis. It was founded in 1775, the church and hospital having cost over £200,000. There are 100 endowments, the annual revenue exceeding £21,000. Sixty patients were admitted last year: the friars also distribute alms.

Santa Cruz is a military confraternity to succor the widows and orphans of soldiers; it grants 274 pensions, out of a revenue of £24,000 sterling per annum.

Benedictine and Rosary societies have for object

to assist poor negroes when sick, and also to redeem a certain number of slaves annually.

St. Theresa orphanage, founded in 1860, has an income of £16,000 from private donations. It gives dowries of £200 each to the most deserving girls, and allows shelter to a number of old women. The Princess Isabel in 1871 laid the foundation stone of an orphanage for this institution, which has cost £4,300 to build.

Blind Asylum, counts 30 children, but the number will be much greater when the new building is completed, to hold 600. The annual donations amount to £11,000. Some of the teachers have been born blind, and others formerly children brought up in this institute now earn a living as piano tuners, or music teachers.

Deaf and Dumb Institute, founded in 1856, has 20 pupils. It is about 4 miles from the city, and is supported by the State at a cost of £6,000 per annum.

There are in Rio Janeyro 28 other charitable institutions, including the Old Men's home, the Invalid asylum, the British, French, Swiss, German, Belgian, Italian, Spanish, Portuguese, and Hebrew hospitals. The Swiss was founded in 1821, the British in 1837, the others later; all being supported by donations.

Monte Pio is a kind of institute different from those of Italy of the same name. There are 3 at Rio Janeiro, and annuities in favor of a third person may be purchased, not exceeding £600 per annum. The Civil Service Monte Pio, established in 1835, has a capital of £360,000 in Imperial stocks. The Monte Pio Genl. has £620,000 capital, being for the general public. The Naval Monte Pio provides half pay for families of deceased officers.

VIII.

ARMY AND NAVY

The standing army in time of peace is 16,035, but may be raised to 32,000 men if occasion require. The cavalry are armed with Winchesters, the infantry with Comblains, the artillery with Krupps and Whitworths. The officers carry Le-faucheaux revolvers.

The Nat. Guard comprises 616,596 rank and file, without including a reserve of 125,186 men, viz—

- 96 squadrons of cavalry,
- 11 batteries of artillery,
- 278 battalions of infantry,
- 79 battalions of the reserve.

There is also a police-force organized on a military footing, mustering 10,792 men, each province supporting its own force.

There are military arsenals at Rio Janeyro, Bahia, Pernambuco, Pará, Rio Grande do Sul, and Ouyabá, where orphan boys are trained in various trades between the ages of 7 and 16 years. The Rio Janeyro arsenal counts 600 workmen and 400 apprentices. At the age of 16 the latter are allowed to choose whether they will enter the army or follow their trades; they are very clever turners, carpenters, boot-makers, saddlers, jewellers, tin-smiths, cabinet-makers, blacksmiths &c. The discipline in these arsenals and the appearance of the boys cause the general admiration of travellers. The arsenal of Rio is in connexion with Fort Congigao arms-factory, where firelocks are converted, guns rifled &c. The Musquetry-school at Campo Grande has 70 cadets, besides a Military-school of 95 cadets, and an artillery school of more than 300 youths. There is a laboratory for making cartridges at Campinho, a station on the Pedro Segundo Railway, distant 16 miles from Rio: the works comprise 42 ranges of building, covering an area of 24 acres: in time of peace there are 120 workmen, who turn out 30,000 cartridges daily. The Powder-factory is at Raiz da Estrella, terminus of the Mauá railway, on the way to Petropolis: it has powerful

steam machinery, and can produce 150 tons powder per annum. The Imperial Government has an important foundry attached to the iron mines of Ipanema, San Paulo, which turns out steel cannon, small arms, and agricultural implements.

Numerous military or penal settlements have been established in various parts of the Empire. The most important is on the island of Fernando Noronha, in mid-ocean, 210 miles from Cape San Roque. The total population between garrison and convicts is 2,088; some are occupied in agriculture; others work as blacksmiths, carpenters, shoemakers, &c.; the Government allows a portion of their earnings to be set aside for them till the time of their release. Maize produces 400-fold, and cotton is grown equal to the best Sea-Island. There are 547 houses on the island, besides church, schools, infirmary, forts, prison and light-house.

Military colonies are found at the following remote points of territory, chiefly to keep back Indian incursions—

1. Obidos, on the Amazon, with 500 inhabitants; it stands on a hill, enjoys every advantage as regards climate and soil, and is thriving.

2. Alcantara, province of Maranhão, is 16 miles from the town of Gurupy, and 65 from the seaboard. It counts 600 souls, including the garrison,

and raises coffee, sugar, cotton, &c.; besides, the surrounding forests are of valuable timber.

3. Dourados, province of Matto Grosso, was an old settlement, to keep back the Coroado Indians; it was destroyed by the Paraguayans in 1864, but is again reviving, the situation being healthy and fertile.

4. Miranda, also established to check the Coroados, is on the river Miranda, in a country of rich pastures which raises the largest horned cattle in Brazil.

5. Itapura, San Paulo, counts 335 souls, and is situate below the great falls of Tieté, upper Paraná, in the midst of virgin forests abounding in game. The garrison raises some coffee, cotton, tobacco and potatoes; subsisting mainly on fish.

6. Avanh andava, same province, is on the right bank of the Tieté, and counts 1,000 inhabitants, who subsist by agriculture.

7. Sta. Theresa, on the high-road from San José to Lages, consists of land-grants to superannuated soldiers, along the river Itajahy in a favorable soil and climate; population, 454 souls.

8. Pedro Segundo, province of Pará, is on the banks of the Araguay, 150 miles from its mouth; the garrison raises beans and mandioca.

9. San Juan de Araguaya, in the same province,

counts 71 houses, 259 inhabitants, chapel, workshops, &c.

10. Urucu, in Minas Geraes, is near the Mucury.

11. Itacaya was established in 1867 on the Araguaya to facilitate communication with Matto Grosso from the Amazon. It is 40 miles south of Leopoldina, near the reef of Agua Branca, which impedes all navigation.

12. Caseros, 272 pop. is situate near Lagoa Vermelha, province of Rio Grande do Sul.

13. Leopoldina, Alagoas, was originally a collection of fugitives from justice and is now a prosperous settlement of 4,000 inhabitants, who raised last year large crops of sugar and tobacco, besides 60 tons of cotton.

14. Iatahy, province of Paraná, stands at the mouth of the Tibagy, with 293 military settlers who have saw-mills, oil-factory, chapel and schools.

Besides the above there are 4 new military colonies in Matto Grosso to keep back the Indians, at Nioac, Brilhante, Lamare on the San Lorenzo, and Conceição near the settlement of civilized Indians at Albuquerque.

Also 4 new outposts called Xagú, Chopim, Ere and Guarapuava, in the province of Paraná, to guard against the Indians, or rather to attract them by degrees to civilized life. The policy of the Imperial Government has always been most amicable

to the Indians, and most of the tribes are now quite friendly to white men. There are 57 Capuchin missionaries supported by Government, who have missions of tame Indians in Matto Grosso, Minas Geraes, Goyaz, Amazonas, Pará, Maranhão, Alagoas and Sergipe. There are also 33 Franciscan Missions, some of them amongst the most ferocious Indian tribes, such as Nonohay mission of Coroados, this tribe being one of the most deadly known. Over 20,000 Indians are now under instruction.

Navy.

The navy comprises 15 iron-clad or armour-plated vessels, and 55 wooden ships, carrying in all 137 guns of various calibres and representing total steam power of 11,188 horse. Two of the most powerful ironclads in the world have been recently built for Brazil, namely the *Independência* at London and the *Javary* at Cherbourg. The fleet is manned by 7,500 sailors and 338 officers; the latter including 1 Admiral and 2 vice-admirals. During the Paraguayan war the fleet was put in a state of perfect efficiency, and behaved with great spirit in the battle of Riachuelo. The Government still devotes every attention to this branch of the service.

The Imperial dock-yards and arsenal at Rio employ over 3,000 workmen, mostly Brazilians; here

have been built half the vessels composing the navy, the *Trajano* being the latest, admitted to be a chef d'œuvre of naval construction.

There are two dock-yards at *Ilha das Cobras*, cut in the rock; the *Imperial* and *Santa Cruz*. The traveller may also find it of interest to visit *Wilson's Commercial Dock* at the *Island of Mocanguè Pequeno*, 45 feet wide at entrance and 405 feet long: it is cut out of solid rock, and capable of admitting vessels of almost every size. Every facility is afforded to vessels requiring repairs. On the island are bonded warehouses.

Sir John Hawkshaw's plans have been adopted for making a dock at *Maranhão*, where the tide rises and falls 20 feet: these works are progressing. It is also proposed to make a dock at *Belem*, more generally known as *Pará*.

The *Maná Dock* and arsenal at *Punta Area*, near *Rio Janeyro*, will be described in the chapter on that province.

There is also a *Naval Arsenal* near to *Nitherohy*; it has 26 lathes worked by steam-power, also circular saws, and all machinery for cutting metal, making percussion caps, torpedoes, &c. It has been notably enlarged since 1874, and now employs 810 workmen, who turn out 1,000 cartridges daily, besides making small arms.

The navy list comprises the following effectives:

3,000 able seamen, Marinheiros Imperiales,
 3,400 cadets or apprentices in 17 companies,
 1,000 Imperial Marine Artillery,
 338 fighting officers and commanders,
 313 surgeons, engineers and pursers.

At the Ilha do Governador a Naval Home for invalid sailors has recently been erected; the endowments reach £44,000 sterling.

The Budget for 1876 shows the following items—

Army	£ 1,680,000
Navy	1,240,000
Docks and harbors	1,200,000

These 3 items make up about one-third of the total expenditure.

Ladario arsenal, commenced in 1874, is only second to that of Rio, employing over 1,000 workmen, and fitted with all the newest machinery. Some of the departments are under the direction of clever Brazilian youths educated in English and French dock-yards. There are numerous English and other foreign operatives. Ladario is 4 miles below Curumbá, near the junction of San Lorenzo and Paragnay rivers, province of Matto Grosso. The surrounding woods are of timber admirably adapted for ship-building.

The efficacy of the Brazilian fleet was tested in the most remarkable manner by the fortress of Humayta, which was generally considered as im-

pregnable as Cronstadt. It was freely predicted that the iron-clads would never pass those frowning batteries of 180 heavy cannon enfilading the narrow channel, rendered still more difficult by a sharp curve of the river, where the Paraguayans had thrown across a formidable boom. English, French and American officers who had inspected the position agreed that the Brazilian monitors would be certainly sunk if they attempted the passage. In fact, nature and art combined to make Humayta the strongest naval fortress in South America, the various batteries having been finished with great care, during 20 years, under European engineers employed by Lopez. Some of the guns were 140-pounders, others of less calibre, cast in the Asuncion Arsenal, the heaviest battery being that of Londres, which was casemated, like most of the others. No wonder that for three years it defied the Brazilian fleet, as it had ten years before defied a powerful U. States squadron of wooden vessels. It was thought that even iron-clads would be sunk in attempting to pass the concentrated fire of so many batteries, to which they must be exposed at least half-an-hour.

At last on the morning of Feb. 19th 1868 three Brazilian ironclads, built in England, steamed up before daybreak and were speedily under fire of the batteries, which opened up so terrific a can-

monade that the earth shook at Itapiru, at the mouth of the Paraguay river, and the tide lashed itself upon the shore, although several miles distant. As soon as the three ironclads doubled the bend in front of Londres battery they were within pistol range, having to hug the shore for fully a quarter of an hour under the tremendous raking fire of 180 guns. The passage under fire was 42 minutes in duration, and when this tremendous feat was accomplished the ironclads sent up signal rockets as agreed on with the land forces, to signify that they had forced the passage. This was the turning point of the Paraguayan war, and reflected no less credit on the officers and men than on the admirable construction of the vessels, more especially as iron plated vessels had been viewed with distrust since the sinking of the Italian ironclad at Lissa by the Austrian wooden ship. The fall of Humaytá was the prelude to the end of a war which cost the lives of over 250,000 men, between all combatants, and an expenditure of forty millions sterling by the Brazilians.

IX.

AGRICULTURE AND COLONIES

The soil is generally so fertile as to produce crops of amazing abundance; maize yields from 150 to 400-fold; rice as much as 1,000-fold; wheat from 30 to 70-fold. An acre of cotton is found to give 4 times as much as in North America; while the cultivation of coffee and sugar brings as much wealth to Brazil as could the most productive gold mines or diamond-fields.

An able-bodied man can easily cultivate 2,000 coffee-trees, on an area of 5 acres English, which will give him an average crop of 6,000 lbs. of coffee, worth about £80. Even on the slave coffee-plan-

tations it is computed that the crop equals £60 per head, for men, women and children. Coffee is almost the only staple product of Brazil that white labor can be applied to as well as that of slaves.

Sugar-cane is a very profitable crop, but only suited for negroes; the canes last 20, and sometimes 40 years. A strong negro can look after 5 acres, which will yield 200 tons of sugar, worth £140 sterling; of this sum the negroes salary will take about £30 sterling.

Cotton is a crop suitable for European settlers with small capital. A man can attend to 7 acres, with 14,000 cotton plants, the yield averaging 6½ tons unginned, worth about £80.

Tobacco, india-rubber and other articles of exportation have been already alluded to in the chapter on Commerce.

Mandioca surpasses all as a lucrative branch of agriculture, and at the same time demands little labor. There is, for example a farm at Campos, near Rio, only 12 acres in extent, which regularly produces 37 tons of tapioca, from the mandioca root, representing a market value of £520 sterling per annum.

Some provinces are rather of pastoral than agricultural industry. For instance Rio Grande do Sul exported in 1874 no less than 24,600 tons of dried beef, representing a value of £660,000.

The Imperial Government spares no efforts to encourage rural industry. Besides the sum of 2,600,000£ which the Bank of Brazil is bound to advance to planters at 6 per cent per annum another valuable aid is rendered by the Mortgage Bank, capital £4,400,000, which is authorized to lend double its capital at interest not exceeding 7 per cent and a sinking-fund spread over 30 years; the Government giving a guarantee of 5 per cent on the capital. Moreover the Government has set apart funds from the new loan to guarantee 7 per cent per annum on whatever capital (up to a total of £3,300,000 sterling) may be invested by planters in erecting sugar-mills or improved machinery for coffee-plantation. A new sugar-mill has been put up near Macahé on this plan, the Government guaranteeing 7 per cent on an outlay of £80,000; the mill to turn out 3,000 tons sugar yearly.

As the gradual abolition of slavery which has been going on for some years, since the Emancipation Law of Viscount Paranhos, has already reduced the number of slaves to one million and will entirely abolish slavery before the close of the 19th century, every effort is made to introduce European settlers on a great scale. Contracts have been made with shipping firms at Antwerp, Hamburg and other foreign ports for more than 100,000 able-bodied colonists, the Government paying the

shippers £6 per head on the settlers landed in Brazil. The authorities supply these settlers with house, food &c. till forwarded to their destination. English colonies in Brazil have generally proved an utter failure, but the German colonies in Rio Grande do Sul have been most successful, counting over 60,000 colonists, besides sundry flourishing colonies in San Paulo, Santa Catarina, Parana and other Provinces, of which detailed accounts will be found in subsequent chapters.

X.

RIO JANEIRO

The entrance to the Bay of Rio; about $1\frac{1}{2}$ mile across, is the most magnificent picture that ever delighted the eye of man. The Sugar-loaf rises precipitately nine hundred feet on the left, while Santa Cruz on the right overlooks a fort of 100 guns. As we advance into the Bay the scene changes every moment like a kaleidoscope, the mountains moving one behind another and changing their shape, till we get full view of the city, numerous islands topped with convents or batteries, and the peaks of Gavia, Tijuca and the Organ Mountains, which form the limit of the splendid panorama. The Bay is 100 miles round: all the navies in the world might ride at anchor here

Ferry-steamers are seen crossing it in all directions to the various suburbs that lie along the water's edge or on the slope of the hills crowned with luxuriant tropical vegetation. War-vessels and merchantmen display the flags of all nations, the tonnage of this port being greater than any other in South America. Owing to the number of vessels and the semi-stagnant nature of the Bay the fish are not considered wholesome. At times also yellow-fever is very prevalent, usually from January to May, and if the traveller have to land here he should not sleep even for one night in the city, but proceed at once to the mountain suburbs of Tijuca or Petropolis.

Rio Janeyro, the capital of this vast empire, is the largest city in the continent, having a population of 270,000 souls, or with the suburbs 400,000. It was founded in 1556 by the French adventurer Nicholas Durand de Villegagnon, Knight of Malta, who had previously saved Mary Queen of Scots from English cruisers, and was reckoned one of the bravest men of his day. The fort that bears his name in the Bay marks the spot where he arrived with the two small vessels of his command, which had been fitted out by Coligny, on the understanding that Rio Janeyro was to become an asylum for Huguenots. Villegagnon had only 80 men, and his settlement was destroyed in 1560 by the Portuguese,

who built a city here in 1565, and called it San Sebastian from the Saint's day, 20th January; at the same time calling the bay Rio Janeyro under the impression that it was a river.

It stands in 24 deg. 50 min. South latitude, being just outside the tropics, and is by no means an unpleasant or unhealthy place. There is little variation of season, even the winter months being as hot as Algiers; and in summer the temperature rarely goes above 90 in the shade. Of course it is very enervating for persons who have to attend to business in the hot season; the diplomatic and other affluent classes repair to Petropolis and other mountain retreats. The average mortality of Rio Janeyro is about the same as in New York or Berlin, say 40 per thousand, or double the rate of London.

City improvements on a large scale have been effected in recent years by an English company, which is still extending its operations, and causing a steady decline in the death rate. Even when yellow fever prevails the deaths rarely exceed fifteen or twenty per day. The supply of water is healthy and abundant; the aqueduct from Tijuca was built in the time of the Jesuits. It is proposed now to cut away the Morro, just behind the city, and admit such a current of fresh air as will reduce the temperature five or ten degrees; an

English company has offered to do the work if allowed to dispose of the site of the mountain when cut away.

Near the Bay the streets are narrow and gloomy, all drawn in straight lines except the Rua Direita : this is the busiest thoroughfare, with the Exchange, banks and principal merchants' houses. Rua dos Ouvidores is the gayest, owing to the number of jewellers and vendors of feather-flowers &c.: here you can obtain diamond ornaments about one-third cheaper than in Europe, and the beautiful stuffed humming-birds and feather flowers which form so large an article of commerce. The Empress, in union with Lady Burdett Coutts, is endeavouring to check the destruction of humming-birds, since the French dealers are killing and exporting them in thousands as ornaments for ladies head-dresses. Some of the streets off Rua Ouvidor are so narrow that when a Brazilian grandee comes along in his mule-carriage you must step into a shop on either side to let him pass. But in the newer parts of the town the thoroughfares are spacious and well-built, especially the Constitution Square, where there is a fine equestrian statue of Pedro Primero.

The public buildings are hardly in keeping with so great a metropolis. The churches are not remarkable for size or beauty; the clubs, theatres

and hotels are inferior to those of B. Ayres. Nevertheless the bustle and traffic in the streets near the water-side cannot be equalled by any other city in South America. The busiest places are the Market and Exchange. The former is remarkable for the wonderful variety of fruit, sold by enormous black women, some of whom are slaves, others slave-owners. The Exchange is thronged with hundreds of merchants, chiefly dealers in coffee, English being amongst the foremost. Here the telegrams are daily posted up from all parts of the world, and a fine reading-room is attached. The British Consulate, Post-office, Exchange, and Emperor's palace are close together; Carson's and Exchange hotels are also near, and all within five minutes walk of the landing-place.

In charitable institutions few cities can compare with this. English physicians who have visited every hospital in Europe testify that the hospital of Rio far exceeds them all: it is under the care of French Sisters of Charity, and is admirably managed. The same may be said of the Lunatic asylum, Foundling home, and similar institutions, which call forth from visitors louder praises than even the matchless scenery of Rio.

The Botanical gardens have justly attained a world-wide celebrity by the magnificent 'avenue of palms.' The Botafogo Tramway conveys passen-

gers thither, running through a delightful series of suburbs, composed of nobleman's villas. The traveller who wishes to see Rio properly should make short trips on all the lines of Tramway, to Laranjeiras, Botafogo, Gloria, &c., which will be less fatiguing and obviate the risk of sunstroke. The Hotel de Estrangeiros near Botafogo is a favorite resort of such travellers as have not time or inclination to go farther from town. From here numerous pleasant excursions may be made, such as to the Sugar-loaf: this precipitous peak was ascended by an American lady who put her glove on the top; but several persons have since lost their lives in a similar attempt.

Permission to see the arsenal is easily obtained. Here some war-vessels have been built, and the workshops are well served by native and foreign workmen. A portion of the arsenal was accidentally burnt two years ago. Last year another arsenal, the property of Viscount Maua, was inaugurated by the Emperor at Punta Arena, some miles from the city: it has cost £250,000, being supplied with all the newest inventions and machinery from England.

Among the charming suburbs which are the glory of Rio the nearest is San Cristobal, remarkable for the Emperor's palace, where he usually gives audience to foreign visitors in the evening.

Dom Pedro speaks all European languages fluently, and is moreover of high scientific attainments, being a member of several learned societies in France and England, and a patron of arts and schools. His personal appearance and deportment are dignified and prepossessing, and such persons as have had the privilege of spending some evenings at the palace invariably testify to the amiable character of the Imperial family. The Empress was an Italian Princess, and is aunt to the ex-King of Naples. The Count D'Eu, son-in-law of Dom Pedro, generally resides at Rio or Petropolis, his wife being heiress to the crown. Another daughter was married to the Count de Saxe; she died at Vienna. The Emperor is of Democratic tastes: his salary is partly spent in schools, and most of his time is devoted to the arsenal and public works. The great objects of his reign have been public instruction and the abolition of slavery.

The Province of Rio Janeyro has an area of 42,370 square miles, with a population of 1,002,548 souls. There are numerous public schools, attended by 49,340 children.

The city of Rio Janeiro public schools are included in the above returns for the Province. Public instruction is making great progress: besides the University and upper and lower class schools there are numerous literary socie-

ties, such as the Historical Association, of which the Emperor is president. There are 14 newspapers, the most important being the *Jornal do Commercio*; the *Anglo-Brazilian Times*, edited by Mr. William Scully, is well-known to foreign readers. This gentleman is also author of a Handbook on Brazil, published in 1865. The traveller will find in the bookshops of Rio some admirable photographs of the best scenery around; the 'Album do Brazil' is a splendid work of this description.

Visitors cannot fail to be struck with the brilliancy of the jewelry shops in Rua Ouvidor, Rua Ourives and other streets. The best silversmiths are Domingo and Farani, Valeutin and V. Resse. Distilled perfumes and liqueurs of many kinds are manufactured by Coutinho and Vianua. Articles of carved ivory, rosewood, &c. are made by Amaro Jose Pereyra, Eduardo Barata, J. de Oliveira, and Lorenzo Dominguez; feather-flowers by Mdlle Natte, Rua Ouvidor; flowers of fish-scales, by Joaquin Fernandez, and embroidered cotton hammocks by Lagos, Miranda, Souza and Filgueras. The traveller should visit the factory of St. Alexo at Mage, not far from the city; it employs 170 German and Portuguese operatives, who turn out beautiful hammocks and consume over 50 tons of cotton yearly in this article of manufacture.

At the school for Blind Children a great deal of needle-work is produced, especially cloaks, shirts and stockings. At the Agricultural Institute the traveller will see fine samples of tobacco, cotton, and all the products, as well as farming implements. The best cigars are those of Bastos, Djebel, Correa, Mendonza, Castanhera and Olivera Pinto. Drugs and chemicals may be had at Alexo Gary, F. Farant or Domingues Viera : saddlery of F. Catinot, Abreu Guimaraens or Marcellino Silva ; preserved meats and butter of L. P. Halliot ; sweet-meats of Querioz and Menezes. There are a dozen brewers in and about the town ; Leyden's beer is the best known.

The best photographic views of Rio and its suburbs are those by George Leuzinger, Stahl and Wahnschaffe, Fleyuss Bros., Linde and Heck. Excellent maps are published by Fleyuss and Linde. Books in all languages may be obtained of Messrs. E. and H. Laemmert, 61 Rua dos Invalidos, and we can specially recommend Mr. Scully's work on Brazil. The visitor may find it interest to visit the *Anglo-Brazilian Times* Office, 78 Rua do Hospicio, and that of the *South American Mail*, 184 Rua Riachuelo. The most important newspaper in Brazil or in all South America is the *Jornal de Commercio*, 65 Rua Ouvidor, which was founded in 1821 and circulates 15,000 copies daily ; it employs 8 editors

and 250 operatives, besides 80 correspondents, and consumes 600 tons of paper yearly. The *Diario de Rio* is 60 years old and circulates 5,000 daily. The *Globo* is a new paper connected with telegraphic enterprise. There are numerous papers of less note.

Rio and the suburbs are magnificently lighted with gas. The first company was formed by Baron Maua in 1851, who transferred his rights to a London Co. There are 5,500 street lamps, the annual cost of which is £70,000 sterling. The municipal revenue of the city exceeds £110,000, having increased 50 per cent in the last 10 years. The Imperial Government pays for gas-lighting, water-supply, prisons, police, fire-brigade and other expenses usually municipal; this is because the city is federalized, after the manner of Washington. The city comprises 423 streets and 33 plazas or squares; the largest of these latter is Campo Sant Anna, with an area of 40 acres, elegantly planted; in the centre is a monument to the soldiers who fell in the Paraguayan war. Plaza Constitucion has a noble equestrian statue of Pedro the First. Largo San Francisco is the terminus of the Tijuca tramway. The other principal squares are those of Onze de Junio, Caxias, Ajuda, Marinha and Imperatriz.

In commercial activity no city in South America

rivals Rio, which is said to come next after New York among the trading centres of the New World. There are 8,943 houses of business, of which 7,263 belong to Europeans. The annual import and export trade averages £21 millions sterling; arrivals and departures summing up last year 4,310 sea-going vessels with an aggregate of 2,473,000 tons. The Custom-house of Rio gives £4½ millions sterl. to the Imperial Treasury. The port is defended by 6 fortresses, the principal being those of Santa Cruz and San Juan with casemate batteries. Forty-eight steam boats ply, every half-hour, across the Bay, between Rio, Nitheroy, Paqueta Island, Piedade, Villa Nova, Maua and other suburbs, or as tugs for vessels entering port; besides 800 small ferry-boats or gigs to convey passengers in any direction.

There are 2,000 hack-coaches, besides various lines of tramway. Over 10 million passengers are carried yearly on the lines known as Botanical Gardens and City of Rio. Another line runs from the Nitheroy wharf to Campo Sant Anna, and there are 3 suburban lines to Tijuca, Isabel and Santa Theresa. Omnibuses ply on all sides, and the traveller should return from Tijuca by the coach which starts from Boa Vista for the Botanical Gardens, a delightful ride of 10 miles of enchanting scenery through the mountains.

The General Post-Office is now on an improved footing; the mails to and from Europe are conveyed by 20 steamers, English, French, German and Italian. There is also a monthly mail-steamer to United States; and almost daily communication with the ports along the seaboard and the River Plate. Subsidies are paid to lines of steamers trading up the Amazon, the Paraguay and other rivers, as also the Lamport and Holt's admirable coast-steamers. The total expenditure of the Postal service of the Empire is £106,000, while the revenue reaches £113,000 per annum. The various Provinces make up the following postal receipts.

Rio Janeiro.....	£53,200
San Paulo.....	11,150
Pernambuco	8,320
Bahia	6,500
Minas Geraes.....	6,200
Other provinces.....	27,630
	<hr/>
	£113,000
	<hr/>

Brazil has made postal treaties with France, Spain, Belgium, United States, Peru, and is now concluding same with Great Britain, Italy and other Powers.

Water-supply is being rapidly extended to every part of the capital, at present serving over 250 miles of streets and giving 70 quarts to each inhabitant. There are 740 pillar-fountains, besides

240 conduits for fire-engines. The Carioca aqueduct, built in the last century, is a massive work, bringing the water a distance of six miles, the arches in some places being 60 feet high. Since the English City Improvements Co. has been formed the water-supply is greatly increased, and a better system of drainage has sensibly reduced the mortality. The drainage service costs £102,000 per ann.

The public-buildings of the capital comprise a cathedral, 70 churches, 7 convents, the imperial palace, bourse, museum, mint, war-office, arts-academy, cabildo, university, treasury, academy of music, custom-house, bishop's palace, Bank of Brazil, Misericordia hospital, 8 other hospitals, opera-house, 7 theatres, Government-house, railway terminus, library, arsenal, gas-works, palace of Boa Vista, hotel des Invalides, mendicants' asylum, small arms factory at Congeigao, pyrotechnic laboratory at Campinho, model college, town hall, policia, fire department, lyceum, archives, board of works, telegraph department, post-office, barracks, inspection of schools, asylum for deaf or blind children, penitentiary, and numberless institutes, schools, free libraries, clubs and charitable associations.

The Mint is a magnificent structure in Campo Sant Ana, covering an area of an acre: here the Industrial Exhibitions are held.

The Arts-academy has galleries for annual shows

of painting and sculpture, with an annex called the Pinacothek, where the best works are kept.

The new Exchange occupies a front on Rua Primeiro de Marzo of 400 feet, with a side length of 130 feet. This grand structure, built entirely of Brazilian granite, is divided into three distinct buildings, namely, the main or central one, to be used as the Exchange; a lateral one on the south side, for the General Post Office; and one on the north side, intended to furnish banks and other institutions with elegant and spacious offices for the transaction of business.

The War-office, on the north side of Campo Sant Ana, covers an area of nearly 20 acres, including the barrack attached.

It is supposed that the Misericordia Hospital is the finest in the world, covering more than two acres in extent, with two wings, each 600 feet long, and admits annually 15,000 patients. Adjoining it is the Lunatic Asylum, with a frontage of 900 feet, and covering $1\frac{1}{2}$ acres. The lunatics make beautiful ornaments of artificial flowers for sale. There are four smaller hospitals supported by Carmelites, Franciscans and other religious fraternities, besides the Portuguese and French. The new poor asylum cost £4,000. The home for Invalid soldiers is as Bom Jesus island, built after the war with Paraguay.

Near the Custom-house, which is of great extent, are some fine docks, especially that of Las Cobras for careening vessels.

Most of the Government offices are in Plaza Pedro Segundo, in handsome new buildings. Among the other new structures of remarkable elegance are the Treasury, University, Music Academy and Imperial College. The Bishop's palace stands on the summit of Congeigao hill. The Pedro Segundo terminus is a massive building at Campo Sant Anna. The gas-works cover an area of 5 acres. The Penitentiary is also large: the prisoners turn out admirable cabinet-work, book-binding, and life-buoys.

In order to measure the magnitude of the trade relations of Rio with Europe the following table of exchange transactions will shew the last seven years:—

	England	France	Hamburg
	—	—	—
1875	£16,214,047	£2,046,000	£450,000
1874	16,200,000	2,348,000	490,000
1873	17,070,000	1,728,000	475,000
1872	13,990,000	820,000	132,000
1871	16,306,000	620,000	115,000
1870	10,495,000	1,144,000	97,000
1869	9,405,000	1,894,000	120,000

The above does not include any sums in 1875

drawn for by the Government, on account of the new Brazilian loan in London (5 millions sterling). The rate of exchange last year (1875) varied from $26\frac{1}{4}$ to $28\frac{3}{4}$ pence on London, the lowest being in April, the highest in September. On France it ranged from 340 to 364 reis per franc; and on Hamburg from 415 to 450 per mark. The Imperial Government drew on London at $26\frac{7}{8}$ pence.

The port returns of Rio are $3\frac{1}{2}$ million tons yearly, viz—

	Vessels	Tons
	—	—
Sea-going.....	2,863	2,563,088
Coasting	4,476	895,490
	—	—
	7,339	3,458,578
	—	—

The trade of Rio Janeiro forms one-half that of the whole empire.

The city of Rio Janeiro in 1875 exported 3,152,296 sacks coffee, of which two million sacks were shipped by seven foreign houses, viz. Phipps Brothers, Johnston, Bradshaw, Wright, Kern Hayn, Schwind Mckinnell, and Lackeman. Two-thirds of the coffee exported went to the U. States, and one-third to Europe. The export-trade of Rio may be summed up thus—

Coffee, 3 million sacks	£12,500,000
Tobacco, 2,000 tons	135,000
Diamonds	65,000
Sundries	320,000
	<hr/>
	£13,020,000
	<hr/>

The shipments of coffee from Rio in 1874 and 1875 were to the following destinations—

	1875	1874
	<hr/>	<hr/>
United States	2,041,995 sacks	1,521,499
Northern Europe	828,222 “	769,535
Mediterranean	114,939 “	212,878
S. Africa, R. Plate, &c.	167,140 “	169,369
	<hr/>	<hr/>
	3,152,296 sacks	2,673,281
	<hr/>	<hr/>

Although the coffee trade of Rio had grown up rapidly at first, it has been nearly stationary for the last 20 years, viz—

1837	exports	743,185 bags
1847	“	2,009,343 “
1857	“	2,570,480 “
1867	“	3,255,080 “
1875	“	3,152,296 “

It may interest the traveller to visit the little garden in the convent of San Antonio at Rio,

where the first coffee in Brazil was planted by Father Villasô in 1754. The seeds were given to planters for experimenting on, and in 1808 we find Brazil exported 30,000 bags. Such was the origin of an industry that now produces £12,000,000; Brazil raising one-half the entire coffee crop of the world, which is estimated at 1,000 million lbs. (say 500,000 tons) per annum. In Brazil the trees take $2\frac{1}{2}$ years before they give the first crop, and then three crops yearly. The trees are cut when they arrive at a height of 8 feet. Coffee is a native of the Yabal mountains in Abyssinia. In Western India trees are found to give sometimes as much as 16 lbs.

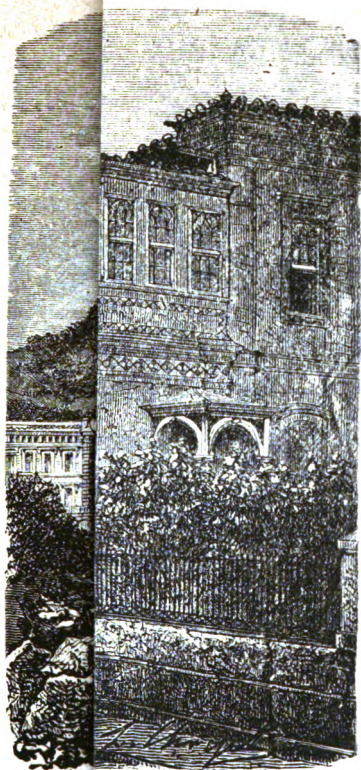
XI.

SUBURBS OF RIO

Excursions may be made to numberless islands about Rio. Ilha Raza is said to be the scene of a love-romance similar to the tradition about Madeira, and in which an English ship-captain and his bride had a wonderful escape from Paulista corsairs. It is about 10 miles from the entrance to the bay, with a lighthouse 300 feet above sea-level. If the traveller prefer land-journeys he will always find troops of mules going inland to Goyaz and Matto Grosso, which take four months on the road; the planters are exceedingly hospitable, and a man

may travel for years in the interior of Brazil without spending a dollar. Artists especially find this life delightful. Indians are sometimes heard of, and we even know of a traveller in the woods who found an arrow one morning sticking in his hammock-netting.

Tijuca stands over a thousand feet above Rio, and is 13 miles distant. It is reached by a road of great engineering merit, constructed by Mr. Ginty, passing through the picturesque village of Boa Vista. The tramway starts every half-hour from the church of San Francisco, passes the Opera-house, Senate, city-prison, aqueduct, and a number of spacious country-houses surrounded by magnificent tropical vegetation and fruits. These Brazilian houses seem all windows, and are tile-roofed; most of the servants are slaves, but as the process of gradual emancipation is now going on there will be no more slaves in Brazil in twenty years. All slave children are now born free, besides numerous societies purchase a batch of slaves monthly to liberate them, and each master on dying manumits all or a portion of his servants: the religious orders have set all their slaves at liberty. The plantations of coffee around Tijuca are models of good order; the slaves are well-treated, and visitors will meet with every courtesy. The scenery is unrivalled; nor is it easy to determine whether the



"Chinese view" is superior to the Vista Dos Reyes, or the gorgeous panorama of Pedra Bonita surpassed by that from the peak of Tijuca. The traveller should make his head-quarters at White's hotel, which is near the famous waterfalls. During forty years this house has maintained a well-deserved reputation, and is known to most English people in South America, who come hither to recruit from over-work and enjoy the repose and comfort of an English home. Visitors usually make up parties and pic-nic excursions daily, the proprietor having a supply of sure-footed mules that carry you up or down the steep mountain paths without danger. Among the night excursions it is usual to go to Boa Vista and see the effect of Rio Janeyro by gas light: the spectacle is very fine, the lines of light extending along the shores of the bay and climbing the precipitous hills for twenty miles in some directions.

Petropolis, in the Organ Mountains, about forty miles from Rio, is the residence of the Corps Diplomatique and, in summer months, of the Emperor. Its great elevation, 2,600 feet, has always preserved it from yellow-fever, and its climate would be perfect but for the frequent rains. The scenery is superb. To reach it the traveller should take the terry-steamer from the Arsenal pier across the Bay 14 miles to Mauá, then by rail 16 miles to Raiz da

Serra at the foot of the Organ Mountains. This was the first railway made in Brazil, and cost hundreds of English workmen their lives, as it traverses a pestilential swamp. From Raiz da Serra the mail-coaches convey passengers up a zig zag road cut in the face of a perpendicular mountain ; a succession of terraces protected on the outside by a granite wall. As the coach ascends, if you look up you will see others some hundreds of feet above your head, and downwards others below you in parallel terraces, so that you might drop an orange on the roof of the coach lower down the side of the precipice. In some places the parapet seems to be giving way, but no accident is recorded of the mules going over the precipice. The road is an engineering triumph, and at each sharp bend in the ascent the panorama beneath your feet becomes more extended and magnificent. The whole journey from Rio is accomplished in six hours, and the traveller finds good hotels at Petropolis, which was originally a German colony, some of the settlers still cultivating farms, others doing a brisk business in coffee sticks and wood-carvings beautifully executed. The Emperor's palace is large, resembling the villa of an Italian nobleman : flower-shows are held here by the Countess D'Eu.

Mr. Hinchliff, Pres. of the Alpine Club, thus describes Petropolis, as visited last year : —

“It is built among lovely hills, and surrounded by the richest vegetation of this prolific region. Fuchsias of fifty or sixty feet in height, blooming from top to bottom; the passion flower of our hot-houses twining round the bamboos, roams at will over everything it comes in contact with; poinsettias, not in small plants as seen on a London dinner table, but grown into very large bushes, on which are occasionally found crimson stars 2 ft. in diameter; the *Cobæa scandens* hanging its purple bells from bush to bush—such are some of the more showy attractions that abound in the vicinity; while to the fern collector no other place appears comparable to this region. We collected about 250 distinct species within a day's walk or ride from Petropolis; and found a few species new to science.

“From Petropolis a good road has now been made to the most important of the mine districts, and it runs for a considerable distance past coffee plantations. Agassiz convinced himself that this rich country had been swept by glacial action, and that the most successful coffee plantations were found exactly where the movements of ice had most enriched the soil, by the transportation and mixture of its component elements. It is deplorable to see the awful destruction of vegetable life involved in the production of a few pounds of coffee. The virgin forest is burned, and blackened stumps

alone remain. A French botanist told me it would take a fortnight to botanise one of these huge trees. Each of them is a garden, for the whole stem is clothed with other plants and flowers, and so is each wide-spreading bough.

"The Imperador butterfly is the largest, from ten to twelve inches. Birds are very scarce. Now and then a grand kingfisher may be seen on a river-side rock; and here and there a brilliant toucan darts across the road in all the splendour of crimson, blue, and yellow; but as a rule they remain in the depths of the forests, where they are very difficult to see amongst the multitudinous branches and leaves."

Juiz da Fora is reached from Petropolis by a fine macadamized road, along which English mail-coaches travel ten miles an hour through the most varied and surpassing scenery. This place is used for halting by persons going on a visit to the mines and diamond-fields, which belong to English companies, and have given large profits for many years past; the journey to the mines is made on mules, and everywhere in Brazil the traveller meets with greater hospitality than in any other part of the world. The hotel at Juiz da Fora is excellent, and the surroundings are delightful.

Entre-rios, a short drive from Juiz da Fora, is situated in the heart of a picturesque locality tra-

versed by the Pedro Segundo Railway. The journey from here to the city is among the grandest in the world; over precipices, through mountains, across rivers, and in the midst of palm, orange, banana, cactus and all the luxuriance of tropical vegetation: this line cost immense labor and outlay. Travellers who make the trip to Petropolis should return to Rio by way of Juiz da Fora and Entre-Rios, the round journey taking only three days. The Pedro Segundo Railway was begun in 1857, and has now 320 miles open to traffic; it is a Government line, and has already cost 7 millions sterling; the net proceeds are always over 6 per annum on the outlay, and the Imperial Government devotes £500,000 per annum to its prolongation.

The city of Rio Janeyro being federalized, like Washington, the seat of government for the Province is at Nitherhoy, on the east side of the Bay. Here the provincial Legislature passes the necessary local laws, including subsidies for schools and some smaller railways; among these latter is a line to Novo Friburgo on the Fell system, going up a steep incline.

Mauá's new arsenal and graving-dock at Sandy Point, Nitherohy, was opened by the Emperor in Dec. 1874. So far back as 1846 Viscount Mauá had constructed here the first establishment of this kind in Brazil and manufactured the metal piping

for the water-works of Rio. In 13 years, down to 1860, no fewer than 72 steam-engines were made here. A great fire occurred in 1866, which reduced the place to a heap of ruins, and such it remained for seven years, until Viscount Maua having gone to Europe to conclude arrangements about the Brazilian submarine cable purchased in England all the newest and best machinery. The arsenal now represents an outlay of £250,000. The graving-dock is large enough to construct four good-sized steamers simultaneously. The machinery department has 48 machines of different kinds, the moving drum being on Fowler's system. The saw-mill has 15 machines for sawing, planing &c., driven by a 40-horse engine. There is an 8-ton steam-hammer. The foundry has 4 furnaces, turning out $5\frac{1}{2}$ tons metal at a time. Railway bridges over 100 feet long have been made for the Rio Janeyro and San Paulo junction. The wharf is 1,000 feet long, with 16 to 20 feet depth of water at the end. Viscount Mauá is the same who made the first railway in Brazil, introduced steam-navigation on the Amazon, and successfully carried out the ocean-cable between Brazil and Europe.

Strangers not afraid of sunstroke or over-exertion may undertake the ascent of Gavia or Corcovado. The first has been seldom accomplished; Mr. Norton and some others succeeded, but nearly

lost their lives and had to pass the night on the summit. The best panorama of Rio is obtained from Corcovado, which is 2,300 feet high, and of easy ascent.

Among boating excursions we may mention Hett Wilson's island and dry-dock, Governor's Island (20 miles in circumference), Cobras island and docks, the Government arsenal, the City baths (admission 1 shilling), and numberless islands covered with crops of coffee, mandioca, fruit &c.

Port Real colony on the Parahyba do Sul may be reached by Pedro Segundo railway, to Divisa station, in about 7 hours. Here a new steam mill was inaugurated in Sept. 1876 by Count D'Eu, accompanied by the Foreign Ministers.

At present the colony has 529 persons, settled on 184 lots. Of these 529 colonists 214 are French, 209 Italian and 88 Swiss. The ground in cultivation is about 600 acres.

No Englishman should leave Rio without visiting the San Juan del Rey mines which may be reached by the Pedro Segundo railway and Juez da Fora mule-road. See next chapter.

XII.

MINAS GERAES

The fifth province of Brazil in extent, and the most populous in the whole empire, having an area of 348,480 square miles and a population of 2,009,023 souls. It derives its name from the numerous gold and diamond fields which early attracted numbers of adventurers. Among the diamonds that have been found here the most notable are the Southern Star, of Bagagem, which figured at the Paris Exhibition, and the Abaetè diamond forming the largest stone in the crown of Portugal. Emeralds were discovered here in 1573 by Fernandes Tourinho, who explored the country inland from Porto Se.

guro : after him came expeditions under Antonio Diaz and Marcos Azevedo. Before the close of the 16th century gold had been met with in different places by Paulista rangers, such as Antonio Rodriguez and Bartolo Bueno. The territory of Minas was separated from San Paulo in 1720, and formed into a distinct province. An attempt was made here in 1788 to proclaim Brazil independent of the mother-country ; the movers were put to death, including a famous poet named Gonzaga and an officer called Tiradentes.

In 120 years ending with 1820 the Portuguese extracted no less than 35,647 arrobes gold dust, say 600 tons, worth about sixty millions sterling, besides an annual yield of four to five thousand 'oitaves' of diamonds. Such was the abundance of gold that it became the custom, whenever the governor-general dined with any private individual, to set before him a dish of hominy in which pieces of gold took the place of the maize ; and at Ouro Preto the horses of the guard of honor attached to certain religious processions were shod with gold. But from the beginning of the 19th century a rapid decline set in, and the 80,000 miners at the commencement of the century had in 1823 dwindled down to about 1,000.

The English mining company of San Juan del Rey at Morro Velho has been attended with mar-

vellous results. It was established in 1842, and has re-paid the capital 8 times over.

This renowned mine consists of a bed of auriferous pyrites, and is situated about twelve leagues N.N.W. of Ouro Preto, on the road to Sabará, which village owes its prosperity to the mine. On passing the barrier encircling the buildings for the machinery and the 1,200 men employed in the works, the sound of falling water and stamps guides the visitor along the shady avenues of an elegant park, in which are the houses of the Company's employees. Around flow rivulets bearing with them a black powder with shining spangles, coming from the 105 stamps working night and day in triturating the auriferous ore. Next we come upon an immense opening, from which great tubs full of the auriferous pyretic quartzites rise up every instant. The gold-bearing bed is almost vertical and worked beneath a shaft over 600 feet deep. On descending, either by the miner's bucket or by one of the 60 ladders which connect the workings with the surface, we enter a chamber 420 feet long by 324 wide, whose roof, floor and sides are composed of ore. On the side twenty or thirty miners are hanging, drilling the holes for the charges of dynamite which from time to time explode with deafening report and shatter down masses of ore upon the floor. Since 1875, however, drilling

machines, worked by compressed air, have been introduced. The ore thus obtained amounts to about 150 tons a day. Huge waterwheels are employed in keeping the workings free from water, chiefly coming from the abandoned mines, and others move the stamps and other machinery, the abundance of water power rendering unnecessary the more costly aid of steam. From the shaft the ore is transported to the stamping sheds, where, after crushing in a machine, it is reduced by the stamps to very fine powder, to free the almost invisible gold from its pyrites and quartz, and by washing the lighter parts of the ore are carried away with little loss of gold; after which the heavy powder, caught by the woollen cloths over which the current passes, is mixed with quicksilver, which seizing the gold forms with it an amalgam. From this amalgam the mercury is separated by distillation, leaving a spongy lump of gold which is afterwards melted and run into bars. On the average the ore yields an ounce and a quarter to the ton. The yield of the mine during the half year ending October 9th 1875 was 28,552 tons of ore, giving 267,215 drachms of gold, leaving a profit of 77,900£, from which 50 per cent dividend was paid and over 15,000£ carried to account. High praise is given to the intelligent and careful administration of the present superintendent. Every where per-

fect order reigns, and no trouble is spared to ensure the material and moral welfare of the workmen. The hospital is equal to the library, and both the doctor and the clergyman are ever on hand to give their services. The Morro Velho mine is a model in every respect. The Pary mine is about 10 leagues to the north of Ouro Preto and 2 leagues south of Santa Barbara. The old miners had worked it from the surface downwards, but the manager of the present company took advantage of its situation, in the side of a hill, to drive a gallery, sloping upwards, from the foot and thus formed a natural outflow for the waters and an easy mode of transport for the ore. The mining and treatment of the ore is similar to that at Morro Velho, but as there is no crusher the breaking of the lumps is done by women, who get 360 reis (9d) a day and food and can break up about a ton each per diem. The number of workers is 200, the stamps 35, and the mining of ore about 1,000 tons a month. The yield is said to be 10 to 12 grammes (say one-third of an ounce) per ton. Professor Gorceix gives the management equal praise to that bestowed on Morro Velho.

Many other mines are grouped around these two, amongst others that of Passagem, a league from Ouro Preto, abandoned by a company but now worked on his own account by an able en-

gineer; Rossa Grande, whose auriferous bed is a compact quartz; Cuiabá, near Sabara, worked without art but yielding well; Torquato and Campestre, with true quartz veins; and Saragossa, in the neighborhood of Ouro Preto.

The Morro de Sant' Anna affords a good example of the second kind of gold deposit, one probably peculiar to Brazil, the gold being found in jacutinga, the sandy variety of the quartzites with oligist iron. It is situated 8 miles from Ouro Preto and one from Marianna. There are no shafts, and the galleries are almost all dry, being formed in a soft, black, ferruginous, sandy rock showing belts and grains of white quartz. The gold is irregularly distributed through this sandy rock, but concentrated in certain paying streaks, sometimes the thickness of an arm, the discovery of one of which may in a day repay the fruitless search of months. The gold is visible, but no sure character has yet been found to accompany the streaks; the only test and guide is the result of the cradle, and the galleries are carried here and there according to the miners' estimate of probabilities. Four of these pay streaks have been discovered, one above the other. The average thickness of the beds is 15 feet and the length about 200. The sands around are auriferous to a certain distance. The soft rock is easily picked down, but great care is required in

the shoring; and when the streak is struck theft is difficult to prevent. Often the workmen fill their hair with gold dust, sprinkling the black sand above it to conceal the gold.

At Itabira and Conceição other mines of jacutinga are worked successfully, and the jacutinga mines are in great request, but the distribution of the gold in them continues a mystery.

The present yield of gold in Minas Geraes may be set down at £280,000 or £300,000 a year. In fact there is hardly a rivulet at which washers are not to be found on holidays.

The miners of the last century must have left many veins and deposits undiscovered, and they abandoned many rich ones because their defective appliances no longer served to make them profitable.

It is the most mountainous province of Brazil, the principal range being the Serra Mantiqueira, from which numerous streams descend northward towards the San Francisco, and southward towards the Paraná. The soil is usually very fertile and the climate healthy, except in some places, subject to intermittent fevers and elephantiasis.

Coffee, tobacco, sugar and cotton are largely produced, the estimates for the annual yield being—

Coffee.....	22,000 tons
Tobacco.....	7,000 “
Sugar.....	3,400 “
Cotton	1,400 “

In 1875 Mr. James Wells surveyed the route for a proposed railway from Piropeba in Minas Geraes to the Pirapora falls on the San Francisco, from which point the latter river is navigable down to the famous falls of Paulo Affonso, an interval of 1,000 miles. Mr. Wells descended to Barra on a raft or “ajoujo” formed of two canoes lashed together. Ascending the Rio Grande to Campo Largo, he found this river navigable for 180 miles to vessels drawing 4 feet; the Rio Grande averaging 300 feet wide and 10 deep. There were frequent lagoons, covered with water-fowl. The temperature, it being in the summer month of February, did not exceed 84 in the shade by day, nor fall below 76 by night. From Campo Largo Mr. Wells proceeded up the Rio Preto to the village of Formosa, where the people had never before seen an Englishman, and treated him with kindness. A month later in traversing the Sapon forests he and his attendants were attacked by a drove of several hundred wild boars, and only gained the battle after great slaughter. On April 14th he crossed the ridge which divides the watershed of the San Francisco from that of the Tocantins, a tributary

of the Amazon; and descended by the Rio do Somno westward. This last river flows between perpendicular walls of many-colored rock, sometimes over 100 feet high, on which the Shupé bees make nests 20 feet long and produce excellent honey. The country from San Francisco to Tocantins is free from mosquitoes and carapatos, the plagues of Brazil. At the mouth of the Somno Mr. Wells found a Cherentes village, whose inhabitants were cannibals until 1848, when they were converted by Fra Raffaele, an Italian Jesuit, still resident there. Descending the Tocantins 185 miles, the traveller reached Carolina, a town of 1500 souls, in almost the same parallel as Pernambuco, from which it is separated by a thousand miles of forest intervening. Seven days on horseback sufficed to make the journey from Carolina to Chapada on the Grajahú, where Mr. Wells found the Anambeyo tribe of white Indians, supposed to be descended from Europeans wrecked near the Amazon. At last, after numberless toils and dangers, he safely reached Maranhão on June 25th, having travelled over 2,000 miles in 170 days, through a country apparently never before explored by any European.

Cattle-farming is general in Minas Geraes, and over 100,000 head annually sold in the neighboring provinces besides great quantities of pork. There

are over 5,000 sugar-plantations, 6,000 cattle-farms, 113 saw-mills, and numerous other local industries. Most trade is done with Rio Janeyro via Parahybuna and the Union-Industria highroad to Juiz da Fora, or by steamers on the river Mucury; but the prolongation of the Pedro Segundo Railway will shortly open up this province and facilitate its commerce.

The population has doubled in 20 years; in 1854 it only counted 1,081,909 souls, of whom one-fourth were slaves. At present there are only 208,103 slaves, say one-tenth of the population. Minas sends 10 Senators and 20 Deputies to the Imperial Congress at Rio, besides having a local Assembly of 40 members.

Ouro Preto, formerly called Villa Rica, is the capital of the province. It was founded in 1714, at a considerable elevation, among rugged mountains, in a cold and foggy atmosphere, and is distant 300 miles from Rio Janeyro. It is a well-built city of 2,000 houses, 12 churches, Government palace, town-hall, penitentiary, 2 printing-offices, public library, botanical garden and lyceum. Mules are mostly used to convey merchandize to and from Juiz da Fora, terminus of the Union-Industria road; this magnificent highway is 145 miles long, starting from Petropolis, all admirably macadamized, and remarkable for some fine iron bridges. The

mail-coach service on this road cannot be surpassed anywhere. In 1874 the Co. carried 27,000 passengers and 56,000 tons of merchandize ; receipts £19,100, expenses £13,300, leaving for dividend £5,800 sterling, say 3 per cent on capital of £200,000.

San Juan del Rey, centre of the mining region, is a city of greater commercial importance than Ouro Preto ; the streets are well laid out, and a tramway is being constructed with a 7 per cent guarantee on £66,000.

Barbacena stands 3,530 feet over sea-level, has many fine buildings, and is reputed the healthiest and pleasantest town in Brazil.

Diamantina comes next in population after Ouro Preto and is the residence of a Bishop, the second diocese in this province ; the senior bishopric is that of Marianna, 2 leagues from Ouro Preto.

This province supports 53 schools, attended by 1322 children.

XIII.

ESPIRITU SANTO

Occupies that portion of the seaboard between Bahia and Rio Janeyro, extending inland as far as Minas Geraes, with an area of 27,200, and a population of 82,137, including 10,000 slaves. The climate is healthier than that of either Rio or Bahia, and the soil very fertile but poorly cultivated ; it is watered by numerous streams rising in the mountains and debouching in the Atlantic, which are navigated by coasting craft. The principal exports are sugar, rum, mandioca, flour, rice, maize, cotton, timber, dyes, drugs and salt-fish. There are

numerous deep and safe harbors, and also a dangerous reef known as the Abrolhos islands; opposite to these on the mainland is the important commercial town of Caravellas, where there is a prosperous colony of Germans. Formerly this province was held by the warlike Botacudos tribe, reputed cannibals, but now they have fallen back from the coast to the mountains and forests inland.

Caravellas is a well-built town of 5,000 inhabitants, with a good harbor, and carries on an export trade to Bahia, Pernambuco and Rio Janeyro. There is a new light-house at Santa Luzia with a fixed light, visible 15 miles.

Victoria, the capital of the Province, is a seaport about 24 hours by steamer from Rio Janeyro; it has 5,000 inhabitants and is the residence of the President, Legislature and other authorities; the public buildings including the church and schools, besides which there are three printing-offices. The *Correo da Victoria* newspaper is 30 years old. There is also a newspaper (*Estandarte*) at Itape-mirim, a small port in the south of the province, near Campos.

The Provincial Legislature proposes three lines of railway, the principal to run from Victoria to Port Sousa on the Rio Doce, 85 miles; at which point the second is to start off for Ouro Preto and Queluz, joining the Pedro Segundo main

trunk line at the last-named place. The third line will start from Port Sousa for Diamantina, in the Province of Minas Geraes.

This province is remarkable for its colonies. Leopoldina, on the Santa Maria river, has 3,000 German settlers; the returns shew about 40 deaths and 100 births yearly, and the statistics of exports amount to £12,000 worth of coffee, sugar and potatoes. Rio Novo, with 1,000 Germans, produces £9,000 worth of coffee and cereals. These colonies are described at length in the annexed treatise on Rio Grande.

The provincial revenue is £85,000, of which £20,000 is spent in supporting 131 schools attended by 2,216 pupils.

This province takes its name from the fact that it was Whit Sunday when Vasco Coutinho with 60 followers landed here in 1535 with letters from King John of Portugal. The Aymoré Indians made some opposition, but were speedily overcome, the conquerors building the town of Victoria on an island in the bay of that name, which place is still the capital of the province. The Jesuits came in 1551 and founded a college, which is now the Government house. Owing to the hostility of the Indians the place made such little progress that in 1718 the King of Portugal bought it from Cosme

Rolin for 40,000 ducats. It became a distinct province in 1812.

The climate is moist, but rather healthy for natives, although not so suited for Europeans as the provinces of Santa Catharina, Paranà, Rio Grande or San Paulo. The face of the country is woody and mountainous, and traversed by numerous rivers.

Besides the cities of Victoria and Caravellas there is San Matheus, a thriving town of 2,000 people, who export farinha in large quantities.

The province contains some curiosities of natural and historical interest. At Barra do Castello, on the road to Minas, is a crystal formation over 6 feet long. At Itapernirim the traveller will admire a large cave like a ball-room, and a granite pyramid of monolith. Penha, near where the first settlers landed, has a church built on the summit of a rock in 1558 by Father Palacios, the altar being of rich marble; it is much visited by pilgrims.

XIV.

B A H I A

The city and province of this name hold the second rank in Brazil for population, wealth and importance. The city of Bahia is situate ten degrees north of Rio Janeyro, and carries on a considerable foreign trade. Bahia dates from March 9th 1549, when Thome da Sousa, a gallant Portuguese soldier who had served in Africa, founded the city as San Salvador, giving to the magnificent bay the name of Bahia de Todos los Santos. From that time Bahia became the capital of Brazil for 214 years, until the seat of Government was removed to Rio in 1763. It is even still the ecclesiastical capi-

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tal of the empire. The first bishopric was established here by Pope Julius III. in 1555; it was made an archiepiscopal see by Innocent XI. in 1676. The historian Southey says the advancement of this place was due to the Jesuits, who under Father Nobrega accompanied Da Sousa, and whose beneficence to the Tupinambas gained over that warlike tribe. So rapid was the growth of the settlement that in 4 months there were numerous sugar-plantations extending 30 miles into the interior. In the 17th and 18th centuries Bahia was the centre of the slave-trade; even 40 years ago when the British Government concerted measures with the Brazilian for the abolition of this trade the annual number of slaves imported from Africa averaged 45,000 of which one-third came to Bahia.

The traveller who has not yet seen Rio Janeyro gazes with admiration on the superb Bay of All Saints, with the city of Bahia built along its steep northern bank. The bay is one of the largest and safest in the world, and its shores are resplendent with tropical vegetation. But when you land the charm is dispelled. The streets are foul; most of the inhabitants are negros or colored, and although there are some fine buildings they are hardly worth the exertion of visiting, in the torrid noon day heat. At early morn a pleasant excursion may be made to Victoria, the English quarter overlooking the

entrance of the Bay; the view from the Jardim Botânico takes in the full sweep of city, bay and ocean. Another pleasant ride is to Bom-fim at the head of the Bay; but if time and inclination suggest a further exploration inland the traveller may take the Bahia and San Francisco railway, which runs through coffee and sugar plantations. This railway was opened in 1860; the receipts do not cover working-expenses; in 1874 there were receipts £39,900 working expenses £14,064. It was built by an English company with 7 per cent Government guarantee for 90 years. The first section traverses a zone of country-houses surrounded by luxuriant foliage. The suburbs are best visited by means of mule-carriages, the roads being very hilly. The market-place is rich in fruits, and the black women who sell them are some of the largest specimens of the human race. The best hotel is that of Figueredo, opposite the theatre. Among the English residents there is a Cricket Club, which plays near Victoria.

The population of the esty is 129,109, of whom barely 50,000 are of white blood, including numbers of English, French, German and Portuguese residents. The number of slaves is 16,448. Although Bahia is next in importance to Rio, the trade of the place is inferior to that of Pernambuco. The merchants' offices are mostly in the lower town,

which is very dirty. Negroes with 'cadeiras' or palanquins like shower-baths carry you up the steep hill to the upper town, where there are many grand churches, colleges, hospitals and other public buildings. The Cathedral is built of marble brought from Europe ; the Archbishop is primate of Brazil.

The trade of Bahia shews imports and exports pretty equal, making up in the aggregate over 5 millions sterling. The bay is entered at Cape San Antonio, where there is a fort and lighthouse ; the entrance is here 7 miles wide, the western side being formed by Itaparica island. There are numerous islands and harbors, and the depth of water varies from 50 to 250 feet, everywhere offering secure anchorage for the largest fleets. Two forts called San Felipe and Do Mar protect the city, and Fort Beaumont is on a headland of Itaparica island commanding the upper part of the bay. Excursions may be made to the islands of Mar and Frados. So many rivers debouch into this majestic bay that there is usually a strong current, especially near San Antonio light-house, where vessels have to pass close under the point, owing to a bank on the opposite side. The light-house is not high, and can hardly be seen over 10 miles at sea. The stranger should visit the building-yards at Tapagippe, a suburb just above the city and Fort San Felipe ; handsome, well-modelled vessels of all sizes

are turned out, the timber being found very suitable for ship-building.

The diamond trade is an important feature; the value of diamonds being constantly on the increase. The first diamond-fields discovered in late years were at Cerro do Frio, about 40 years ago; the yield still averages 30,000 carats per annum of rough diamonds, but two-thirds are lost in the cutting. A brilliant of 2 carats may be bought for £50, one of 6 carats will fetch £500. The Emperor of Brazil is said to have a diamond of 1680 carats, valued at $5\frac{1}{2}$ millions sterling. Topazes and amethysts are also exported at times; aguamarines have been found as large as 15 lbs. in weight.

The commerce of Bahia supports 8 Banks, of which only one, the Bahia Bank, has the right of emission, which was extended in 1875 to the amount of £300,000 sterling; it was founded in 1858 and its capital is £800,000 stg. Besides 5 other local Banks, chiefly for Savings or Mortgages, with an aggregate capital of $1\frac{1}{2}$ million sterling, there are the branch-banks of the London Brazilian and the English Bank. The local Banks average a dividend of $7\frac{1}{2}$ per cent per annum.

The area of the Province exceeds 220,000 square miles, being about the size of France; population 1,379,616, including 167,824 slaves. It extends inland as far as the San Francisco river, which

Captain Burton descended in a canoe for 1500 miles to the Paulo Affonso falls. The interior of the province is traversed by 3 ranges of mountains, the Cincora, Giboya and Itabayana. The soil is so prolific that besides immense quantities of coffee and sugar it produces superior tobacco and cotton, as also valuable dye-woods.

The distance overland from Bahia to Pernambuco is not over 500 miles, but as there is no road through the forest it would take weeks on horse-back; the voyage by steamer takes only 36 hours. Hardy fishermen are met over a hundred miles out to sea in the peculiar craft known as Catamarans or yangadas; passengers may buy pretty models of the same, as well as parroquets, marmozets and feather-flowers from the dealers who come alongside the steamer at Bahia and Pernambuco.

The Bahia railway runs 77 miles to Alagoinhas, and is being prolonged 280 more, to Joaseyro on the Rio San Francisco. It belongs to an English company, and has proved very unfortunate, the traffic not exceeding 80,000 passengers and 20,000 tons of merchandise. The deficit is made good out of the 7 per cent guarantee paid to shareholders. Surveys for prolonging the line have been made by Mr. Vignolles, C.E.

This province has a coast line of 500 miles, and the debt of water along the seaboard varies from 60

to 100 feet. Steamers ply almost daily to Rio Janeiro and Pernambuco: the former voyage averages 70 hours, the latter 40. Porto Seguro, where Cabral first landed when he discovered Brazil (in April 1500) is in this province, about 300 miles south of Bahia. It is safe for vessels drawing 12 feet. Independence was declared in 1821, and the Portuguese officials were expelled, the first constitutional Governor being Vicente Vianna, Baron do Rio Contas. Antiquaries may trace the first foundations of Bahia (in 1549) near the present chapel of Ayuda. English travellers will see the tomb of Father John Martin, superior of the Jesuit order in Brazil, in the old Jesuit church, with the inscription "non Anglus sed Angelus;" his memory is still gratefully preserved, but the natives always call him Father Almeyda.

There are no fewer than 60 churches in Bahia. The Cathedral is a large and imposing structure, but not equal in splendor to the Jesuit church and college, with colossal statues of St. Ignatius and St. Francis Xavier. Another fine church is the Concepcion, built of marble blocks hewn at Lisbon, and possessing a musical peal of bells. Bomfim chapel stands on a hill at the head of the bay. The churches attached to the Franciscan, Benedictine and Capuchin convents are remarkable for sculp-

ture and gilding. The oldest in Brazil is the Victoria chapel.

Bahia is indebted to the last Portuguese viceroy, Count Arcos, for the public garden overlooking the entrance of the bay; its lofty trees, marble seats, aviaries &c. make it a favorite promenade, and in the centre is an obelisk in memory of the Regent, John the 6th of Portugal, who landed here in 1808.

The theatre is a massive building supported by an immense wall of masonry, one of the most conspicuous objects from the port. The upper town is 174 feet higher than the lower town. The latter is devoted entirely to commerce, and contains the custom-house, post-office, arsenals, dockyards, Chamber of Commerce, market-place, steamboat agencies and merchants' offices. The market is remarkable for the size of the black women and the oranges; it was built by Count Palma in 1819. Bahia oranges are probably the largest in the world, and have all their seeds at one end, and others without any seed. The Bolsa stands on the site of the old San Fernando battery and was built by Count Arcos in 1814. An enormous trade is done in the export of cigars.

The Upper town contains the residences of all the principal native families; also the Government palace, the Archbishop's house, the Comandancia of Arms, Policia, public library, senate-house,

town-hall, law-courts, lyceum, university, museum, seminaries, convents, churches, hospitals, theatres, prisons, printing-offices, and asylums. The streets are narrow and ill-paved, whereas those of the lower town are wide and regular, especially the 37 blocks built of 4-story houses in 1832 by an enterprising merchant named Gonsalvez Ferreyra.

Until very recently the only way of ascending to the Upper town was in sedan-chairs borne by negroes, but in 1869 Don Antonio Lacerda began the construction of a steam lift with a tower 191 feet high, which was finished in 1874. Two coaches each holding 20 persons are lifted in a minute from the Custom-house to Palace Square. The cost of the works was over £90,000 sterling. The number of persons lifted exceeds 5,000 daily.

Besides the San Antonio light at the mouth of the bay there is 20 miles southward the Morro de San Paulo light, visible 28 miles, revolving once a minute; it stands 300 feet over sea-level. The Abrolhos light near Puerto Seguro is visible 20 miles at a dangerous part of the coast. A new light-house has been built at Itapucu, 18 miles north of Bahia, a fixed light visible 20 miles. The Custom-house of Bahia in 1873 produced £945,000 in import and export duties, coming next after Rio Janeyro.

Education is much advanced, only two other

Provinces having a larger number of school-children. There are 422 schools and 41,003 scholars; this includes 17,362 children attending free schools. The expenditure for schools exceeds £40,000 per annum. The University is chiefly used for the study of medicine, the course being six years; the classes are taught by 21 professors. There are 400 medical students; about 20 new doctors receive their diplomas each year. There is also a School for Pilots. The state library has 20,000 volumes and counts 5,000 readers; six other free libraries are open for the public. There are 8 daily newspapers, the oldest being the *Journal* and the *Diario*. The Historical and Medical associations meet every month. The hospitals are admirably conducted, as also the orphanages and asylums.

Visitors at the Paris Exhibition of 1867 had occasion to admire an oil-painting by Victor Meyrelles, representing the sad fate of Moema, the daughter of an Indian Cacique, who swam after the vessel in which her lover, Caramurú, was carried off from Bahia for Portugal until she sank from exhaustion, her dead body being afterwards washed ashore.

The Provincial revenue, for local requirements, amounts to £220,000 per annum. The city of Bahia is well let with gas, and has 3 lines of tramway, to Fonte Nova, Itapagipe, Victoria and other

suburbs. Besides the Bahia and San Francisco railway there are 3 others partly constructed; the Nazareth line, of which 30 miles are open to traffic, to be prolonged 50 more; the Bahia and Santo Amaro, 20 miles complete; and the proposed line from Jequitinhona to Minas Geraes, 50 miles.

The trade of this Province according to Mr. Consul Morgan's report published in 1875 was as follows—

EXPORTS.

	Value.
	—
52,000 tons sugar.....	£770,000
15,500 tons tobacco.....	700,000
4,700 tons coffee.....	240,000
2,500 tons cotton.....	170,000
1,200 tons cocoa.....	40,000
1,460 tons hides	120,000
100 lbs. diamonds.....	45,000
12 tons amethysts.....	1,000
Rum, timber, &c.....	43,754
	—————
	£2,129,754
	—————

The exports were distributed among the following countries:—

To Great Britain.....	£941,602
“ Germany.....	530,000
“ France.....	130,000
“ Portugal.....	134,000
“ Italy.....	66,000
“ other countries.....	69,610
“ Brazilian ports.....	258,542
	<hr/>
	£2,129,754
	<hr/>

IMPORTS.

Cotton goods.....	£890,000
Wollen do	135,000
Linen do	110,000
Wines.....	160,000
Hardware	110,000
Drugs	128,000
Clothing	80,000
Sundries	754,003
	<hr/>
	£2,367,003
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The countries from which the above articles were received were as follows—

From Great Britain.....	£1,385,497
Germany	210,000
France	215,000
Portugal	195,000
United States	138,000
River Plate	105,000
Other countries	118,000
	<hr/>
	£2,367,003
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This shews that the import and export trade with Great Britain is greater than that with all other countries in the aggregate.

Diamond washing suffered some depression in 1872 owing¹ to the discovery of large fields of amethysts near Cattite, whither 7,000 diamond-washers hastened to commence working. About 5,000 boxes were quickly shipped to Europe at prices varying from £400 per cwt. to £40, until they no longer paid the cost of working.

This province is not suited for European immigration. A gentleman named Aragon brought out in 1873 some 2,000 Swiss, Poles and Germans, but the Austrian Consul had to raise a subscription some months later to send 1500 of them back to Germany.

Mount Pascua, in the southern part of this province, was the first land sighted in the discovery of Brazil by Cabral, 22nd April 1500, and the name leads us to suppose the day must have been Easter Sunday. Two years later the splendid Bay of All Saints was discovered by Christopher Jacques; it is a hundred miles round, with secure and deep anchorage for all the navies of the world. The citizens of Bahia sometimes make pic-nic excursions to the islands in the bay; that of Itaparica is 20 miles long by 10 wide. The adjacent wooded island of Medo is now a powder magazine; it was much infested by Indians in the early days of Bahia.

It is said the island of Itaparica was portion of the dowry of the amiable and virtuous Catherine of Braganza, married to Charles II. of England; and was subsequently exchanged for Bombay.

Travellers wishing to ascend the Rio San Francisco can do so with great ease for about 600 miles above the falls of Paulo Affonso, and will always find vessels at some of the ports of that river, such as Urubú, Barra, Santa Sè, or Joaseiro.

Besides the capital there are seven large towns in the Province, viz.—

Cachoeira, on the Paraguasù, with 88,200 inhabitants, of whom 15,347 are slaves; it is one of the stations on the southern telegraphic line from Bahia to Rio das Contas.

Santo Amaro, on the Jaguaripe, with 58,300 population, including 10,620 slaves, is another station on the same telegraph line, not far from the diamond fields.

Rio das Contas, sometimes called Minas, with 59,850 inhabitants, including 8,900 slaves, stands at the mouth of the river of same name, on the sea board, nearly 100 miles south of Bahia.

Sant Anna, with 51,600 souls, including 4,100 slaves, is near the foot of the Giboya mountains and the head waters of the Jiquirica, on the southern telegraph line.

San Francisco, 44,500 pop., including 3600 slaves, is between the Paraguassú and the Bahia and San Francisco railway.

Maragapife, 46,600 pop., including 5,200 slaves, stands south of the Paraguassú, on the southern telegraph line.

Nazareth, 38,200 pop., including 8,400 slaves, is also a station on the same route, southward of Maragapife.

One of the most important villages on the San Francisco is Barra, at the confluence of the Rio Grande, a place of 17,000 inhabitants, about 350 miles west of Bahia. At this point the San Francisco is a great river, and in the centre is the island of Miradero, 4 miles long. Nearly 300 miles higher

is the island of Carinhanha, where the San Francisco first spreads out to a great width.

There are two lines of land telegraph besides the ocean cable; the northern was opened in 1874 between Bahia, Alaguinhas and Sergipe; the southern in 1876 between Bahia and Rio das Contas; each of these lines is about 150 miles long, independent of the line along the Bahia and San Francisco railway. The ocean cable connects with Rio Janeyro and the River Plate southward, and with Pernambuco and Europe northward.

The post-office of Bahia shews less business than either Pernambuco or San Paulo, although Bahia surpasses both these provinces in wealth and in the proportion of persons who can read and write. There are 68 postal offices in the provinces, and this branch of revenue yielded in 1874 only £6,500 sterling.

There are 6 Banks, as follows—

Bank of Bahia, founded in 1859, with right of emission; capital £900,000 sterling, in 40,000 shares one-half paid up. The emission is guaranteed by National Bonds, and amounts (May 1875) to £150,000 stg.

Bank do Commercio, capital £900,000, three-fourths paid up, in 80,000 shares; reserve-fund £13,500 stg.

Mercantile Bank, capital £440,000 stg., in 40,000 shares.

Hypothecary Bank, paid-up capital £100,000 sterling.

Savings Bank, paid-up capital £460,000, reserve-fund £23,000.

New London and Brazilian, capital one million sterling.

There are 4 colonies, viz., **Muniz**, **Theodoro**, **Bio Branco** and **Carolina**, whose aggregate only makes up 186 settlers. There are also two agricultural native settlements, **Commandatuba** with 500, and **Ilheos** with 422 inhabitants, who raise coffee, cotton and cocoa.

Thirty Indian villages have resident missionaries and schools; they consist of **Camacan**, **Mongoy**, **Botocudo**, **Tupinamba**, **Caricé**, **Tapuya** and other tribes.

The most remarkable charitable institution is the **Sta. Casa de Misericordia** at Bahia, founded by **Juan Aguiar** in 1700; it receives annually 2,800 sick, and is maintained at a cost of £5,500 per an., two-thirds being endowments. There is an **Orphanage** attached, where 300 children are fed and clad, besides a poor-school for externs; cost £4,000 per an. The new lunatic asylum opened at **Boa Vista** in June 1874 cost £6,500 to build, and is under the direction of the **Santa Casa**, whose total

income last year was £16,500, and expenditure £16,300 sterling. Similar 'Casas de Misericordia' exist at Cachoeira, Sant Amaro, Nazareth, Maragogipe, Valenza and other towns. San Joaquin's college at Bahia is an orphanage for 100 boys, who are educated in various trades; it has £3,000 a year in endowments. The Providencia is a female orphanage for 140 girls, supported by 222 charitable ladies. The Sacred Heart is a similar institute, founded by Rev. Francisco Souza in 1827; here 160 poor girls are received; the endowments exceed £12,000 per an.

Bahia has 3 lines of tramway—

1st. Justo Arriani's line, from Barroquinha to Fonte Nova, Soledade and Matadouro, which is now 7 miles long, and will be carried on to Nazareth and Rio Vermelho. It does a large passenger traffic.

2nd. From Congeigao to Itapagipe, through all the most crowded thoroughfares of the city; six miles long, the section from Bomfim to Itapagipe being by steam-traction. This is a joint-stock company.

3rd. From Praza do Palacio to Campo Grande and Barra. This includes the Lift from the Lower to the Upper town, and does a great traffic both in passengers and merchandize.

The Bahia Docks Co., capital £900,000, has been

formed at London by Messrs. Mauá, Baring, Youle, Holt, Saunders, Bartlett and Neate, who have petitioned Government for right to export merchandise duty-free from the proposed docks; these are to be constructed from Agua Meninos to Largo Pilar, with an area of 40 acres and 2 miles of wharfrage; there are to be two inner or graving-docks, 24 feet deep, connected by tramway with the city. Mr. Charles Neate, C.E. calculates the total cost at £725,000, besides £175,000 for purchase of site and other expenses. It is proposed to make subsequently two other docks alongside, one northwards to Jequitaya, 40 acres, the other southward to Caes Dourado for small craft. These docks would be such an advantage to Bahia, to revive and augment its trade, that the Government will probably grant the favors demanded.

The Provincial revenue rose from £220,000 in 1872 to £330,000 in 1875; it is derived from property tax, legacy duty, 1 per cent on diamonds, 3 on sugar, 6 on brandy, coffee, cotton and tobacco, and 2 per cent on such articles as pay no export duty to the general revenue of the empire.

Bahia is ahead of most provinces in public instruction. The Lyceum has 240 students. The Library in the old Jesuit College has 18,000 volumes, and is visited by 6,000 readers annually. The Medical College has also a library of 2,000

volumes; the Literary Society 8,000; the Reading Club 3,000; the Agricultural Institute 6,000 volumes, besides a library of 600 volumes at Valenza.

Bahia seems destined to become the outlet for the trade of the San Francisco river and valley, as soon as the railway reaches there. The Imperial Government called for tenders to prolong the line to Joazeiro, 350 miles, and the estimates amounted to £3,970,000 sterling; the work has not yet been taken in hand. The line actually in traffic does a poor business; lines of similar length in the River Plate carry 10 times as much.

There is a smaller line called the Central or Paraguassú, started by Mr. Hugh Wilson, C. E., in 1874, with an Imperial guarantee of 7 per cent for 30 years on £1,430,000 stg. The first section from Cachoeiras to Santa Ana has been opened, 30 miles, and the second will reach Diamantinas or the Diamond-fields, after which it will be carried on to Urubù, 250 miles from Bahia, and centre of the San Francisco trade, the river being navigable for 800 miles higher.

Besides the above there are some railways projected by the Legislature of Bahia—

From Alagoinhas to Timbó, concessionaire Freitas Paranhos.

From Nazareth to Santo Antonio, 30 miles, es-

timated cost £440,000; 5 miles already in traffic, to Onha.

From Santo Amaro to Bom Jardim, estimate £132,000 sterling; plans approved in 1875, with Provincial guarantee.

There is a tramway of 3 miles at Santo Amaro; in 1874 the working expenses were £800 ahead of the receipts.

A steam-tramway, 50 miles long, is to be made by Messrs. Galvan Brothers from Valenza to Mutá; plans approved.

Mr. Hugh Wilson obtained a concession, in 1875, of 7 per cent guarantee on £150,000 for 30 years to make a railway from the Belmonte or Iequitinhonha, starting from Cachoeirinha, to Farpon, the frontier town of Minas Geraes. Mr. Joaquin Ribeiro also obtained a concession last year for a line from Oliveira dos Campinhos to Santo Amaro.

Among literary associations the oldest is the Historical Institute, founded in February 1856 by the venerable Archbishop Scéixas, Marquis of Santa Cruz. The first newspaper was *Idade de Ouro* (golden age) established with royal license in 1811; at present the leading papers are the *Jornal de Bahia*, 25 years old, and the *Correio*, started in 1871.

In 1753 some adventurers discovered a deserted city in the woods and wrote a description of it,

which Canon Benigno reproduced in the *Literary Annals*. Not far from the village of Sincora there is a precipitous gorge in the mountains, with a defile cut by human hands through the solid rock. As no such work appears in local annals it is believed to be much older than the discovery of America. Canon Benigno set out in quest of the mysterious city, but after 14 days of journey and travelling more than 100 leagues he had to give up his object. He afterwards embarked for Valenza and tried in that direction, but was prevented by heavy rains from proceeding. The adventurers in their account (1753) state that they were 3 days descending the river from the ruined city, and it is ascertained the river must be the Paraguassù, which comes from Sincora Sierra, passes by Cachoeira city, and falls into the bay of Bahia in front of Itaparica. Some daring English traveller may yet solve the mystery.

There is a Government dockyard built by the Portuguese where the first line of battle-ship was constructed in the last century; it is in front of the Conceicao de Praya church, and several frigates have since been built there, but latterly this business is almost confined to Rio Janeyro.

The most remarkable civic festival in the year is the Dos de Julio, the date of the expulsion of the Portuguese by General Labattut fighting for ind

pendence. Every year two waggons are brought from Lapinha with figures of Tupinamba Indians to the Largo da Piedade escorted by the students, dressed in white with green sashes.

The snuff-factory of Meuron and Co. at Unhao is the largest in Brazil ; the snuff is known all over the world ; there are branch houses at Rio Janeiro and Pernambuco.

The gas-works at Bahia are worth a visit ; they contain 50 retorts and employ 100 men, the consumption of coal averages 15 tons in 24 hours. Last year the quantity of gas consumed was 53½ million cubic feet, to light 3,000 street lamps and 1200 houses.

Water supply is provided by the Queimado Co., capital £100,000 sterling, who sell water all over town at one cent or 20 reis per barrel. The works were constructed by M. Lenoir. The number of elegant fountains of bronze and marble cannot fail to attract notice. Similar joint-stock companies supply water to Cachoeira, Nazareth, Maragagipe and other towns.

There are 8 Insurance companies, viz. Liverpool London and Globe, Royal, Alliance, Fidelity &c. Most of these are English agencies, but there are two local companies, the Allianz and Interesse Publico, the second of which has a Fire Brigade for the general service of the city.

The principal cotton factories are those of Todos-os-Santos, Queimado, Dos Mares, Modelo, Amparo, Pilar, Penha, Paraguassu, Progreso, Salvador and San Braz, some of which have from 100 to 200 operatives. The first-named belongs to Baron Antonio Albuquerque and consumes 300 tons of cotton yearly. There is also a large sugar refinery called the Dos de Julio. Mr. William Watt has a steam saw-mill at Ponta Area, and there are two others belonging to W. Schmidt and F. Bastos. Seven cigar-factories employ a number of hands and export millions of cigars to all parts of the world. Messrs. Hopkins and Webster have a foundry at Jequitara, Messrs. Cameron and Schmidt another at Monserrat, Mr. Thomas Russel another at Santo Amaro, besides the Bahiana and other foundries. There are, moreover, three soap factories.

No province surpasses Bahia in the richness and variety of its animal and vegetable kingdoms. Its forests abound with game and reptiles, its waters teem with hundreds of different kinds of fish. There is a kind of cedar called Acajuca-tinga admirably suited for building and growing to such a size that the historian Gabriel Soares mentions one of these trees washed down by an inundation from Ilheos, so big that the neighbors built a church out of the planks and had still enough over for a house afterwards. So reckless of late years has been the

system of clearing the forests that a petition is before Government in this matter, the districts of Jequiriza and Nazareth being utterly devastated.

Minerals are found in many places, especially gold, copper, iron and coal (besides diamonds already mentioned). In the last century gold dust was largely exported; the best gold-fields are at Jacobina, Victoria and Serra da Saude. Amethysts and other precious stones are found at Caetete; coal at Porto Seguro and Nazareth; iron at Valenza and in the Chique-Chique Sierras near the San Francisco. Copper has been exported for over a century from Cachoeira and Santiago de Iguaçu. The engineer Bulhones in making railway surveys near the San Francisco found copper cropping out over the ground in various places.

Thermal springs exist at Itapicuru; the water is clear and tasteless, with a temperature of 30 degrees centigrade. The baths are much in use, and under the care of a manager, who has 3 houses for patients.

The province counts no fewer than 893 sugar factories, of which 282 are worked by steam-power; the largest number are situate at Santo Amaro, Nazareth, San Francisco and Maragagipe. In 1872 the mills produced 54,000 tons of sugar, but the production has since fallen off.

The imports and exports of Bahia for 5 years shewed thus :—

	Imports	Exports
	—	—
1870.....	£2,170,000	£2,168,000
1871.....	1,980,000	1,985,000
1872.....	2,410,000	2,470,000
1873.....	2,505,000	1,980,000
1874.....	1,910,000	1,420,000
	—	—
	£10,975,000	£10,023,000
	—	—

Bahia tobacco obtained 8 prize medals at the Vienna Exhibition. The coffee of this province is no less renowned, especially that of Maragagipe and San Francisco, of a yellow color, esteemed better than the finest of San Paulo. Cotton from the neighborhood of Caetete always fetches a penny per lb. over any other class grown in Brazil.

Coasting traffic has declined greatly in 2 years ; it represented two millions sterling in 1872, and fell to £1,200,000 in 1874. The Bahiana coasting steamboat Co. keeps up constant traffic, with Pernambuco, Sergipe, Alagoas and Espiritu Santo, running steamers 3 times a week, and making 680 trips yearly, including those on the various rivers which are navigated by means of Government subsidies: the receipts of this Co. in 1874 amounted

to £102,000 sterling, besides a mail subsidy of £31,000 per annum. The Jequitinhonha Mail-steamer Co. receives £4,400 a year to run a steamer monthly to Belmonte; and the Legislature has recently voted £1,300 for a daily steamboat from Bahia to Itaparica.

The tonnage of Bahia shews a wonderful increase since 1872, partly, owing to the number of Pacific steamers now touching here. The aggregate returns of arrivals and departures make up the following:—

1872.....	845,620 tons
1873.....	2,886,204 “
1874.....	3,522,952 “

Nearly 30 per cent of these totals is composed of coasting tonnage, which increased in precisely the same ratio as sea-going tonnage, quadrupling in two years.

Bahia surpasses any other part of Brazil in historical associations. In front of this city took place the famous sea-fight in which the Dutch Admiral, Adrian Patryd, being beaten by the Spaniards, refused to surrender, and folding himself in the flag of his country leaped overboard, saying: “The ocean is the fittest grave for a Dutch Admiral.”

XV.

S E R G I P E

This province was formerly a part of Bahia, until formed into a distinct province after Independence, under the name of Sergipe del Rey. The sea-coast is low and sandy, the interior mountainous. It has about 100 miles of coast-line north of Bahia, the boundary between the two provinces being Rio Real, while it is separated from Pernambuco on the north by the Rio San Francisco. It is the smallest of all the Brazilian provinces, its area not exceeding 23,700 square miles, with a population of 161,307, including 25,351 slaves. It counts 6

towns and 18 villages, the capital being Aracaju, at the head of the Cotinguiba river. The bar at the mouth of this river is such an impediment to commerce that ocean vessels are hardly able to approach; hence two thirds of the products are shipped in coasting craft to Bahia and swell the trade of that port. Imports are also obtained chiefly from the same port, except a portion coming by way of Pernambuco. Some 30 European vessels, mostly English, German and Swedish, clear annually from Aracaju with sugar, for Sweden, Portugal and Russia. It is considered a better quality of sugar than Bahian. The statistics for 1872 and 1873 shew the annual trade of Sergipe to reach £920,000 sterling, exports being 3 times greater than imports. The chief exports are sugar and cotton—

Sugar.....	£390,000 sterling
Cotton.....	330,000
Local revenue....	64,576
Provincial debt...	43,200

About one-sixth of the local income (there is only £21,000 annual imperial revenue) is devoted to education, maintaining 154 schools, attended by 5,669 children. There is a free library at Aracaju. A railway concession has been granted by the Provincial Legislature for a line from Maroim to Propria, 160 miles, but not yet commenced. The

great river San Francisco debouches into the Atlantic at Villa Nova, 70 miles north of Aracaju. Large fossils are found on its banks.

Marble, rock-crystal, salpetre and lime-stone abound in many places; gold and diamonds on the slopes of Itabayana. The forests consist of trees of varied utility, especially for building houses or making boats; some of these trees produce gum-arabic, others resin for calking. The Cabureicia emits a balsamic odor; the fruit of the Ameira gives an admirable rose dye, and its distilled water is better than sarsaparilla for purifying the blood. The Mangabeira produces a viscous milk much used in medicine; the Jacaruba is well-known in veterinary science and also as a cure for rheumatism. Cocoa oil is annually exported to a value of £300, for use of machinery at Bahia; sea-salt is also exported to Bahia and Rio Grande do Sul. Mandioca and arrow-root are largely produced. Among local industries may be mentioned Cardoso's factory for refining sugar and clarifying it with milk, Amaral's distillery of brandy, rum, and cordials on the River Piauhytina, and Silveyra Coelho's cotton factory.

The first settlers were French buccaneers, expelled in 1592 by Governor Barros, who built a town near Aracaju and called it San Antonio, but the site was so unhealthy that the inhabitants

moved to San Cristobal. This latter place was taken by Maurice of Nassau and held some years by the Dutch, until the Tupinambas took it, these last being expelled by Portuguese troops in 1696. The seat of Government was moved from San Cristobal, in 1855, to Aracaju, a very unhealthy place.

Larangeiras, the largest city in the Province, is also very unhealthy, being surrounded by swamps; it was decimated by cholera some years ago, and has a fine hospital.

San Cristobal, the old capital, is 5 leagues from Aracaju, and appears running to decay.

This province has 770 sugar-factories, employing 12,000 hands and turning out 37,000 tons sugar; also 930 cattle-farms, which export 20,000 head annually.

XVI.

ALAGOAS.

This is another small province, only 35,460 square miles, bounded on the north and west by Pernambuco, on the east by the Atlantic, and on the south by Sergipe, with a population of 348,009, including 33,242 slaves. The chief town, Maceio, is a port of some importance, frequented by coasting steamers, and here reside the President, Legislature and other authorities; it has a tramway, several convents and 14,000 inhabitants. Jaraguá, the port of Maceio, is only 2 miles distant, extending along the beach. A railway is projected by

the Provincial Government from Maceio to join the Pernambuco line near the river San Francisco, 75 miles; also another by the Imperial Government from Piranhas to Yatoba, 65 miles, but neither of these lines is yet begun. Six miles have been made of a railway from Jaraguá towards Imperatriz, with a provincial guarantee; the length when completed will be 56 miles. All these lines have for object to convey the produce of the interior to the seaboard.

Maceio has a bank, lyceum, normal school, 4 newspapers, a public library, an archeological institute, chamber of commerce, 74 streets and 2,200 houses. There is a light-house visible 25 miles; a new light-house has been also put up at Barra San Francisco, visible 12 miles. The bank was founded in 1861, with a capital of £56,000, in shares of £11 each. The library has 4,700 volumes and is visited by 850 readers yearly. There is another free library at the town of Penedo, with 400 volumes. Popular instruction is making progress, the State supporting 222 schools, with 6,624 scholars. The Imperial Government has just granted a subsidy for two more free libraries and night schools.

The provincial revenue of Alagoas is £200,000 sterling, of which £38,000 is devoted to public schools. The province has its own Legislature and also sends 2 Senators and 5 Deputies to the Im-

perial Parliament at Rio Janeyro; it formed a part of Pernambuco until 1840. Being situated between 9 and 10 S. Lat., its climate is too hot for Europeans. Two-thirds of its surface consists of wooded mountains; the soil in the lowlands is very fertile, and grows much sugar and cotton. Travelers should visit the falls of Paulo Affonso, a cataract on the San Francisco, about 100 miles inland. Besides the timber for exportation the forests abound in medicinal drugs, such as dragon's blood, copaiba, ipecacuanha &c., and in tropical fruits. Most of the inhabitants are negroes and live by agriculture; some tribes of the interior still follow the chase. Cotton cloth is manufactured in inconsiderable quantities. There are 300 sugar-factories, this province exporting sugar largely to Pernambuco and Bahia.

Alagoas, the ancient capital, stands some miles inland, and is still remarkable for the agricultural products of the surrounding district; the seat of Government was removed to Maceio in 1839.

Penedo, 25 miles north of the mouth of San Francisco, is a place of growing importance, and gives title to the present Brazilian Minister at London,

XVII.

PARAHYBA

This province lies north of Pernambuco and has a sea-board of 90 miles ; it extends inland nearly 400 miles, in a succession of hill-ranges. The Sierra Borborema separates it from the Province of Ceara, and in this range takes rise the rapid river Parahyba, whose principal affluent is the Guarahu. These rivers impart fertility to the soil, for it never rains during six or eight months of each year. In the uplands sterility prevails, but the valleys are clad with luxuriant vegetation. The climate is healthier than most of the adjacent provinces, and

the atmosphere kept cool by sea breezes. The rainy season is from March to July. Nature is so bountiful that the inhabitants are of idle habits, paying little attention either to agriculture or cattle-raising. The Government uses every effort to encourage agriculture by free donations of land, and some slight progress has been made, due to the impulse of Governor Albuquerque in 1860, who aided in getting up a line of steamers on the river Parahyba, and proposed to connect this river with the San Francisco by means of a canal 60 miles long, through a level country. Model-farms might be advantageously established in the valleys of San Gonzalo, Valenza and Bom Jesus, to utilize the thousands of idle hands, who could make butter and cheese, dry beef, or raise cereals for exportation.

The late Dr. Servio Ferreyra left essays on the mineral wealth of the Province, shewing that it abounded in gold, iron, quicksilver, saltpetre, flint, calcareous rock, and tabatinga, a substance much used for house-building. No less valuable are the botanical treasures, such as quinine, copaiba, cochineal, aniseed &c. There is a species of ant which produces wax.

Parahyba city is a seaport 70 miles north of Pernambuco, in 7 degrees S. Lat., with a population of 20,000 souls. The aspect it presents on approaching

from the sea is delightful; at 15 miles from the embouchure of the limpid river which bears its name the town is surrounded by successive amphitheatres of hills, the intermediate valleys revealing fertility and cultivation. The city counts 8 churches, 3 convents, Government house, Legislature, lyceum, public schools, treasury, barrack, penitentiary and other buildings. The upper town is falling to decay. The lower is new and flourishing, and goes by the name of Varadouro. Fort Cabedello once defended the mouth of the river, but is now in ruins. The port returns shew about 200 vessels touch annually at Parahyba, mostly coasting craft, only one-third being sea-going.

There are 4 towns of minor note, viz., Maman-guape, near the capital; Arèa, centre of an agricultural district; Souza, far inland, seat of the pastoral industry; and Pombal, in the woods, well known as a market for fat cattle.

A railway is projected from Parahyba to Alagoa Grande, 130 miles, with guarantee from the Imperial Government. The public buildings comprise the Government house, some churches and convents, the Lyceum and several schools.

The provincial revenue is £180,000 sterling, of which £37,000 is devoted to the support of 149 schools, attended by 3,906 children. The province has an area of 45,300 square miles, with a

population of 362,557, including 40,000 slaves. The forests abound in valuable timber, which forms an article of export, as well as cotton and sugar. There are 160 sugar factories. This province sends 2 Senators and 5 Deputies to the Imperial Legislature.

This territory was first explored by settlers from Bahia. The city of Parahyba was founded under the name of Filippea in 1585 by Barbosa, and afterwards was some years held by the Dutch.

XVIII.

PERNAMBUCO

This province is about midway between Bahia and Cape San Roque, being 500 miles north of the former, and extending along the Atlantic seaboard. It is remarkably fertile, and has an area of 77,830 square miles. There are more than 500 sugar plantations, besides numerous cattle-farms; cotton and indigo are also largely produced.

Pernambuco is the worst port in the world for large vessels; the mail-steamers lie far out to sea, and there is a nasty reef near shore, but such small vessels as can come inside find here a safe an cho

rage. When the weather is rough, as generally happens, passengers are lowered from the steamers in an arm-chair, and as a sea-breeze always springs up about 1 in the afternoon it is a risk to venture ashore. Bathers must beware of sharks.

The trade of Pernambuco is about $5\frac{1}{2}$ millions sterling per annum, three-fifths being imports. There are numerous English merchants and other foreign residents, but these northern Provinces are as a rule too hot for Europeans, and all efforts to found German or English colonies in these low latitudes have proved failures.

The Pernambuco railway runs out 76 miles through a varied and picturesque country, its traffic consisting chiefly of sugar and other produce. It cost almost 2 millions sterling, the Government taking £700,000 in shares and also giving a 7 per guarantee. It is not yet self supporting, the working-expenses absorbing two-thirds of the receipts.

Olinda is the ancient-name for Pernambuco and one of the suburbs is still so called. The first settlement, in 1530, was made by Captain Duarte Coelho, who received this grant from the King of Portugal for his long services in India; it extended from the Juraza river to the mouth of the San Francisco. The native name Pernambuco signifies an "opening through a stone reef," but when Duarte landed with his wife and children he ex-

claimed 'O que linda' (oh! how beautiful) and this gave rise to the Portuguese name. The aboriginal inhabitants were called Cahetes and were expert navigators, using a species of raft or Catamaran made of timber and wicker-work such as is still seen with the coast fishermen. Duarte's little colony was nearly exterminated by the French and some Indian tribes, but for the timely aid of the Cacique Tabyra; this brave man sallied out with Duarte to fight the besiegers; an arrow pierced his eye; he plucked it out and the eye-ball on it, saying to his followers that he could still see to beat his enemies with one eye. So rapid was the progress of Olinda that 30 years later when Duarte's son George, a youth of 20, was elected by the Jesuits as Commander of the place there were 50 sugar-factories paying 19,000\$ revenue, and the residents were able to bring into the field 2600 infantry and 400 cavalry. Each factory had twenty or thirty residents, a hundred or more African slaves, besides native ones; and adventurers from Portugal made large fortunes in a few years. George Duarte in 5 years reduced all the surrounding country for 150 miles from Olinda, the commerce of which place freighted 45 ships annually to Portugal. In 1630 it was captured by a Dutch fleet of 50 sail, after a vigorous resistance by the garrison under command of Vieira, a youth of 17;

the Dutch committed horrible atrocities on this occasion, and held Pernambuco for a quarter of a century afterwards, till recovered by the Viceroy Barreto. It remained under the Portuguese until the declaration of Independence.

Of late years the city has been much improved, and it contains some fine buildings. It is unhealthy, owing to the frequency of fever and small-pox; the latter is owing to the prejudice of the lower classes against vaccination. The city-hospital is a large establishment with 400 beds; last year it admitted 2,554 patients, of whom 522 died. The new Orphan Asylum at Tamarineira will be a noble edifice; the number of orphans averages 200; the first stone of the new structure was laid in September 1875, Baron Soledade subscribing £4,000 sterling, and other donations making up £15,000; the estimates are £40,000 sterling, according to Mr. Victor Fournier's plans; municipal subsidy £8,000 per annum. There are also Lazarist and Lunatic asylums, the first with 140, the second 40 beds; the Poor-house averages 100 mendicants. and much out-door relief is given by the Misericordia Society.

The city as well as the Olinda suburb are lighted with gas; the former has 1500 street-lights. The new Abattoirs are spacious and cleanly, having been constructed in 1875, with sheds for sheep

and cattle. The most notable improvement will be the new harbor designed last year by Sir John Hawkshaw; this is included in the estimates approved by the Imperial Government for 5 new harbors to be made within 10 years, representing a total cost of 3 millions stg. Among private enterprises is worthy of notice Silva Barroca's great cotton factory, which has 60 hands and steam-power of 30 horse. Messrs. Keller and Co. are putting up a sugar-factory which will grind 120 tons of sugar cane daily. Pernambuco has over 90,000 inhabitants.

There is a steam tramway in traffic since August 1874, which is now being prolonged to Afogados and the Magdalena cotton-mill. Travellers are usually filled with admiration for the luxuriant vegetation and picturesque appearance of the suburbs, but they must beware of going about much on foot, which might induce fever. The city is situated between two rivers, Beberibe and Capibaribe, and the sea, giving it some resemblance to Venice. Splendid buildings are seen in the Boa Vista quarter, and the stranger ought to visit the college, lyceum, cathedral, hospitals, gas-works, theatre &c., as also the suburb of Olinda, where the rich merchants have charming country-houses. There is a fine panoramic view from this point.

There are 3 forts defending the city. The cemetery is the finest in Brazil.

The population of the Province is 841,539, including 89,028 slaves. The provincial revenue is £270,000 per annum, of which just one-fifth is expended in public schools. There was a decline in trade during 1874 as compared with the previous year, caused by the crisis.

There is a line of Pernambucan coasting steamers which ply to Maceio and Sergipe southwards, and Parahyba and other northern ports, twice a month, as also to the penal settlement of Fernando Noronha island in the Atlantic; the Company have 7 steamers, from 200 to 400 tons. The little port of Goyanna is being improved by the construction of a canal 60 feet wide, 12 deep, and a mile long. Land grants of 20 acres are given to Indians who offer to cultivate same. San Miguel is a settlement of 36 Indian families.

The city is made up of 3 distinct quarters, connected by bridges. The first is Recife, near the port, with narrow streets and old houses, comprising the richest and most commercial quarter, besides the Custom-house, arsenal and observatory. Secondly, San Antonio, anciently called Maurice-town, after Maurice of Nassau, who evacuated this place in 1654, leaving 464 well built houses; this quarter connects with Recife by a great iron bridge

under which flow the two rivers Beberibe and Capibaribe. San Antonio comprises the Government-house, military school, theatre, prison, 2 churches, and some fine streets, as also the railway-terminus, Thirdly Boa Vista, the newest part of Pernambuco, extending towards Olinda. The whole city counts more than 7,000 houses, 17 churches, 1 Protestant chapel, numerous Banks, public fountains, squares, literary institutions and printing-offices.

Olinda stands 3 miles N. of the city. It was burnt by the Dutch in 1631. Besides the old Jesuit college there is a very fine cathedral; the convents of Benedictines and Carmelite friars are now in ruins. At Forno de Cal is shewn the spot where the first sugar-factory was established by Albuquerque 400 years ago. About 20 miles from Pernambuco is the village of Iguarrassu, where the first Portuguese settlers of this province established themselves.

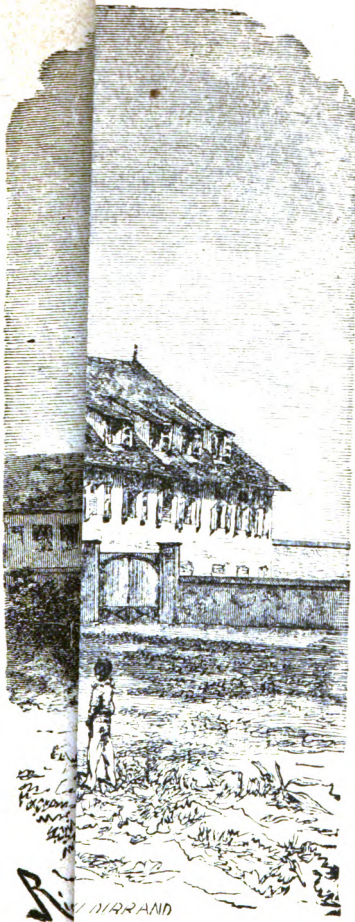
Goyana, 50 miles from Pernambuco, is sometimes called San Pedro; it is a large, populous and ancient city, centre of a great sugar industry.

Bio Formoso, 70 miles south of Pernambuco, is another place of active trade in sugar, and has a good port.

XIX.

RIO GRANDE DO NORTE.

Lies north of Parahyba and east of Ceará, having the Atlantic for boundary on its two other sides. Area 34,840 square miles, population 233,979, including 5,000 slaves. The coast-line is nearly 150 miles, almost inaccessible from dangerous shoals; there is not a single port suitable for seagoing vessels. Near the coast are sandy plains, but in the interior the country becomes mountainous, giving rise to numerous small rivers, some of which are affluents of the Parahyba. When the first discoverers landed here they mistook the Portengi



R. V. HARRAND



for the Rio Grande, and hence the name of the province. Salt is obtained in large quantities from salt lakes. Gold, silver and iron are found in some places; also limestone, sandstone and granite. The soil is barren, unless on the banks of rivers. The principal crop is cotton, besides which the inhabitants raise mandioca, sugar, rice, and maize. Large herds of cattle pasture on extensive plains. Various kinds of dyes, balsams and gums are extracted from the forest timber. The export trade, in coasting craft, consists of cotton, hides, sugar, salt-fish and drugs.

The local Legislature, consisting of 20 members, meets at Natal, the capital, situate a few miles south of Cape San Roque, the easternmost point of South America. The fortress of Reis Magos has a light visible 13 miles. The provincial revenue is only £110,000, and of this sum £19,000 is spent in supporting 152 schools with 6611 pupils. There are 3 public libraries. The province sends two Senators and five Deputies to the Imperial Parliament at Rio Janeyro.

This territory was first settled by Albuquerque, who expelled some French buccaneers and founded Natal city on Xmas Day 1599. In the following century it fell into the hands of the Dutch, and subsequently became an appanage of Pernambuco till formed into a separate province in 1817. The

climate is dry and generally healthy, but subject to the same droughts as Ceará. There are over 2,000 cattle-farms, which export 60,000 head yearly to the neighboring provinces, also 200 sugar factories, yielding 7,000 tons sugar. Cochineal is found in many districts.

Natal is the centre of trade, which exceeds £100,000 per annum, exports being ahead of imports. It is 3 miles from the coast, near the mouth of the Potengi or Rio Grande; there are four churches, palace, assembly, lyceum, treasury and other buildings, besides the ruined Fort of the Magi.

Mipibu and Imperatriz are two villages in the midst of agricultural districts; Macao is a small ort where 100 coasters annually come to load salt,

XX.

PIAUHY.

Lies west of Pernambuco and south of Ceará, being 3 times the extent of either, and very thinly inhabited. Area 182,960 square miles, population 202,222, including 20,000 slaves. The surface is generally flat, except some small hill-ranges, that rise to mountains on the southern border. Large numbers of horses and horned cattle are reared. The climate is too hot for Europeans. Iron, alumstone, copperas and saltpetre are the mineral pro-

ducts. The natives cultivate some sugar, rice, cotton, tobacco and mandioca. Palms abound, of various species.

Theresina, the capital, is the residence of the President and Legislature. It is called after the Empress, having been founded in 1852, and counting over 6,000 inhabitants. It stands on the eastern bank of the Parnahiba, about 200 miles from its mouth. This river is the boundary between Piahy and Maranhão. The provincial revenue is £110,000, of which £20,000 is spent in supporting 73 schools, attended by 2,026 children. There is one free library, also a lyceum for superior instruction, and an Industrial Institute where youths can learn the trades of tailor, shoemaker, tinsmith, cabinet-maker, and the arts of printing and music. There are 3 newspapers.

Parnahyba is a port 4 leagues from the mouth of that river on the Atlantic ; a tramway of 5 miles is in construction to the mouth of the Iguarassu. A light-house was erected in 1873 at Pedra do Sal ; it is a fixed light visible 12 miles. The city of Parnahyba is of more importance than Theresina, being the centre of trade and much more populous, but its growth is very much checked by the prevalence of intermittent fevers. The river Parnahyba is navigable for light-draught steamers over 1,000 miles, debouching into the Atlantic by 6 mouths ; it rises

in the mountains of Goyaz, its total course being about 1500 miles.

This province sends a Senator and 3 Deputies to the Imperial Legislature at Rio Janeyro. The local Chamber has 24 representatives.

Piauhý was at first subject to Bahia, afterwards to Maranhã, until formed into a separate province in 1811 under Governor Albuquerque. The seat of Government was at Oeiras until 1852; this place was originally known as Mocha. The first explorers were Affonso and Jorge, in 1674, who founded 50 cattle-farms, and 24 of these still belong to the imperial Government as state-property. Oeiras is rapidly declining, being surrounded by a dense forest and quite isolated from the rest of the world.

This province is the most unhealthy in Brazil, and deadly to Europeans, the climate being hot and damp, pregnant with fever. The rainy season is from October to April, accompanied with dreadful thunderstorms. The annual export of cattle to adjacent provinces averages 50,000 cows and 8,000 horses. For 300 miles from the seaboard the country is an undulating plain covered with grass or cocoa-palms; further inland there are several ranges of hills, that of Dous Irmaos separating this province from Pernambuco.

The trade-returns of Parnahyba hardly exceed £33,000 per annum, between imports and exports. A line of railway is projected from Maranhão to Theresina; also a narrow-gauge line from Oeiras to the Rio Parnahyba, 90 miles, to cost £770,000. A third line from Theresina to San José, 42 miles, has been already surveyed, to cost £350,000.

XXI.

C E A R A

This noble territory of woods, mountains and savannahs has an area of 63,200 square miles, and is washed on two sides by the Atlantic; its western limit is the river Parnahyba, and on the south it touches the provinces of Piahy, Pernambuco, Parahyba and Rio Grande do Norte. Population 721,686, of whom 30,000 are slaves. At times there are fearful droughts, from which the cattle perish in large numbers, and even the inhabitants sometimes greatly suffer. Dykes have been erected in certain places to form reservoirs for the mountain streams; that made by Mendez Brothers 15 years

ago was 500 feet long, 40 high, of stone and lime, to retain the waters of a valley 3 miles long and a mile wide. This reservoir suffices to irrigate 300 square miles of land, chiefly devoted to coffee, cotton and sugar-planting. It is also proposed to canalize the Rio Jaguaribe, which traverses the most fertile districts.

Minerals abound, such as gold, silver, iron, copper, lead, saltpetre and crystal. The botanical kingdom is no less rich, all kinds of balsams, gums and timber of many useful descriptions being found in the forests. Travellers will particularly admire the Carnahuba or tallow-tree, the leaves of which are covered with a species of wax or tallow that serves the natives to make candles: the leaves are also used for thatch-roofs, the timber serves for building, the fruit is eaten for cabbage, and the roots have the same quality as sarsaparilla; this most useful tree is of the palm family, stands drought better than any others, and has been known to attain a height of 70 feet in five years.

A railway is in construction from Ceara to Batarité, 25 miles, with a guarantee from the provincial Government. Three other lines are projected, with similar guarantee, viz. from Acaracu to Ipu, 140 miles; from Itapipora to Mundahu, 30 miles; and from Ceara to Soure 15 miles.

Ceara city, sometimes called Fortaleza, is a new

and well-built town of 25,000 inhabitants, with fine public buildings, especially the cathedral. Government-house, barrack, gas-works, custom-house, lyceum, Bolsa and hospitals. As the port is by no means secure it is less frequented than those of Acaracú and Aracati. Being situated close to the Equator the climate is too hot for Europeans. Sir John Hawkshaw's plans for the new port of Ceara have been adopted; the works to be completed by 1882. The chief exports are cotton, hides and dye-woods, besides sugar, tobacco, pine-apples, and small quantities of amethysts and gold. The local Legislature consists of 32 members. The province was formed into a diocese in 1854. The city stands 7 miles from the shore; the streets are well paved and spacious, counting about 2,500 houses and some handsome squares.

Aracati, about 90 miles south of Ceará, stands 10 miles inland from the mouth of the Jaguaribe. It has 5 churches and a fine town-hall. It exports over a million lbs. cotton and 2,000 hides annually; its trade would be more considerable but for the bar, which prevents vessels approaching if they draw over 8 feet. The population hardly exceeds 5,000, and the town often suffers severe inundations.

Granja, the best port in the province, is a few

miles from the coast, up the river Camocim ; here the Pernambuco coasting steamers touch.

The local Legislature, President, Bishop and other authorities reside at Ceará. The province sends 4 Senators and 8 Deputies to the Imperial Parliament. The provincial revenue is £270,000, of which £67,000 goes to maintain 245 schools, attended by 10,589 children. There is a revolving light at Mucaripe, visible 12 miles. There are 3 newspapers at Ceará, the *Pedro Segundo* being 37 years old.

This territory was first colonized by Martin Soares Moreno in 1611, when he laid the foundations of Villa Velha, afterwards taken by the Dutch. Ceará was nearly 2 centuries a dependency of Pernambuco, till formed into a distinct province in 1799. The climate is dry and temperate near the sea-board, but hot, damp and unhealthy in the woods of the interior. The rainy season is from January to May. The principal mountain range is Ibiapaba, reaching a height of 3,000 feet.

Gold is found at Baturité, Ipú and Lavras ; silver, iron, coal, marble and precious stones in many places. The forests abound in cedar, rose-wood, quinine, ipecacuanha &c. The province exports over 100,000 horned cattle and 15,000 horses, besides cheese, candles, straw-hats, india-rubber, coffee, sugar &c. by means of steamers and coast-

ing craft to Pará and other ports. The total trade-returns exceed £550,000 sterling, of which two-thirds exports.

Izô is a central town on Rio Salgado. 50 leagues from Aracaty ; there are 4 churches. The heat in summer is insupportable.

Baturité, 16 leagues inland from Ceará, is the centre of an agricultural department which exports annually 4,000 tons of coffee and sugar. There is another very productive district called Maranguape, 12 miles from Ceará.

XXII.

MARANHAM.

This vast and fertile province lies between Pará and Ceará with a seaboard of nearly 400 miles, and derives its name from the River Marauham, better known as the Tocantins, which forms the boundary with the inland province of Goyaz. This country was the home of the warlike Tupinambas, some traces of whom still survive in the woods that fringe the Parnahyba. Some of these tribes are almost as fair as Europeans, owing to crossing of race with French and Dutch adventurers who made repeated efforts to establish themselves here. Lakes, forests, mountains and rivers diversify the

surface. The climate is said to be delightful, except near the swamps of the Parnahyba ; it is generally humid. The thunder-storms in autumn are the grandest on earth, and accompanied by terrific rains. The population amounts to 359,040, including 45,121 slaves. The island of Maranhão contains about 30,000 souls.

Scientific explorations made by Mr. Gunther for an English Company resulted in the discovery of gold, so rich that samples sent to England were said to surpass the best Californian, giving over £5,000 worth of precious metal for every ton of ore. These gold-fields lie at Montes Aureos, between the Gurupy and Maracassume and the valley of Good Hope ; the first-named river is navigable all the year round. In other parts are found iron, copper, coal, marble, lime-stone and rock-crystal. There are likewise deposits of nitrate of potash, sulphate of soda, chloride of iodine and sulphate of lime. Between the Mearim and Grajehu are a number of caverns which abound in vampires, and these cause much loss of cattle by sucking their blood when asleep. Nevertheless the raising of cattle is the chief occupation, the annual slaughter exceeding 600,000 head, as dried beef is largely exported to Rio Janeiro. Agriculture cannot make much progress owing to the thinness of population, the want of roads or conveyances, and the absence

of proper machinery or implements. Droughts are, moreover, at times very destructive.

The first settlers were a band of Frenchmen under Ravardieré, who was expelled by Albuquerque in 1614. Maranham was separated from Pará in 1774. President Bruce was its first ruler after the Independence.

San Luis the capital, stands on an island of the same name; it is a well-built town of 3,000 houses with a population of 30,000. Some of the buildings are real palaces, and as the steamer enters the spacious bay a pleasing sight greets the traveller. The Governor's palace on the top of the hill is the most prominent object, from which the eye wanders over the city, and rests on the fort that protects the bay, while the delightful suburbs watered by the Anil and Bacanga are clad in perpetual verdure, and the Alcantara gardens stand out boldly in the clear blue sky. There are 12 churches, several convents, a Jesuit college, town-hall, hospitals, arsenal, Chamber of commerce, museum, library, abattoir, 7 printing-offices and 4 public fountains, which give an imposing look to the city. The inhabitants are most courteous to strangers and passionately devoted to the fine arts, especially music. The climate, however, is hardly suited for Europeans. New docks, magazines and light-houses have recently been constructed. The Imperial

Government has adopted Sir John Hawkshaw's plans regarding Maranhão, this being one of the 5 ports on which a sum of £3,200,000 is being expended in improvements. Over 100 sea-going vessels arrive yearly, besides a large number of coast-traders, and the aggregate value of imports and exports is over one million sterling, the trade with Great Britain being equal to all other countries collectively. The principal products are rice, cotton and sugar; the other articles of export are timber, drugs, horned cattle, and a kind of butter made of tortoise eggs, called Manteiga de Tartaruga. São Luís is the entrepot of 6 provinces. The island on which it is built is 20 miles long, and separated by the Mosquito river from the mainland.

Four railways are projected by the Provincial Legislature ;

San Luís to Caxias.....	212 miles
Caxias to Theresina.....	80 “
Caxias to San José.....	94 “
Barra-do-Corda to Chapada	82 “

São Luís is lit with gas and has several lines of tramway, in all 10 miles, belonging to the Maranhão Tramway Co., capital £90,000 with provincial guarantee: the branch to Cutim will join on the proposed Itabirú Railway. The Maranhão Bank was founded in 1857 with a capital of £110,000 in 10,000 shares, and a right of emission on condition

of burning annually 6 per cent of its notes; its capital was raised in 1871 to £340,000 sterling. The Commercial Bank of Maranhão, founded in 1869 has a capital of £170,000 in 15,000 shares. The revenue of the province is £1,330,000, of which £215,000 is devoted to support 167 schools attended by 6,033 children. This province has 5 light-houses, at Barra, Alcantara, Itacolônia, Santa Anna and San Marcos.

There are 2 lines of steamers which keep up constant traffic with Pará and Ceará, besides another line of lighter draught navigating the Tury, Pindaré and Itapecuru rivers.

Carolina is an old town on the Tocantins, which can make no progress, owing to the cataracts that impede navigation. The public buildings comprise 2 churches, 2 schools, town-hall and law-courts.

Alcantara, a well-built town in front of the capital, from which it is distant about 15 miles, has a good port, but trifling commerce. Between here and San Bento is grown the best cotton. Vianna is another place of rising importance.

Caxias, second city in the province, stands on the Itapecuru, 300 miles from San Luis de Maranhão; it is the centre of a great trade with the inner provinces, and connected by steamer with the capital.

XXIII.

PARÁ AND THE AMAZON.

Pará, at the mouth of the Amazon, is the great northern emporium of Brazilian trade, and has now entirely recovered from the fearful massacres committed by the Indians in 1834-35. The Amazon line of steamers trades from here to Tabatinga, 1800 miles, on the Peruvian frontier, the company having been originally established by Viscount Maua, who transferred it into English hands.

The Amazon, sometimes called the Maranhão or the Orellana, was first navigated by a Spanish ad-

venturer of the last name in 1542. He was one of Pizarro's officers who crossed the Andes from Peru, and with fifty followers began the descent of the tributary Napo in search of gold and spices, then floated into the Amazon, and after dreadful privations and numberless encounters with Indians, in which half his little band perished, safely reached the place where Pará now stands, having navigated 6,000 miles in 239 days. Orellana called the country Amazonas because in one place he fought an Indian army led on by 12 women of white complexion, although this is regarded as a fable; two years later he led an expedition of 400 men from Spain to conquer the country, but perished with most of his followers. Maranham, the name of the great island in the mouth of the river, is supposed to be called after one of the survivors of this expedition. The Amazon in its winding course of nearly 4,000 miles receives 200 tributary rivers, some of them from 1,000 to 1,800 miles long; between the main stream and tributaries there are 22,000 miles of river-navigation suitable for steamers. The Government mail-steamers of the Amazon, Tocantins, Negro and Madeira carry on a service 6200 miles long. At its mouth the Amazon is one hundred miles across, and even far up the river it is so wide that the traveller almost thinks himself at sea; wooded is

lands alone break the monotony of the voyage. The heat is overpowering, the vegetation wonderful; thick forests, trodden only by Indians, cover the banks on either side, and are infested with jaguars and boa-constrictors, while the river-side swarms with ferocious alligators. Some of the islands are 30 miles long, formed apparently by the debris of forests carried down by the flood. In times of high water the rise of the Amazon often exceeds 50 feet. Sailing vessels navigate this river almost as easily as if on sea, and regularly make the run from Para to Manaos, 1250 miles, in 25 days. The Indians in some places are cannibals; in 1874, when Baron Tefte was marking out the frontier with Peru, a clergyman and his servant were surprised asleep near the river-bank, killed and eaten. An English naval officer named Maw safely descended the Amazon in 1828, and since then numerous travellers, including Wallace, Biard, Agassiz, Keller &c. have written interesting works upon this immense watershed. Agassiz published his scientific researches in 1872, and Keller particularly describes the great tributary Madeira, which it was proposed in 1874 to connect by railway with the Mamorè in Bolivia, thus opening up the trade of the latter country by the Amazon. The Madeira and tributaries are navigable for 4200 miles above the falls, through a

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vast portion of Matto Grosso and Bolivia. It is feared the Mamoré and Madeira railway will not be carried out, owing to the failure of the Bolivian Government. Another important tributary is the Tapajos, which rises within a hundred miles of the head-waters of the Paraguay. Several attempts have been made by adventurous travellers to ascend the Parana and Paraguay rivers to the highest point, carry a canoe through the forest and float down the Tapajos to the Amazon and the ocean. Captain Bossi tried in 1863, but his Indians deserted before he had got fifty miles through the woods near Cuyabá. Nevertheless the journey is quite feasible to a man who sets his life at little value.

As soon as the Oroya Railway over the Peruvian Andes, now nearly finished, connects the head-waters of the Amazon with the Pacific seaboard at Callao, it will greatly develop the steam-trade of the Amazon. Passengers will be able to leave Pará by steamer, ascend the river in 25 days, take the Oroya Railway, and proceed to Lima or Callao. The Amazon in its first 300 miles through the Andes country is unnavigable, the falls of Manseriche extending nearly 25 miles, and the stream finally emerging through a defile 150' yards wide, to debouch into the valley which marks its course to the ocean. So immense is the volume of water that

the current of the Amazon is felt by vessels 500 miles out at sea. Several persons have disputed the highest source of the Amazon, but Southey places it at a lake near Arequipa.

The Province of Pará is traversed by the Equator. The first settlement was made here in 1616 by Francisco Caldeira, who established a factory where the city of Belem now stands. An Irishman named James Purcel tried to make a settlement here in 1626, and two subsequent attempts were made by Englishmen (1630-1632), but all were alike defeated by the Portuguese Governors.

This province is about 900 miles from north to south, and 800 from east to west, being 4 times as large as the United Kingdom. The population amounts to 259,821 souls, of whom 27,199 are slaves. The soil is extremely rich, and notwithstanding the heat of the climate some colonies appear to be doing well; there are 270 French Canadians on the Braganza route, where the Government has marked out 300,000 acres for colonial grants. The land gives readily 3 crops a year. The surrounding forests are rich in timber of various descriptions. The climate is hot, moist and rainy; in summer it rains every afternoon, and in winter not so regularly. Fever is common in swampy districts. There is a fish called Piracará,

eating which produces a tendency to Elephantiasis; nevertheless it is much eaten by negroes.

The great island of Marajo at the mouth of the Amazon is 180 miles long by 120 wide, and contains two large cattle-farms that formerly belonged to friars and are now used by the State, since 1794. They are valued at £100,000 sterling. Dr. Charles Brown visited the island in 1875, when cattle-disease was raging, but he reported it of a mild character, proceeding from the swampy nature of the land. There are 250,000 horned cattle in the island.

The original inhabitants were Tupinambas, skilful navigators, whom Father Vieyra converted and protected from the Portuguese slave-hunters. The Pará rebels of 1835 held out here for a long time. The present inhabitants, 20,000 in number, belong to the Tapuya tribe, attending chiefly to horned cattle; the soil is very rich and produces much rice. This magnificent island might easily be made a garden of Paradise; fanned by the breezes from the sea and the Amazon, the island enjoys an agreeable and salubrious climate. In 1830 some adventurers bought the right to kill 200,000 horses at a silver dollar per head, and soon converted the island into a vast slaughter-house, shipping the hides in thousands and leaving the carcasses to putrefy and spread infection around.

The inhabitants fled, but not before numbers of them had succumbed to putrid fevers.

Montorte, capital of the island, stands on a hill overlooking the Bay of Marajo, 50 miles north of Para. The citizens are Indians. Ten leagues lower is Montsaraz village, whose inhabitants live by hunting and fishing. On the north side is a new town called Chaves or Equador, on the site of a Portuguese arsenal and settlement of the 17th century.

There is a great lake at Villa Franca, near Santarem, about 60 miles long, the islands whereof abound in monstrous turtles and in birds of the richest plumage, whose feathers form a branch of commerce. Besides the Amazon and tributaries this province possesses two notable rivers, the Tocantins and Araguaya; both the same length, say 1800 miles, and receiving forty or fifty tributaries.

Foremost among local industries is the collection of india-rubber, which forms the chief article of exportation. The Seringueros make incisions in the tree and catch the gum in clay vessels; the season begins in August, and a Seringuero will ordinarily turn out from 10 to 18 lbs. of rubber, duly smoked and prepared, each day. A German named Strauss and the late French Consul, Chaton, tried to improve the system of working, but failed,

although the English and American exporters preferred the new kind of rubber to what was smoked. This province produces cocoa, the trees growing as high as 10 feet, and also licorice, sarsaparilla, and other medicinal plants. Its tobacco is the best in Brazil.

Pará, otherwise called Belem, is a port of call for the North American and Brazilian line of steamers. It is a handsome, well-built city of 30,000 inhabitants, including several Europeans and Americans. Trade-returns shew that the imports reach £1,300,000, and the exports £1,200,000 yearly. Pará is the head-quarters of the Amazon Steamboat Co., which has 20 steamers in constant traffic, each averaging 120 horse-power and 220 tons burthen; they make 288 trips yearly, each trip averaging 900 miles; thus these steamers travels 226,400 miles per annum, on the Amazon and lesser rivers. The valley of the Tocantins is said to enjoy a mild climate and offer room for 3 million settlers. For more than 100 miles the River Tocantins is infested with savage Indians; there are 20,000 of the Carajá tribes, who go perfectly naked. Efforts are made to civilize them, and several Capuchin missions have recently been founded among them.

Statistics for 1875 shew that Pará exported during the year 6,539 tons of india-rubber, worth

£880,000 sterling. The total exports of the province reached £1,200,000, of which one-half went to England, and one quarter to United States. Public instruction is advancing; there are 259 schools, frequented by 10,576 children, two thirds being boys. There is a good Botanical Garden.

Para presents a flattering view at first sight, but is one of the dirtiest cities in South America, and hence its death-rate is very high. It is 25 miles from the Atlantic, 104 miles south of the Equator, and 2,150 north of Rio Janeyro. Its port is constantly crowded with shipping, and its telegraphic communication extends to West Indies and Europe. The principal buildings are the Government House, Chambers, Cathedral, Bishop's palace and seminary, lyceum, arsenal, 2 banks, 3 libraries, hospital, and several schools. Around the city are plantations of sugar, rice, mandioca and cereals. There is a large number of mills, factories, distilleries, kilns, soap-factories &c. all moved by steam-power.

Braganza, situate midway between Para and the Atlantic, is a flourishing town of 18,000 souls. It was founded by Pedro Texeira in 1616, after a sanguinary battle with the Tupinambas. In 1753 it received its present name, in honor of the royal house of Portugal. The climate is healthy and the

soil extremely fertile. A colony of 270 French Canadians has recently been established here.

Para was the scene of two revolutions. The first was suppressed by Admiral Grentell in 1827, when the ring-leaders were shot, and 253 prisoners locked up in a black-hole, only 4 of whom were found alive next day. The second occurred in 1835, when the palace-guard murdered the President, the military Commander and the Port-Captain, besides 20 European residents; after 6 months the rebels were dislodged, and fled to the woods, where being joined by numbers of Indians they came back, re-took the city, killed the Governor and made a massacre of the whites. English and French marines were landed, but were unable to hold their ground, and those families that escaped the massacre took refuge aboard vessels in port. Houses and plantations were burnt, and in many districts not a white person was left alive. General Andrea at last put down the revolution, but the grass grew in the streets, and Para gave no signs of returning life till 1848, its great impulse dating from the commencement of the Amazon steamers in 1852.

The department of Braganza contains about 20,000 souls, extending along the Atlantic to the frontier of Maranhão. The soil is admirably suited for agriculture, wherever the primeval forests have been cleared. The city of Braganza stands

on the site of an old Jesuit mission. After the expulsion of the Dutch the place was made a city by the Duke of Braganza. It stands 100 miles N.E. of Para, has some public buildings and 10,000 inhabitants, who are reputed the best swimmers in Brazil, devoting themselves rather to fishing than to agriculture. The tide rises 10 feet, thus giving access to vessels by means of the river Caite. There is an old Indian village called Vizeo at the mouth of the Gurupy; the inhabitants live by the chase. Another Indian hamlet called Ourem is on the river Guama, 80 miles from Para; it is falling into ruins.

Cameta department is crossed by the Tocantins, and for the most part a swampy country, whose inhabitants are industrious in trade, agriculture and navigation, exporting particularly a large quantity of cocoa. Cameta city, 30,000 pop., is an important centre of trade on the Tocantins, where all vessels touch going to or from Goyaz province, and carries on an export of indian-rubber. There are various churches and other public buildings, especially a fine town-hall built by Pres. Coelho. Texeira's expedition in 1837 left here and proceeded up the Amazon to Peru, returning the following year. In the war of 1835 this city remained loyal to the Government. Steamers ply between this place and Para.

Ascending the Tocantins 40 miles we find Bayon, with a mixed population of 8,000 Indians, whites and half-breeds, who raise considerable quantities of rice, cocoa, coffee, cotton and mandioca in the low-lands annually flooded. Melgazo, on Lake Anapu, is a town of 6,000 Indians, who cut and export timber by the river Tagypuru. Portel is a village near the same lake, 100 miles SW. of Para; the inhabitants are famous hunters, and have a public school. About 35 miles E. of Melgazo is the town of Oyeras, a settlement of Comboca Indians, 4,500 pop.; the men hunt and fish, the women raise maize and vegetables.

Macapa department, on the north bank of the Amazon, runs along the river Jamunda to the mountains of Guiana, comprising a country of marvellous fertility and scanty population. The forests abound in magnificent timber, especially the macaco, guatiara and other valuable woods for upholstery. The fortified city of Macapa, only 3 min. N. of the Equator, is a large, well-built town on the left or northern bank of the Amazon, 150 miles N W. of Para; it has a good port, well situated for commerce; the streets are wide, the houses have tile roofs, and the churches, hospitals and schools give an air of importance; the population consists of 12,000 Indians, whites and creoles, who devote themselves to trade and agri-

culture. The fortress is admirably built, after plans by Vauban, but the encroachments of the Amazon threaten some day its destruction.

Porto-de-Mox and Mazagan are in the department of Macapa. The first is a place of 6,000 inhabitants on the right bank of the Xingu, 13 miles from its mouth and 340 from Para; it is usually a port of call for vessels going up to Goyaz. Mazagan (formerly Santa Ana) is 16 miles from the confluence of the Mutuacá with the Amazon; it derives its name from a village in the Azores whose inhabitants came and settled here. Rice and cotton could be largely produced, but for the unhealthy character of the climate; it is supposed that by draining the swamps into the Amazon the prevalence of fevers might be mitigated.

Gurupá department is south of the Amazon and follows the river Xingu; besides the mainland it includes the large islands of Gurupá, Cupurú and Salvador. India-rubber abounds, as also the Assarucu; the leaves of the latter are so poisonous that they corrupt the rivers and breed malignant fevers, for which reason the Government labors to remove this tree from the vicinity of rivers. The country is very fertile, and cocoa and sarsaparilla are largely raised. The smiling city of Curupa was founded by the Tupinambas near the confluence of the Xingu and Amazon, and here the Portuguese

erected their first fortress in the Amazon valley, in 1623, to close the river against English, Dutch and French buccaneers. When the place afterwards fell into the hands of the Dutch they improved the fortifications, which are now in ruins. The hospital, built by the King of Portugal in 1693, the church, prison and custom-house. make up the public buildings; pop. 5,000. The people are industrious, and make some cotton fabrics.

Santarem is a department that embraces territory on both sides of the Amazon; the northern portion lies between the rivers Trombetas and Jaramunda; the southern between the Tapajos and Tupinambarana. The soil is of exuberant fertility, in great part covered with forests, and producing india-rubber, vanilla and a thousand other valuable articles.

The city of Santarem is one of the finest in Amazonia, distant 474 miles from Pará, on the right bank of the Tapajos where it joins the Amazon. When the Jesuits founded a mission here they taught the Tapajos Indians how to cultivate cocoa. The traveller sees still the ruins of a fort built by the Dutch. The present city is remarkable for its fine edifices, noble cathedral, hospital, town-hall and public fountain. Messrs. Pinto have a sugar-factory which turns out 300 tons of sugar and 200 brls. of rum annually. The population com-

prises 7,000 Indians, whites and half-breeds. The exports include 100,000 tons of salt fish (pirarucu) and 400 tons of cocoa, besides medicinal drugs, especially Mururè.

Alemquer is a village of industrious agriculturists, 50 miles N. of Santarem, on the borders of Lake Surubiu; it produces excellent cocoa, rice and tobacco, besides raising fat cattle. Not far off, in an island of the Gurupatuba, is the old Jesuit mission of Monte Alegre, with 4,000 inhabitants mostly wood-cutters, and a Government saw-mill. The lumber is floated down on rafts.

About 15 miles SW. of Santarem is Villa-Franca, with 4,000 Camaru Indians, who raise much cocoa. Higher up the Tapajos is Pinhel, whose inhabitants live mostly by hunting and fishing.

Obidos is an important, well-built town, commanding the confluence of the Trombetas and Amazon, 30 miles W. of Alemquer and nearly 600 miles from Para. There is a superb and extensive view from the heights, the Amazon flowing by in one broad stream of 2,000 yards wide, unbroken by islands. Although here 1,000 miles from the Ocean the effect of the tide is visible. The town carries on a brisk trade, several Europeans having settled here; population 4,000. The suburbs form a zone of cocoa and cotton plantations. The annual exports reach 600 tons of cocoa and 2,000 tons of salt

fish. Saw-mills are worked in the forests, which abound in the richest kinds of cabinet woods. About 40 miles E. of Obidos, and 20 from the mouth of the Janunda, is the village of Faro, surrounded by cocoa and cotton fields; it is famous for the exportation of turtle-butter.

XXIV.

UPPER AMAZON.

So many travellers have described the Amazon that most of this immense watershed is comparatively well-known. The steamboats, however, go no higher than Tabatinga, the frontier between Brazil and Peru, about half-way from the mouth (at Pará) to the Andes. The latest explorer, Paul Marcoy, only descended from the confluence of the Ucayale, but M. Belmar, in 1860, explored the Amazon and most of its affluents, which he describes very minutely.

Above Tabatinga it is generally known as the Maranhão, but below this point it receives three great tributaries; the Javary, which forms the boundary with Ecuador; the Japurá, and Rio Negro; after which it becomes the Amazon proper, and pours onward in one majestic flood to the ocean. Several of the minor affluents traverse districts more or less auriferous, as attested by the sands which they bring down in tribute to the king of rivers. The width of the Amazon varies from three to five miles, being continually maintained by such auxiliaries as the Madeira, Tapajós, Xingu etc; the first drains a great portion of Bolivia, the second comes from the Sierras of Matto Grosso; the third is fed by the snows and streams of Goyaz.

There are two mouths of the Amazon: the southern, called Tocantins or Guajará, is six miles wide; the northern, from Marajo island to Cape Norte is 186 nautical miles across, gradually narrowing to 6 miles. At the tides of new and full moon there occurs 'the Pororoca' or battle between the ocean and the Amazon, when the waters leap to a height of 15 feet, with a noise that is heard for several leagues, and such violence that the effect is clearly perceptible as high as Trombetas, over 900 miles distant.

The melting of snows in the Andes causes the Amazon to rise in the end of October, the period

of lowest water being in June. Navigation is at all times easy for steamboats, but the immensity of the river is wearisome to the traveller, unless when the coast varies in scenery. In some places there are endless prairies, in others dense forests or swamps ; at rare intervals you see a cluster of Indian huts, where fishermen are mending their nets, or the women dancing to the sounds of music.

Although 150 large rivers fall into the Amazon there are only 11 which call for particular notice.

1. The Javary, which rises in the Peruvian Andes and forms for 300 miles the boundary between Brazil and Ecuador, as agreed in 1781 by the Kings of Spain and Portugal. The inhabitants are very savage, and it was proposed in June 1875 for Peru to cede this territory to the Mormons, in order to facilitate trade between the Andes and the Amazon, but public opinion in Lima energetically opposed the project.

2. The Purus, which rises also in the Andes, near the holy city of the Sun (Cuzco), former capital of the Incas. The inhabitants are not so savage as those of the Javary ; they produce a large quantity of Turtle-butter made from the eggs of that animal, which are found in millions. Children of these tribes are quite fair till 15 years, when their skin suddenly turns dark, but without affecting their health.

3. The *Madeira*, rising near La Paz in Bolivia, separates that Republic from Matto Grosso, and after a course of 1500 miles falls into the Amazon near the island of Tupinambarana, which is 160 miles long. The first explorer seems to have been Francisco Palheta, who called it Madera on account of its thick forests; the Indian name was Cayary. There are 12 cataracts, which prevent navigation above 600 miles from the Amazon. About 25,000 Tapuya Indians collect india-rubber from the Borracha tree. It takes 46 days for their canoes to descend from Matto Grosso to Pará, viz :

	Days
	—
Matto Grosso to Mamore confluence.....	20
Mamore to the Amazon.....	16
Down the Amazon to Pará.....	10
	—
	46
	—

The return voyage takes from 100 to 150 days, according to the season. The canoes average 6 feet in width, carrying easily 30 tons of merchandise. At each cataract they have to be unloaded and dragged along the banks, sometimes for 600 yards. Col. Church's proposed railway of *Madeira* and *Mamore* would have obviated the falls.

4. The *Tapajos* is formed of two streams, the

Arinos and Jurueña, which have their origin in the mountains of Matto Grosso. It was first explored in 1746 by Juan de Azevedo, and has a course of 900 miles till it falls into the Amazon at Santarem. The country it traverses is not so fertile as that of the Madeira, but it is easier navigated, having only two cataracts. There are sandy tracts, relieved at intervals by mimosa, taquari and other kinds of vegetation. The Arinos shews numerous traces of gold. The Tapajos promises some day an easy outlet for trade from Cuyabá, capital of Matto Grosso, to the Amazon.

5. The Xingu has been insufficiently explored, but seems to rise in the Sierra between Matto Grosso and Goyaz, running 900 miles in almost a straight line, through the country of the Boroto, Guiapy and other Indian tribes. The Missionaries report the banks teeming with fertility, and very healthy; there are two or three cataracts.

6. The Tocantins, formed of streams from the Goyaz cordillera, has the remarkable cataract of Tabocas. The Indians are uncivilized along its banks, but of a peaceable disposition, and collect a considerable quantity of india-rubber. Near the town of Cameta the river Tocantins reaches six miles in width; it is not so deep as either the Madeira or Tapajos. Travellers may halt at the villages of Conde, Bayon, or Pederneira, or ascend in

canoes to San Juan and Port Imperial in the province of Goyaz.

7. The Napo traverses 1,000 miles of Peruvian territory before falling into the Amazon. It was by this river that Pizarro's brother and his companions came from Peru and discovered the Amazon. Gonzalo Pizarro left Quito (1541) with 300 Spaniards and 4,000 Indians; he committed awful atrocities on his march, causing Indian captives to be torn asunder by dogs, in order to infuse terror along his route. After 18 months of sufferings he returned to Peru with a handful of men, all the rest having perished, except Orellana and 50 comrades, who descended the Amazon to the Atlantic, a painful voyage of 500 days.

8. The Hyapura comes from Popayan, New Grenada, and has a course of 900 miles, being navigable about 500. There are 50 Indian tribes on its banks, remains of people who escaped from the savage Spanish conquerors, who sold them for slaves. The lower part is swampy and unhealthy, but the upper fertile and salubrious. In 1750 this river was made the boundary between Brazil and the Spanish possessions. The Muras are a very savage tribe. Besides the village of Maripè there are missions of friars at San Matias and San Juan.

9. The Rio Negro has its rise in the same moun-

tains as the Hyapura, one of its affluents, the Casiquiaré, communicating with the Orinoco. The Indians go in 15 days in their canoes from the Amazon to the Orinoco. The Rio Blanco falls into the Negro, traversing the territory first called El Dorado by the Spanish adventurers; the inhabitants occupy themselves in fishing and making turtle-butter. The Negro is nearly 1,000 miles long, of which 500 are navigable, but going higher we meet a succession of rapids for 200 miles. The first explorer was Major Texeira in 1637. Missionaries have at various times established themselves here.

10. The Jamundá is famous as the river on whose banks Orellana had to fight the female warriors from whom the Amazon derives its name. Modern writers suppose that it was a tribe of beardless Indians whom he mistook for women, but the Indians themselves speak of female tribes of warriors both on this river and the San Francisco.

11. The Trombetas rises not far from the Jamunda; its banks are in some places thickly wooded, but in general deadly pestilential to Europeans, although inhabited by several wandering groups of Indians who live by hunting.

The first six of the above rivers belong to the right or southern bank of the Amazon, the latter five to the left or northern bank.

The Province of Upper Amazon comprises a territory 6 times as large as France, namely all that portion of Amazonia formerly known as San José de Pará, with an area of 1,150,000 square miles and a scanty population of 57,610 souls. It is the largest in extent and least in population of the 20 provinces of Brazil. It is subdivided into four departments, viz.—Manaos, Barcellos, Maues and Solimoes.

Manaos includes all the territory north of the Amazon, between the Yamunda river and the Andes. The city of Manaos, capital of the Province, and residence of the President, Legislature and other chief authorities is a place of 6,000 inhabitants, about 3 leagues above the confluence of the Negro and Amazon, in 3.30 S. Lat., 81 leagues from the mouth of the Jamundá. Here stood the old Portuguese fort of San José, where a depot was established in the 16th century for Indians captured in the woods to be sent down in slave-gangs. A century later it was known as the village of Barra do Rio Negro, where some white traders dwelt along with Baniba, Manao and Boré Indians. In 1836 the Legislature of Pará created it a city, and restored the name of Manaos, from the original Indian settlers. The steam navigation has given it a great impetus. The houses are tasteful and built of brick; the streets and plaza well laid out; the public buildings including a church, Go-

vernment house, town-hall, barrack, Government cotton-mill, besides numerous shops, factories and local industries. The city stands on a hill watered by 3 streams, and the eye wanders pleasantly over prairies, islands and wooded scenery. About one-fourth of the inhabitants are whites, more than 4,000 being Indians and 500 slaves; the Indians are quite civilized, specially addicted to bathing, and cleanly habits, the women remarkable for grace and very stylish in their dress. The town-folk speak Portuguese as well as the Indian dialect. In winter, when the annual inundations take place, the city of Manaos is a scene of balls and festivities. In summer, when the waters have retired, the inhabitants devote themselves to making turtle-butter, catching pirarucú fish, harpooning river-cows, collecting medicinal drugs, hunting, or cultivating patches of coffee, cocoa, cotton or maize. They seldom eat meat more than once a week, generally on Sundays. Viscount Maua has contributed to lower the price of beef by carrying it on his steamers at very low rates. Every Sunday 4 companies of militia, chiefly Indians, go through drill after Mass, in the plaza. Europeans often visit this city, and among recent settlers who accumulated a fortune by persevering industry is an Italian named Antoni, for 30 years the most skilful pilot on the Amazon. Manaos, being 878 miles

from Pará, is half-way to Tabatinga, the terminus of Amazon steam-navigation and frontier-town on the side of Peru. The department of Manaos also includes Sylves, an Indian town of 4,000 inhabitants on Lake Saracá, founded in 1663 by some missionaries, which exports excellent tobacco, as well as cocoa, coffee and india-rubber to Pará; Lake Saracá is famous for strange petrifications. The town of Serpa is on an island at the mouth of the Aniba river, and was likewise founded by friars in 1759; the inhabitants are industrious, and the Amazon steamers call here. An attempt to establish a Chinese colony failed; some of the colonists still work a saw-mill and tile factory.

Barcellos is a department of 10,000 inhabitants, with a town of the same name, on the right bank of Rio Negro, 500 miles above Jamuuda. It is just under the Equator, counts 2,000 Indian inhabitants, and was the residence of the Cacique Camandi, who at his mother's request gave it to the Carmelite friars. In 1758 it was made capital of the department of Rio Negro, of which dignity it was deprived, in favor of Manaos in 1804. The ruins of the Government House and other public offices are surrounded by huts and cabins; three treaties of limits were signed here by Spanish and Portuguese plenipotentiaries. Figuerredo, a poet of much merit, was born here. Barcelos exports

some rice, tobacco, coffee, turtle-butter, river-cow meat and medicinal drugs. The river-cow is an amphibious animal, sometimes 17 feet long and 2½ feet thick, with a head like a cow and a hide like a rhinoceros; the Indians are very dexterous in harpooning it, and the flesh is eaten like beef, fresh, smoked or salted. Turtle-butter is made of turtle eggs, which are found in the sand, in millions, during the months of September and October. The Indians are also very expert in killing boa-constrictors after the latter have had a meal; the boas are 25 feet long and as thick as a 24-pounder piece of artillery; they can seize a bull and strangle him in their embrace, and have often been known to eat two pigs and a goat at one meal, but during the process of digestion it is easy to kill them.

Maues lies between the Tapajos and Madeira, south of the Amazon, and was formerly called Lusea. The town of the same name is on an affluent of the Madeira; it was founded, of Maues Indians, in 1798 by the Viceroy Arcos. The inhabitants are well-disposed, but the place was taken and re-taken in the war of 1838. It possesses a church and school. The exports are cocoa, cotton, tobacco and coffee.

Solimoes department extends from the Javary to the Purus; very little of it has been explored except close to the Amazon banks. Numerous

rivers from the Peruvian Andes traverse it on their way to the Amazon; nevertheless the climate is supposed healthy as this region was formerly inhabited by 60 Indian tribes, mostly very savage, such as the Mura, Juma, Cambeba, and the Maioru cannibals. Teffé is the only centre of population, with 1200 inhabitants, church and school; situate 5 miles above the confluence of the river Teffé with the Amazon, and distant about 350 miles from Manaus, or 1200 from Pará. It was one of the 7 missions founded by F. Samuel Fritz some 250 years ago. Two conferences about limits were held here in the 18th century by the Portuguese and Spanish envoys. The surrounding forests are almost impenetrable. The Achuary, Cocuruna, Solimo, Tauna and other Indian tribes subsist on fish and turtle butter; they collect india-rubber and cultivate small patches of cotton, coffee and tobacco.

The Province of Amazonas possesses inexhaustible wealth of the vegetable kingdom, and is also supposed to be rich in minerals. A Frenchman named Lasalle, claims to have discovered coal in 3 places on the left bank of Lake Sucury, 20 miles from the Trombetas. The Indians are gradually conforming to civilized life; some of them are remarkably athletic, especially the Tapuyas, who earn often two gold dollars a day per man, loading

vessels at Manaus. The military force of the province consists of 3,000 militia, at Forts Obidos and Tabatinga, as well as at Manaus and other places.

The Amazon Navigation Co. was founded by Baron Maua in 1852; the first steamers were built by Messrs. Laird of Birkenhead. The trade returns of 1856 were double those previous to the introduction of steamers, and now the commerce increases in a surprising degree. The steamers from Pará take 38 days to ascend the Amazon, as follows—

	Miles.		Days
Pará to Gurupá.....	269	}	16
Gurupá to Santarem.....	205		
Santarem to Villa Bella..	163		
Villa Bella to Manaus....	241		
	<hr/> 878 <hr/>		
Manaos to Teffé.....	352	}	22
Teffé to Tonantins.....	304		
Tonantins to Tabatinga..	200		
Tabatinga to Nauta.....	288		
Nauta to Yurimanguas....	384		
	<hr/> 1528 <hr/>		

Total 2,406 miles in 38 days.

Two newspapers are published at Manaus.

It is very remarkable that some of the timber

growing along the Amazon is of such specific gravity that if thrown into the water it will sink, while there is a kind of stone so light that it floats down the river, apparently coming from the volcanoes of the Andes, as it is a description of pumice stone.

Among the most valuable woods are; the Copaibeira, from which comes the well-known medicine of Copaiba oil; the Genipa, whose fruit is used for the cure of hernias; the Itanba, rose-wood, bow-wood and other classes for upholstery; and the colossal Massaranduba or Milk-tree which grows to 100 ft. in height and 10 ft. around the trunk. On cutting the bark of the last-named is obtained a white sap used for milk, tea or coffee; it is very nutritive, much used in medicine as an analeptic or for poultices; the sap congeals in 24 hours, still remaining white, and obtains the same elasticity as india-rubber. The Supucarga produces a fruit from whose kernels a valuable preparation is made for remedy of chest disorders. Cedars grow 100 feet high and 18 feet around the trunk, giving admirable timber for building purposes. The Muratinga yields a sap which cures rheumatism or swellings; the Tamaquary an oil which is a specific against scurvy; and the Guayinguba oil is said by the Indian women to have a prolific effect.

XXV.

G O Y A Z.

This is a central province, area 453,040 square miles, being half the size of Matto Grosso and twice as large as France, with a scanty population of 160,395, including 10,000 slaves. The surface is mountainous and intersected by numerous rivers, near which the soil is remarkably fruitful. The chief productions are tobacco, sugar, cotton, timber, and cattle. Goyaz, the capital, where the President and Legislature reside, is a town of 7,000 inhabitants; it was anciently called Villa

Boa, and stands on Rio Vermelho, about 700 miles N.W. of Rio Janeyro. The Capuchins have 4 missions for the conversion of Indians; at San Jose de Jamimbù there is a reduction of Caraja and Chavantes tribes; another of the Chambioá tribe on the Araguaya river at Gorgulho; a third at Rio Somno, and a fourth at Ibiapama.

The city of Goyaz is the residence of a Bishop since 1825 and has 6 churches; the palace of the President, Treasury, Town-hall, Lyceum and Legislative Chamber are also fine buildings. There is a trade in tobacco with Matto Grosso and Rio Janeyro, this being considered the finest tobacco grown in South America. Caravans of mules keep up constant traffic with the metropolis, the distance being about 700 miles, through a country more or less inhabited. Communication with Matto Grosso is more difficult, the journey from Goyaz to Cuyabá being over 400 miles, almost entirely woods and savage country, infested by Coroados and other deadly tribes of Indians; the traveller has to take 20 days provisions for himself and his mules.

This province was first explored by Manuel Correa, a Paulista, who returned to Sorocaba with some ounces of gold dust. A few years later, in 1607, Bartolo Bueno found gold on the spot where Goyaz city now stands, but the discovery did not

attract many adventurers till 1720, when Bueno's son renewed the enterprise, following the traces of Manuel Correa, as far as the Rio Vermelho, where he found gold in the possession of the Indians. Having terrified these by burning some spirits on a plate and threatening so to treat their lakes and rivers, he induced them to discover to him whence they procured the gold, and to aid him in its collection. He thus obtained a considerable amount; and seizing a great many of his labourers, returned in triumph to San Paulo. In 1722, his son was charged by the Governor of San Paulo with an expedition to visit these mines, and to procure gold and emeralds; but he returned home disheartened after three years' travel. The same Governor, however, encouraged him to a new attempt, and in 1725, after several months' march he was recognised by two Indians of great age, and conducted to the lost mines, where he collected a very large quantity of gold, and after establishing several small towns returned to San Paulo with 8,000 *oitavas* of gold, upon which he received the appointment of *capitao mor* of the district. In 1749, the first diamonds were found at the rivers Claro and Piloes. In 1773, the Tocantins was navigated to Parà. The province possesses but few forests, and timber is not abundant, except on the banks of the Corumba, and where the great virgin forest of Mat-

to Grosso lies between Meia Ponte and the city of Goyaz; the rest of the surface being covered, in a great measure, with brush, which gives shelter to deer, boars, ounces, and other animals of the chase.

Goyaz was formed into a separate province from San Paulo in 1749, under Count d'Arcos, and made into a diocese by Pope Leo XII in 1827: the first two bishops did not reach Goyaz, but died on the way, and two others who were named refused the mitre.

The climate is dry, the rainy season being from October to April. The country is mostly virgin forest, but the plains are suitable for fattening cattle. Some of the rivers fall into the Amazon watershed, others are tributaries to the Rio de la Plata.

No railways have yet been projected. The Provincial revenue is £46,000, of which £14,000 is devoted to 95 schools, attended by 2,602 children.

Goyaz no longer produces much gold or precious stones, but carries on considerable trade in horned cattle, exporting over 100,000 head annually, from its 2,000 cattle-farms. Official registers shew that the Portuguese extracted over 200 tons gold dust from Goyaz up to the year 1800. At present the annual yield averages only 5,000 oitavas; this is either because the mines are nearly exhausted or on account of the difficulty in reaching the precious metal.

Water-communication exists with Pará by the river Tocantins, navigable for vessels of 40 tons, drawing 3 feet of water: about 30 such vessels are in constant traffic. The distance to Pará is over 1500 miles. Pres. Magalhaes has written a work shewing that the Araguaya is easier navigated; steamers can ascend from Pará to Jurupema, only 60 miles from the city of Goyaz, a length of 1600 miles. Another writer on this province is Dr. Padua Fleury.

Trade with Para represents £20,000 worth of annual exports by canoes or flats descending the Tocantins and Araguaya, which bring down more than 40,000 hides, and return laden with iron and other heavy goods, salt, &c.

There are about 25,000 Indians, some of whom are very fierce, while others are settled and apply themselves to agriculture and grazing. The representation is one senator and two deputies to the Imperial Assembly; and 22 deputies to the Provincial Chamber. The military force consists of about 300 soldiers in garrisons, and 13,000 National Guards.

The city of Goyaz is connected by roads with the chief rivers and towns, and with Cuyaba, Minas Geraes, Maranhao and Para. Boats also carry on a trade on the Paranaíba, Pardo, and Parana, with the south.

On the banks of the Araguaya the cotton-plant grows in a form unknown to the world. The cattle are always fat; for in dry seasons they have the borders of the rivers with a grass whose stalk is almost the size of cane, and which, yielding seeds like rice, gives a food that is highly fattening.

On the margins of lakes are immense plains for hundreds of miles, where herds of cattle blend at times with deer, antelopes, hogs, capivaras, jaburus, ducks, and colheireiros with rose-coloured plumage. Pedro Affonso, a little town about 200 leagues north of Goyaz, has several settlements of Indians. One of the tribes, the Guayajaras, lately immigrated from Maranhão having made continuous depredations on the tribe of the Chavantes, who apply themselves, to agriculture and cattle-rearing; these armed themselves, and almost exterminated the Guayajaras on the 13th of July, 1864, destroying even the women and infants. The Indians of the Araguaya have an animated aspect; their skin is smooth and shining.

If the Araguaya can be regularly navigated the carriage of a ton will not cost more than 80\$. to Fara for coffee, cotton, sugar, rum, tobacco, dried beef, hides, leather, wheat &c. which, so far, are produced in the province almost exclusively for consumption.

About 100 miles eastward of Goyaz city is the

flourishing town of Meya-ponte, centre of an agricultural district, whose inhabitants also manufacture cottons and woollens. The ruined village of Pilar is on the site of rich gold mines now abandoned.

XXVI.

PROVINCE OF PARANA.

Paraná is midway between San Paulo and Rio Grande do Sul, extending from the shores of the Atlantic to the borders of Paraguay. Its extent is greater than that of Great Britain and Ireland in the aggregate, and the climate is not too severe for Europeans, the situation being from about 23 to 26 degrees of south latitude.

The principal seaport is Parnaguá, 36 hours by steamer from Rio Janeyro. A few miles inland is the town of Curitiba, from which starts Maua's projected railway to Matto Grosso. The surveys have

recently been completed by Mr. W. Lloyd, after three years of toilsome explorations in the virgin forests. The line will be exactly 1,000 miles long, of which 530 will be by narrow-gauge (40-inch) railway, and 470 by steamboat, viz.—

	Miles.
I. Curitiba to Theresa, rail.....	188
II. Theresa to Coroados, do.....	175
III. River Ivahy, by steamer.....	166
IV. Parana and Ivinheima, do....	163
V. Rio Brilhante, do.....	140
VI. Sete Voltas to Miranda, rail...	168
	—
	1000
	—

Mr. Lloyd says that although the original estimates are put down at 10 millions sterling the line can be made for 7 millions by some slight alterations. When completed it will place Paraguay within 5 days of Rio Janeyro, and bring Chuquissaca within 12 days. The line reaches an elevation of 3,000 feet, crossing the Serrinha dos Capados, and about 500 feet higher traversing the Serra de Ribeira. Mr. Lloyd wished to measure the body of water of the Parana at Salto de Guayra, said to exceed that of all the rivers of Europe collectively (see Revy), but was unable to reach that point.

The falls of Sete Quedas are indicated by him as a place that one day must be of wonderful importance; 7 rivers converge here, navigable for 1300 miles, and Maua's railway will connect it with the Atlantic.

Curitiba, capital of the Province, stands 3,000 feet above sea-level, and shews an equable climate. Mr. Brand kept a register of Fahrenheit in 1872, from which we find the extremes were, in July, 24 and 78, and in December 53 and 98; it did not exceed the last figure during the year. The interior is very healthy, and the engineers compare it to Italy. Diamonds are found in Rio Papagayos, and gold near Curitiba; the Portuguese used to export gold largely from Parnagua. The Serra de Prata contains silver, and the works of the Jesuit copper mines are still seen at Ivahy. Iron abounds everywhere, especially near Paruagua; coal is found at Ponta Grossa and other places. Forests of araucaria cover 400 square miles. Mr. Lloyd found trees measuring 20 feet around the trunk and 150 in height. The rivers abound in fish, the same gentleman having caught a 'dourado' that weighed nearly 90 lbs. Game is no less plentiful.

The soil is so fertile that wheat gives often 40-fold, among the German colonies near Curitiba; potatoes also do well. Maize yields 100 for one, beans 200 for one; coffee, sugar, cotton, rice and

mandioca thrive no less wonderfully. The chief staple, however, is Yerba-maté, the export of which in 1872 reached 16,400 tons, worth over £400,000 sterling.

Parnagua is a port showing 500,000 tons per annum between entries and departures. It is built on a lovely bay and counts 7,500 inhabitants. The city of Curitiba, 60 miles inland, has 12,000 souls, and boasts clubs, libraries, schools, Catholic and Protestant churches and cemeteries, German college and other institutions. There are four newspapers in the Province.

There are 10 flourishing colonies, as follows—

Rocio de Curitiba, counting 1653 Dutch, Danes, Swiss &c., who raise all kinds of market produce for the capital.

Assungey, 1345 Germans &c., stands 1,000 feet over sea-level, in the Iguassu valley, about 60 miles from Curitiba. There are Catholic and Protestant chapels.

Theresa, founded in 1847 by the Belgian Dr. Faivre, stands on the Alto Ivahy, in fertile plains of coffee, sugar, rice, cotton, tobacco &c. with 600 inhabitants. It is on the Maua Matto Grosso railway line.

Superaguy, founded by a Swiss on the borders of Parnagua bay, does a brisk business in coffee and lumber, as also raising oysters for Buenos Ayres.

Argelina, adjoining the capital, consists of French farmers from Algiers.

San Venancio and **Abrauches**, also adjoining **Curitiba**; the second has 55 industrious Polish settlers.

Allesandra, founded by **Sig. Tripoti** (formerly of the **Gran Chaco**), is near **Parnagua**, and raises coffee and sugar.

Euphrasina, founded by **Parnagua** merchants, consists of market gardeners and coffee-planters.

Santa Candida, founded in 1875 by **Dr. Luis**, is 4 miles from **Curitiba** and already counts 300 colonists. Each farm lot is 400 x 400 varas, say 30 acres English; producing fruits, vegetables &c.

In June 1874 the Government signed a contract with **Sr. Pinto Junior**, who engages to introduce 100,000 colonists.

XXVII.

PROVINCE OF SAN PAULO.

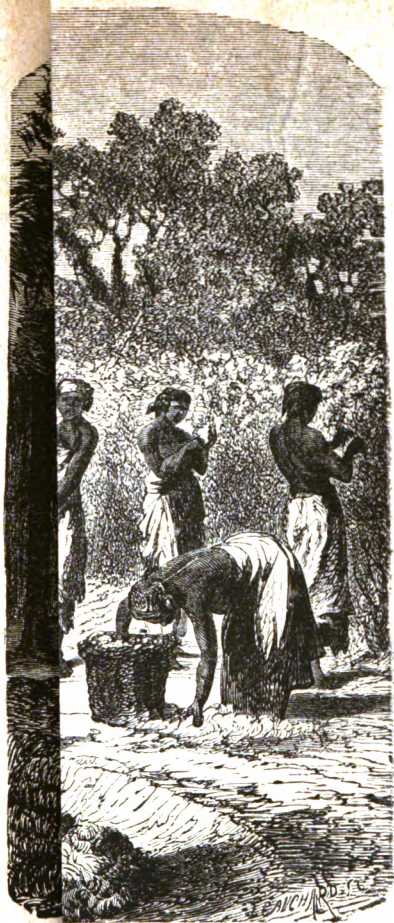
This most interesting portion of the Brazilian Empire is fully described in a pamphlet recently published at Rio Janeyro by Senator Godoy. No other province of Brazil commands so much interest for Englishmen, seeing the amount of English capital employed here in railways, banks, coffee-plantations, and other enterprises.

San Paulo is nearly as large as France, having an area of 169,050 square miles; it is bounded on the north by Minas Geraes, east by Rio Janeyro, south

by the Atlantic, and west by Goyaz. Being situated between 20 and 25 degrees of latitude, one half is within the tropics, the other in the temperate zone. It is traversed in all directions by mountains and rivers. Serra do Mar divides the province, its highest peak, Cubaton, reaching an elevation of 2,700 feet; there is also the Serra Mantiqueira, whose highest point is 3,500 feet over sea-level.

Among the principal rivers are, the Parahyba, Tiete, and Rio Grande. The first-named receives 43 tributaries in its course of 450 miles to the sea, two-thirds of the length being through the province of Rio Janeyro. It is navigable from Jacarehy to Caxoeira, 194 miles, and waters the most fertile valley in the whole empire. In 1874 the products exported from Parahyba valley exceeded 40,000 tons weight. Rio Tiete has an inland course of 750 miles and receives over one hundred tributaries, which water numerous colonies and plantations of German, English, French and other foreign settlers. One of these tributaries in the Ypiranga, famous as the site of the declaration of Brazilian Independence, 7th Sept. 1822. Besides the Rio Grande, which counts 45 affluents, there are many other important water-courses. The province is said to possess no fewer than 442 rivers.

The coast-line on the Atlantic is 300 miles long,



the principal ports being Santos, San Sebastian, Villa Bella, Ubatuba, Iguape and Cananea. The trade of the province increased five-fold in 10 years, from 1864 to 1874, as shewn by the official returns.

	1864.	1874.
Export duties....	£22,420	£130,020
Customs rev.....	89,620	410,340

This extraordinary development is mainly due to the opening of railways (in 1867), which now do an immense traffic in the carriage of cotton, coffee and other products; these having doubled in 7 years, as appears from the value of exports, viz.—

	1865.	1872.
Cotton.....	£114,000	£550,000
Coffee	790,000	1,240,000
Total exports....	1,050,000	2,070,000

Notwithstanding heavy export duties (13 per cent ad valorem on coffee and cotton) the trade is increasing very rapidly, the value of exports in 1874 being put down at £3,140,000, say 10 per cent more than the value of imports. As Brazil produces 3-fifths of the coffee-crop of the world, and as prices have lately risen 80 per cent owing to a great increase of consumption in foreign countries, the duties on this article are not so severely felt; but they weigh most disastrously on cotton. The

export duties consist of 9 per cent. for the Imperial revenue, and 4 per cent for the Provincial Government of San Paulo.

The Provincial Budget shews income over expenditure; the figures for 1874 were—

Income.....£ 2,040,000

Expenditure..... 1,630,000

The estimates for the current year exceed £3½ millions sterling. The public debt of the province is trifling, never amounting to £100,000, and as the railways yield more than the guarantee of 7 p.£ they cause no burthen to the exchequer.

Santos is one of the chief seaports of Brazil: it is a small, well-built town of 10,000 inhabitants, including 1320 foreigners. The port is defended by 3 fortresses, Barra-Grande, Bertioga and Fort Augusto, besides which there is an arsenal and military school. There are 3 newspapers, 3 banks, 3 colleges, and 3 lines of ocean steamers. Some of the churches and convents are fine buildings, as also the custom-house, hospital, prison, barrack and schools. The Government allows subsidies to the Institute, the German and St. Theresa colleges. There are 14 foreign Consulates for the different nationalities that compose the trade and population of the city. The English consul is Mr. Dundas, whose predecessor Captain Burton explored the interior of Brazil in 1867. Steamers arrive almost

weekly from Liverpool, Hamburg or other foreign ports, besides the coasting lines which maintain constant traffic with Rio Janeyro, Santa Catalina, Parnaguá and Rio Grande do Sul. The amount of exchange passed on Europe exceeds £600,000 per annum. The exports in 1874 comprised 518,000 sacks coffee and 154,000 bales cotton. The port returns consisted of 188 steamers and 219 sailing vessels, two-fifths ocean traffic, three-fifths coasters. Santos is the residence of judicial and ecclesiastical authorities, subsidiary to those of San Paulo city. The hospital is the oldest in the province, having been founded in 1543, and possessing an endowment of £8,300 per annum: last year it admitted 229 patients. The district of Santos counts 14,000 souls, including the suburbs of Intanhaem and San Vicente. The latter was the earliest settlement made by the Portuguese in this quarter, being founded by Martin Affonso in 1532. The first settlers were well received by the Tupy and Carijo tribes, owing to the friendly offices of Juan Ramallo, a run-away sailor of some previous expedition, who had married the daughter of the Cacique Teberiza. This cacique afterwards died defending the Christian settlers, on Christmas-day 1562, against the savage tribes. There is no monument to his memory. The city of Santos was founded by Nobrega, the superior of the Jesuits, in 1553.

An English buccaneer named Edward Fenton made a descent here with two armed vessels in 1582, but was successfully repulsed. The place was, however, sacked the following year by Thomas Cavendish, and this caused the seat of Government to be moved to San Paulo, 40 miles inland. The old settlement of San Vicente is now in ruins and has barely 600 inhabitants.

San Paulo city is the capital, where reside the Government, Legislature, Bishop and other principal authorities. It is about 2 hours journey by rail from Santos, and the centre of 3 important lines of railway. The population exceeds 25,000 souls; the public buildings comprise a cathedral, 5 convents now used as schools and parish churches; 3 Protestant chapels, namely English, Scotch and German; a fine hospital, barracks, gas-works, railway stations, orphanage of Sisters of St. Joseph, 4 banks, 4 printing-offices, 3 public libraries, lunatic asylum, prison, penitentiary, Athenaeum, German club, Casino &c. There are also tramways, botanical garden, musical societies, model school, German and American seminaries, 4 newspapers, steam saw-mills, cotton-factory, breweries, distilleries, cigar-factories, foundries and other industries. The suburbs are studded with elegant country-houses and luxuriant plantations, stretching away to the head-waters of the Tiete : this valley pro

duces corn, cotton and wine in large quantities. The district, including the suburbs of Santo Amaro, San Bernardo, Juquery &c. counts altogether 67,000 inhabitants, including a number of Germans and other foreigners, and 3,400 slaves. The principal public library has 10,000 volumes. San Paulo is remarkable for the number of its schools, some supported by the State. The diocese includes the whole province, which is divided into 144 parishes the Legislature gives a subsidy of £16,000 to the Bishop and clergy. San Paulo is also the seat of the military Commander, who has 60,000 National Guards spread over the Province, besides two regiments of the Line for garrison duty. The province has its own local Legislature of 36 members, and also sends 4 Senators and 9 Deputies to the Imperial Chambers at Rio Janeyro. There are 508 public schools in the province, attended by 11,070 children.

The province is divided into 30 departments, the principal being as follows —

	Pop.
San Paulo.....	67,300
Santos.....	14,200
Campinas.....	52,400
Tabaté.....	59,300
Braganza.....	41,000
Lorena.....	45,200
Rio Claro.....	48,000
	14

The total population reaches 1,012,000 souls, of which 171,000 are slaves.

There are 8 lines of railway in actual traffic or course of construction, viz.—

San Paulo line, from Santos to Jundiaby, 90 miles, built by an English company, cost £3 millions sterling, was opened to traffic in 1867, and pays dividends of 8 per cent. The first section connects Santos with San Paulo and is a triumph of engineering: at one place the grade is so steep that a permanent engine with endless chain is used to draw up the train. Gauge $5\frac{1}{2}$ feet.

2. Paulista railway, from Jundiaby to Campinas, 30 miles, built by a native company, cost £550,000, opened to traffic in 1872. This line is being continued to Rio Claro, 56 miles, at a further cost of £550,000. It has a 7 per cent. guarantee for 90 years from the Provincial Government on the whole capital. Gauge $5\frac{1}{2}$ feet. This line is a feeder to the San Paulo line.

3. Ituana line, from Jundiaby to Itu, one metre gauge, 42 miles, was opened to traffic in 1873, with provincial guarantee as above on an outlay of £270,000 sterling. The company is native, and a branch-line of 55 miles is being constructed to Constitution.

4. Sorocaba line, from San Paulo to Ipanema, was opened to Sorocaba iron mines in 1875, a

length of 75 miles, with provincial guarantee on a cost of £650,000; local capital. The Sorocaba mines yield 80 per cent pure iron.

5. Cachoeira railway, built by the State, 30 miles, $5\frac{1}{2}$ foot gauge, from Cachoeira to Salto. This line is to meet the Pedro Segundo line and thus connect Rio Janeyro with San Paulo.

6. San Paulo and Cachoeira, not yet finished, will be 140 miles long and has a state guarantee on a capital of £1,100,000. The gauge is only 1 metre, and at Cachoeira it will change to the wide gauge of the Pedro Segundo. The company is Brazilian, and the object, like that of the preceding line, is to connect with Rio Janeyro.

7. Mogyana line, from Campinas to Amparo, 60 miles, has just been completed at a cost of £330,000, one metre gauge, with provincial guarantee of 7 per cent for 90 years: native company.

8. Rezende and Areas, metre gauge, 40 miles, has a provincial guarantee of 7 per cent for 50 years on £240,000 capital, besides a grant of £150 per mile from the Imperial Government. The company is Brazilian.

There are also 5 lines projected, but not yet commenced, all one metre gauge.

1. Jundiaby to Braganza, 55 miles, has a provincial guarantee on £200,000 capital.

2. San Luis to Ubatuba, 45 miles, guarantee on £270,000.

3. Mogyana line, 50 miles, guarantee on £270,000.

4. Jundiaby to Belem, 20 miles, guarantee on £85,000.

5. Rio Claro to Paranahybá, 420 miles, to be made by the Imperial Government: surveys completed on 130 miles.

Besides the various land lines of telegraph there is communication by cable between Santos and the various ports of Brazil and Europe.

Cotton factories are largely worked at San Paulo, Itú, Sorocaba, Jundiaby, San Luiz and Indayatuba. One of the most important industries in the country is the iron-works of Sorocaba, which were first worked 250 years ago, revived in 1811 by a Swedish engineer, abandoned some years later, and finally put on a proper footing in 1865, when the best machinery was obtained from Europe: the actual number of hands employed is about 120, who turn out 3 tons of iron daily. A bed of coal has been discovered close at hand.

This province does not progress like Rio Grande in colonization. The first German colonists were a batch of 926 settlers brought out in 1828. The London and Brazilian Bank brought out 500 German colonists in 1873 for its coffee-plantation at Angelica. There is also a state-colony at Cananea of 400 English and Swiss settlers.

XXVIII.

SANTA CATHARINA

The paradise of Brazil, is situate nearly midway between Rio Janeyro and the mouth of the River Plate. The province comprises not only the island but also a large section of terra-firma. Travellers and painters have gone into ecstasies over the island of St. Catherine's, yet by a strange contradiction the natives have given it the name of Des terro or 'banishment,' by which the capital is still known. All the charms of Calypso's isle are here heightened a hundred-fold by the glowing vegetation, clear blue sky, and bright Atlantic waves that surround the island, which is supposed at some remote period to have been detached from the mainland by the action of current. It is 30 miles long and 8 wide, and was for some years the haunt of freebooters and buccaneers, but is now the peaceful abode of fishermen and invalids, for it enjoys a sanitary reputation equal to Madeira. Coral snakes are still met with among the orange and lemon groves, where thousands of humming-birds

display the brightest tints of plumage. The air is redolent of flowers, and the eye everywhere reposes on the fruits or vegetation of perpetual summer. Living is very cheap, and the inhabitants are most friendly to foreigners.

Desterro is one day by steamer from Rio Janeiro, and the traveller will find Conceicao's steamers or Lamport and Holt's line offer every accommodation, plying fortnightly up and down the coast from Rio Janeiro to the River Plate. Desterro has a good harbor, the strait being 600 yards across to the mainland, with depth of water from 35 to 120 feet. The city is built on a promontory; the harbor is well fortified, and large enough for the whole military and commercial navy of the empire. The town is traversed by 3 streams, and has 6,000 inhabitants, churches, schools. Government-house, printing-office, library and custom-house. It exports the best coffee in Brazil, also artificial flowers made of beetles' wings or of feathers, fish scales &c.

The province counts 159,802 population, including its part of the mainland, the total area being 44,960 square miles. Provincial revenue £77,000, of which £19,000 goes to maintain 134 schools attended by 5,214 children. The imperial Government proposes to construct a railway from the point of mainland facing the capital, Desterro, to the city of Rio Grande do Sul, a distance of 240 miles.

This province is one of the best suited for Europeans, and contains some thriving colonies of German, Swiss and French settlers, of which full particulars are given in the annexed report upon the Colonies of Rio Grande.

Santa Catalina was part of the lands ceded to Martin Alfonso, but John IV. afterwards gave it for a settlement to Diaz Velho, who was killed by English buccaneers in 1654. A colony was at last introduced from the Azores Islands in 1738 under Col. Silva Paes. The place was seized by the Spaniards in 1777, but they consented to evacuate it the following year.

The Serra do Mar traverses the province, the peaks of Cambireta and Bahul being landmarks to navigators. There are 10 rivers between the Serra and the seaboard, most of which, such as the Itajahy and Biquassú, are navigable many miles; there are also the Iguassu and 4 others beyond the Serra, which debouch in the Paraná. The only lake of any note is the Laguna, 15 miles long.

The island of San Francisco, about 20 miles long by 10 in width, is not wooded like Santa Catalina, but covered with well-cultivated farms. The port of San Francisco, on the western side, is well situated for trade, and exports a great quantity of rice, vegetables, mandioca and lumber to Rio Janeiro direct.

As the soil and climate are so favorable it would be easy to produce much larger quantities of sugar, coffee, cotton, maize, mandioca and rice. The forests are rich in timber and dye-woods. Coal is found, and there are various mineral waters. Population 159,802, of which number 14,904 are slaves.

Laguna is a well-built town on the lake of that name, and exports to Rio Janeyro the same products as San Francisco, besides salt-fish.

San José is a town on the mainland in front of the capital of the Province, and much frequented by muleteers and cattle-drivers from the interior.

Lages is a place of more importance, on the Serra do Mar, centre of a lucrative trade between the provinces of Parana and Rio Grande do Sul. In 1875 the Legislature voted £6,660 to make a high-road from Lages to San Jose.

Various attempts have been made to discover the silver mines of this province, so often mentioned by ancients, but without success. Iron and coal abound in the banks of certain rivers.

JOURNEY
TO
MATTO GROSSO.

BY
M. G. MULHALL,

(SEPTEMBER 1876).

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Printed and published at the STANDARD Steam Printing
Office, Standard Court.

BUENOS AYRES.

JOURNEY TO MATTO GROSSO

I.

FROM B. AYRES TO TRES BOCAS

From Buenos Ayres to the capital of Matto Grosso is nearly 2,400 miles, and the journey has seldom been made by Europeans. The first steamer which ascended to Cuyabá was the *Corza*, Captain David Bruce, in 1856. Subsequently there was the U. S. exploring steamer *Alpha*, of Capt. Page's surveying expedition in 1859. Captain Bossi followed in 1862, when he vainly attempted to cross the intervening country and descend the Amazon, being forced to desist by a mutiny among the Indians who accompanied him. Nevertheless, we

know that it is quite possible to cross from Cuyaba to the river Tapajos, and descend in a canoe to the Amazon, which the Indians compute a journey of 35 days.

Monthly steamers of the line formerly called Congeigao's, and now Companhia Brasileira de Navegacion, keep up an admirable mail-service between M.Video and Cuyaba, in combination with another line of the same owners between Rio Janeyro and M.Video. This Company receives an Imperial subsidy, and has recently constructed in Glasgow two fine steamers, called the Rio Janeyro and Rio Grande. The best steamers actually on the Cuyabá route are the Cuyabá and Itajahy.

The voyage from B. Ayres to Tres Bocas, the confluence of the Paraguay and Parana, is often made in three days, but it has taken us much longer, as our steamer Jauru got aground abreast of Riachuelo. We called at the usual ports, Rosario, Parana, La Paz, Esquina, Goya and Oorrientes, staying only an hour at each; and passed numerous vessels laden with oranges going downstream.

Our passengers number about a dozen first-class. The wife of His Excellency the President of Matto Grosso is en route from Rio Janeyro to rejoin her husband at Cuyabá. A military officer is going to Cerrito to take an inventory previous to handing

over the island to the Argentines. A young Englishman named Morris is son of the late Paraguayan Vice-Admiral. A Rio Grandense cattle-dealer tells exciting tales of his adventures with Indians in crossing overland from Matto Grosso to Goyaz and Rio Janeyro. There are also two or three other Brazilians ; one is a doctor bound for Corumba, another a merchant, who will have to go in a canoe 300 miles up country from Corumba beyond Villa Bella. The ship's carpenter is an intelligent Englishman named MacIntyre, who gives me much information about Paraguay and Matto Grosso.

Captain Costa is a very pleasant commander, and his ship a model of neatness and comfort ; like so many of his countrymen, he is an accomplished linguist, and speaks French, English, and Spanish fluently. The cabins are roomy, the saloon airy, the attendance and cuisine faultless. The discipline on board reminds one of a war-vessel.

The steamers make the round trip from Montevideo to Cuyaba and back in 33 days. In olden times passengers had to make half the voyage in canoes, and trust to the chase for food, monkeys and parrots being best, although many people cannot bear to eat monkeys as they cry like a baby when being killed, and their flesh is like human. Capt. Olley in his trip last year overland from Bahia Negra to Bolivia had to subsist for some weeks on

snakes. If the spiders were not venomous they would furnish a good dish; an Englishman recently deceased in Buenos Ayres asserted upon his honor that he had seen a spider go off with a dinner-fork sticking in him. At present, however, these steamers are as luxuriously maintained as the best hotels in Buenos Ayres.

There is nothing notable in the way of scenery in the interval of 700 miles from Buenos Ayres to Corrientes, which latter port we left to-day. Now we are about to leave the Paraná and enter the Paraguay; as we ascend farther from the ocean the vastness of these rivers impresses itself more upon our mind.

The Paraná is certainly one of the noblest rivers in the world; Revy and others tell us that its volume of water is greater than that of all the rivers of Europe in the aggregate; Revy computes a million tons of water per minute at the falls of Guayra, and says that at Corrientes the Paraná drains a basin of 500,000 square miles, losing afterwards by evaporation more than it gains by several large tributaries. The South Atlantic tidal wave ascends the Paraná 100 miles, twice every 24 hours. Mr. Revy says the Uruguay cannot be compared with the Paraná, although the sectional area of the former, at Salto, often reaches 71,000, and sometimes even 126,000 square feet. Beside these mag-

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nificent rivers what are the Danube, Volga, Tagus, Loire or Shannon, but mill-streams?

On our left is Cerrito Island, about which Brazil and the Argentine Republic were so near going to war. It commands the mouth both of the Paraguay and Upper Paraná, and we see the Argentine flag now floating from the Comandancia. The Brazilians handed the place over a fortnight ago to the Argentines, but most of the inhabitants are leaving or have already left, some for Filar, others for Curumbá. A wooden mole leads up to a group of huts, some very neatly finished; behind the slope is a larger group, including the chapel, hospital, &c., built by the Brazilians, who had a naval arsenal here from 1865 till recently. The island seems of great extent and high near the river, but I believe much of the interior is swampy: it was always held by Paraguay before the unlucky war of 1865, and Lopez kept a picquet here as well as at Itapirú. On some maps it is marked Atajo. The recent treaty with Paraguay and Brazil definitely makes this island Argentine. Several crosses along the bank indicate the graves of some officers of rank who fell here, almost before the Allies had got footing in Paraguay. Among the most daring attempts of Lopez, in which he uselessly lost many brave men, were the seizure of yonder small island in front of Itapirú and the

boarding of the iron clad by canoes. In the latter the half naked heroes who got aboard the iron-clad were swept off by the hot water from the boiler.

About twenty passengers come aboard at Cerreto, mostly Paraguayans, with a soft refinement of expression that you may in vain look for among the same class of any other people in South America. Some of the girls have Roman heads, beautifully shaped; and here is a little curly-headed boy as fair as the countrymen of Thorwaldsen, and like one of the cherubs he loved to chisel.

At 1 p.m. we pass Potrero Piris, where the Paraguayans surprised the Allies on May 24th, 1876, and almost won the campaign, setting fire to the encampment, but then turning their attention to plunder before their victory was secured. Next we come to Curuzú, the advanced post of Curupaity. Captain Costa, who served 2½ years in a Brazilian ironclad during the war, tells me Curupaity was more formidable than Humaytá, the fortifications admirably completed both by land and water. Here the Allies sustained such a crushing defeat on the 8th of September, 1866, that it put a stop to all operations for nearly twelve months. The Paraguayans were several days stripping Argentine corpses and throwing them into the river; some battalions were clad in

the uniforms of the Argentine dead. It was after this battle that Mr. Gould conveyed to Lopez the offer of the Allies to evacuate Paraguay, if he would go to Europe for 12 months. If he had not been blinded by pride he would have saved his people from annihilation, Paraguay had till then suffered little.

9 p.m. Ruins of Humayta.—The moon shines sadly upon the scene, ten times more solemn than the Coliseum or the temples of Luxor. Shot and shell rained upon this place for months. It was the stronghold of a gallant people, and is now its tomb.

Aug. 26th, Saturday—This morning a little after sunrise we passed Angostura, where the late Col. Thompson so gallantly held at bay for some months the armies and fleet of the Allies. Arriving at Villeta we landed some passengers and saw a crowd of white-robed Paraguayan women carrying oranges in baskets to a vessel that I learned was bound for Matto Grosso, where the oranges are neither so good nor so plentiful as in Paraguay. Millions of the golden fruit were piled on the beach. At present large quantities are exported to Montevideo and Matto Grosso, but the ungenerous Argentine Custom tariff of 40 per cent duty almost shuts Buenos Aires against this article of Paraguayan production. Cheap and whole-

some fruit is very necessary for public health in Buenos Aires: yet an orange costs 2 or 3 cents, which is dearer than in England, whereas here in Paraguay you can have a bushel for sixpence.

In sight of Lambaré; the wood-clad peak which marks the resting-place of the first Paraguayan chief who fell defending his country from foreign invaders. His name will live as long as the Paraguay river washes this heroic soil. Lambaré has a more lasting funeral monument than the Pyramids of the Nile; his memory is associated with all that is glorious and beautiful for the historian or the painter. The peak has an elevation of 312 feet over the river. Although Lambaré was killed in battle his courage and that of his people awed the Spanish invaders, who were commanded by the Englishman Sebastian Cabot, and after the latter had lost 28 of his little band he descended the river, leaving the conquest of Paraguay to his successor Juan de Ayolas.

At San Antonio is a charming quinta belonging to General Vedia, who made great improvements here while in command of the Argentine garrison. Almost in front is a site marked out in the Chaco for an Argentine town in case the President of the United States award Villa Occidental to Paraguay. It seems to me to be very

low and swampy. We are now at the mouth of the Pilcomayo, and as the steamer rounds an island we get a distant view of Asuncion with the arsenal in the foreground, the city stretching along the hill side, and the ruined palace of Lopez close to the water's edge.

II.

CITY OF ASUNCION

From the moment that you land there is a painful sense of desolation; not that Asuncion suffered bombardment in the war, for the Brazilians seem only to have fired on Lopez's palace; but the streets are almost deserted, and you have painful evidence that the bulk of the Paraguayan people was destroyed in the 5 years campaign. The ruined palace, which was nearly completed when the war broke out, is a sad emblem of the wild ambition of Lopez; it is estimated that with an outlay of fifty or one hundred thousand pounds it might be rendered tenantable, and if the Croskey-Barreiro contract be carried out it will be made the residence of the Bank and of the officials connected with the Anglo-Paraguay Company.

People connected with the Government congratulate themselves on the Brazilian evacuation and tell me that the country breathes more freely. But I have enquired of several shopkeepers, and they all say 'when the Brazilians were here we sold something, but now we do positively nothing.' This confirms what I had before heard, that the Brazilian garrison spent £40,000 in gold in Asuncion every month. Another cause of Paraguayan ruin is the high duty imposed by the Argentine Republic on products of this country. If the Argentines have such a warm affection as they profess, why not treat Paraguay as an Argentine Province by abolishing all duties, to or from B. Ayres, as in the case of Corrientes? Paraguayan Yerba, which used to be worth \$10 per arroba is now worth 1½ to 2 dollars; of course this is ruinous, but the article has no demand, the duties at Buenos Ayres being almost prohibitory and shutting out from Paraguay her only market.

The unfinished buildings left by Lopez shew how he squandered money at times. The theatre would have been a prodigious structure, as its grass-grown arches attest. The Pantheon, an imitation of St. Paul's at London, was intended to contain his remains and those of his family; the roof and cupola are finished, and with a small outlay it might be made a school. In the adjoining block is the

hotel, in the house where Lopez lived when I visited this country in 1863. At the hotel I found Viscount Richemont, French Charge d'Affaires, and Mr. Mercier, Secretary of Legation, who came up last week from B. Ayres on official business.

In the evening there was a reception at the Brazilian Legation, which is probably the finest house in the city, and here Dr. Callado and his wife dispense princely hospitalities. Among those whom I met at the conversazione were Viscount Richemont, Madame Gen. Hermes, Baron Passage, Col. Wisner Morgenstern, Dr. Pedra, Capt. and Madame Costa, Cavaliere Stella and the Italian Secretary, the Brazilian Consul, Mr. Mercier, Mr. Crooke, jun., Sr. Travasso, and several other ladies and gentlemen. The Brazilian Legation reminds one in every particular of European life. Dr. Callado served several years at the various Courts of Paris, St. Petersburg and London, and speaks many languages with the correctness so characteristic of Brazilian diplomatists: he has also been representative for his Government in Ecuador and Bolivia.

Public expectation centres on the fulfilment of the Crooke-Barrero convention, which would bring English capital into the country, to aid in the development of its magnificent resources. Everybody has great hopes in coffee-planting.

If time permitted, I should like to pay a visit to Minister Barreiro, who came with me to Paraguay in 1863, and to M. Decoud, the talented editor of the *Debates*. I have already met nearly all the foreign residents. Mr. Horrocks tells me the tramway carries 3,000 passengers monthly. Mr. George Stewart turns all his attention to the Salvador coffee colony; his brother, Dr. Stewart, is daily expected from B. Ayres. Mr. Murdoch, formerly of Buenos Ayres, has much experience of Paraguay and its people. Mr. Croskey jun. expects the realization of the proposed London and Paraguay Bank. Mr. Hartogg is an old German resident, most friendly to strangers; as also Mr Deschamps, a Frenchman, who came last year from B. Ayres.

Before leaving Asuncion the traveller should buy some of the beautiful lace-work made by the women; it is called 'handuty' and may compare with the finest Valenciennes lace. The name in Guarani signifies "spiders-web." Hammocks may also be obtained in every variety, from £2 up to 5 pounds sterling, which usually sold at 3 times that price before the Brazilian evacuation. Now the poor people are glad to sell at any price. Paraguayan puzzle-rings of the finest gold sell at 4 patacons, and silver-mounted mate cups at £2, and even less. Cedar-wood boxes may be had for 6 dollars, formerly worth £4. In the shops you can

buy European goods cheaper than in Buenos Ayres. Everybody seems selling off at a sacrifice, only anxious to leave the country, even the Paraguayans themselves. If this continue Asuncion will become a deserted city. The Brazilians have already given 5,000 free passages to Curumba.

The only thing to save Paraguay from utter ruin will be a speedy declaration of free-trade. Yerba, the great staple of the country, cannot be disposed of at 5 shillings (12 reals Bolivian) per arroba, since the Paraguayan Government imposes a heavy export duty, and the Argentine a ruinous import duty, thus obliging the Argentines to use tea and coffee in preference. Gold and silver are becoming mineralogical curiosities since the Brazilians have left, and the 'copper-money' is in such disrepute that 6 reals 'copper' are given for one of silver. Tramway-buttons are at a premium, and still it is so difficult to procure change that you must give half a Bolivian dollar to a peon for the most trifling errand. If the Argentine Government act with a little liberality in its Customs tariff the Paraguayan people will feel most grateful. Surely they deserve a little kindness after ceding to the Argentines the island of Cerrito and all the Chaco from Bermejo to Pilcomayo. It is painful to think how poor Paraguay is crushed, instead of finding a helping hand after all her

dreadful sorrows. I need not say that you cannot see the faintest sign of the two London loans for £3 millions sterling; if I am not mistaken the Parliamentary Enquiry shewed that only £200,000 had ever reached Paraguay; the rest was pocketted by London sharpers. Nobody pretends to know what became of the £200,000 which Bates, Stokes & Co. conveyed to Asuncion: nor do I remember who was Governor then. However, it is absurd to suppose that Paraguay should recognize a debt of £3 millions sterling.

Some persons who ought to know, tell me the present is the best Government the country has had since the fall of Lopez: at all events the first requirement is tranquillity, and Mr. John B. Gill, the President, has a cabinet composed of Messrs. Barreiro, Caballero and Machain, whose patriotism, if equal to their experience, will aid in reconstructing the country. If they fail I think they will have much to answer for, as the people are so docile and easily managed.

Aug. 27th Sunday.—The market of Asuncion at sunrise still presents the same picture as it did 13 years ago. Hundreds of women in snowy white raiment selling cigars, oranges, mandioca, chipa, meat, vegetables, goats—butter, lacework, and white balls apparently of lime but more probably of mandioca starch. Such cheerful people can

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nowhere else be seen, all of them as light-hearted and good-humored as if war had never swept over the land, and most of them with two or three chubby-faced children. It is wonderful how fair-complexioned are most of the women, although exposed to a tropical sun in the field labours; they do all the hard work, the men evidently regarding themselves as the lords of creation. Both men and women always have a friendly greeting for the stranger, and their expression of countenance is so full of 'bonhomie' as to convince you that Paraguayans are the kindest and happiest people in the world. There is the same security for life and property as in the time of Lopez: a gentleman has just told me that last week he travelled 30 leagues of woods and wilds, with 6,000\$ unattended and having no arms bigger than a penknife.

Whichever way you turn in Asuncion you see painful evidences of decay, except the churches. The San Francisco barrack, where Francia and Lopez confined so many worthy men for years and often for life, is now in ruins: the adjacent railway station, once a superb building, is now in part roofless. I entered the church of San Roque; the devout aspect of the worshippers was in keeping with the decent appearance of all around.

III.

EXCURSION TO PARAGUARI

At the railway station I met the French Minister and secretary, also D. José Tomas Sosa, under-secretary of Foreign Affairs, and Mr. Gregorio Machain of Buenos Ayres, father of the Paraguayan Ministers at Washington and Paris. The trains run 3 times a week to and from Paraguari. The second-class was crowded with girls going to a fête and country ball at Pirayu.

After leaving Asuncion the first place of note is the quinta of the late Dr. Berges, who was Minister under Lopez, a man of varied accomplishments, at one time Envoy at Washington; he was shot by Lopez the same day as Col. Bar-

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rios, Mr. Stark and Bishop Palacios. His quinta is still beautiful, displaying the taste with which it had been laid out. At Trinidad we have a long delay, while 8 boys acting as firemen's assistants procure water for the engine by filling kerosene tins at a brook. These stoppages are frequent, and sometimes it is necessary to get down and cut wood. Suffice it to say that a journey of 45 miles takes 10 hours. When this line was made in 1863 by Messrs. Burrell, Valpy and Thompson it was one of the best-finished in South America. Dr. Barreiro says it will now require 70,000£ to be put in working order. The church of Trinidad contains the ashes of Lopez I and his wife; on the hill is a country-house, commanding a view of wood and plain terminating with the Paraguay river, the dark fringe of the Chaco forming the horizon.

Luque station is surrounded by orange groves; numbers of women, all looking as fresh and cleanly as Naiads, offer for sale roast lamb, chickens and oranges. The best 'chipa' is made here, of mandioca flour, eggs, butter &c.; one could travel for days with no other food, it is so palatable. As the train passes through magnificent plantations of orange-trees, palms and mandioca you see the huts of the inhabitants amidst the over-spreading foliage. Neatness and

simplicity are everywhere apparent. Some huts have mortars for pounding mandioca, others vats for soap-boiling, others ovens, sugar-mills, tobacco sheds &c. Inside the entrance to every little farm is a wooden cross; some with a white ribbon; here is the family burial-place. We pass a large sugar-mill belonging to Sr. Arze. As we approach Campo Grande we see numbers of fine country houses belonging to the oldest families of Asuncion, such as Recalde, Machain, Aguilar, Gonsalez, Aramburu &c.

Palm groves, gorges through which flow small streams, and dark-green orange-trees resplendent with golden fruit succeed each other till we reach Areguá, seated on a hill overlooking Lake Ipacaray. This glorious sheet of water stretches away for miles to the foot of the Cordillera of Ipacaray, clad with timber to the summits. Yonder is Azcurra, where Lopez made such a desperate stand under cover of the woods. The Brazilians put steam-launches on the lake to transport men across; whole battalions were annihilated as they set foot on the shore.

The station at Areguá is in charge of Mrs. Richardson de Prieto, a native of Devonport, married to a Paraguayan who studied in England: this poor woman's husband has been 15 months sick, and she has to support herself and two children

out of a miserable pittance, several months overdue. I only discovered her nationality by making some remark upon a picture of the Babes in the Wood, hung upon the wall: she said she kept it because it reminded her of dear Old England.

At the foot of the Cerro Itaiguá where the lake terminates stands Mrs. Lynch's country-house of Patiño Cué, a fine two-story cottage with wide verandahs on each story. There are grander views in Brazil and Europe but this has a beauty all its own: the mountains, forest clad, rise up on one side, and on the other the eye rests complacently on the lake, whose wide bosom reflects the shadows of the clouds and the Cordillera. Near Patiño Cué is a farm where I spent an afternoon with Messrs. Valpy and Thompson in 1863: I asked for the inmates and learned that the father is in Asuncion, blind, and his three graceful daughters died of hunger in the woods near the close of the war. A similar sad fate has befallen many others for whom I make enquiries, and whose innocence and beauty were unable to save them from the wide-spread destruction.

The valley of Pirayù has always been considered one of the loveliest in Paraguay: the village is protected from the storms of the outer world by a range of hills from which the forest of Yaguaron descends to the lowlands. Most of the inhabitants

came to the station to welcome friends from Asuncion to the village ball; among the latter was General Caballero, who was the last commander of the Paraguayan army. He is about 35 years of age, well-made, handsome, with a cunning expression of eye, and appears very popular among his countrymen; he told me that he rose from the ranks, having worked as a soldier in the construction of the railway under Mr. Valpy.

At Cerro Leon the only remains of Lopez's camp are a long range used as his head-quarters, now the farm-house of Sr. Travasso, formerly a Brazilian army-contractor. The huts once occupied by 28,000 soldiers have all disappeared, as completely as the brave men sacrificed to Lopez's ambition.

It was sunset when we reached Paraguari, and as we ascended to the village, which is a mile from the railway, we took in a wide view of the plain that extends to the Tebiquary and Sierra Acay.

August 28th, Monday.—Every Sunday evening there is a village ball, as in the old Jesuit time. Last night it was at the rancho of a peasant with the patrician name of Ortiz de Zarate, perhaps a descendant of the Viceroy Zarate. He and his family received our party with Castilian courtesy and Paraguayan cordiality; all the furniture of his house was hardly worth a few dollars, but the

dwelling was delightfully clean. He wore the usual red blanket of the Paraguayan peasant, although he had seen something of the outer world during 5 years spent in Brazil and other parts of South America. Cigars, mate and caña were offered to the guests, while dancing went on in the next room. The girls were neatly dressed, as also the men, and all wore shoes. Two youths played a harp and a guitar very cleverly: one of the airs contained several bars from 'There is nae luck about the house,' a relic of the Scotch music brought hither by Mme. Lynch and taught to the Paraguayan bandsmen.

This morning we rose long before daybreak; even the inhabitants were not yet stirring. The moon threw her silvery light upon the village and the mountains, and chancicleer was saluting the morning star, as mine host bestirred himself about coffee. It was a glorious sight to see the sun rise between the peaks of Mbatovi and Santo Tomé, the first rays falling upon Cerro Porteño, where the Paraguayans defeated General Belgrano in 1811. Looking towards Villa Rica the eye falls on Sierra Acay, a bold and precipitous range; while away southward is the Tebiquary, a navigable river which may be ascended in steamer from the river Paraguay to the estancia of Lowry and Haycroft, a few leagues from where I stand.

Paraguari seems to have been founded by the Jesuits nearly 200 years ago, as we find they had 30,000 horned cattle on the estancias of this mission in the beginning of the 18th century, one of the Fathers in charge being an Irishman. I may here observe one of the first two Jesuits who came to Paraguay was a Scotchman; they were F. Thomas Field and Padre Ortega. We saw in the church an antique tabernacle, but the church itself was rebuilt in 1863. The old college adjoining is rapidly falling to ruin, being now used as the Comandancia; the soldiers on guard have Remingtons. The carving on the door and window panels speaks of the Jesuit time. Some of the arches in the corridors of the quadrangle have fallen. In front of the college is the state-school where some children are jabbering apparently in Spanish. When I was here 13 years ago few people understood anything but Guarani; now Spanish seems gaining ground a little. There is a good hotel now, kept by an Italian, in the Plaza. In one of the shops I found a Spaniard who had survived the war. The Baez family, three daughters, also survive.

At Cerro Leon the French Minister and Secretary left our party to spend some days shooting along the lake. In our return to Asuncion I learned much about the times of Francia, Yegros, Patiño,

Durey, and Lopez from Mr. Gregory Machain, who remembers events of 60 years ago.

Let me here recal some of the names connected with Paraguay. Mr. Machain remembers well the brothers Robertson and Drs. Regnerr and Longchamps, as also the botanist Amadée Bompland, and a renowned English doctor named William Parley, who died here with his wife, a charitable English lady, about the time that Francia allowed all the English captives to charter a vessel and leave Paraguay with their families and effects, over fifty years ago. He also speaks of kindly reminiscences of Captain Page, U.S. Navy, when exploring these rivers. Another gentleman who has told me interesting souvenirs of Paraguayan history is Colonel Wisner de Morgenstern, a stately soldier of 75 years, descended of an old Hungarian family. He left his home by the Danube over 50 years ago, fought in the Balkan campaign in Turkey in 1826, again in the Polish struggle of 1830, and coming to South America when the cause of Poland was lost, he made surveys in Brazil from Bahia to the Upper Uruguay, following the Serra do Mar. He was the bosom friend of Gen. Paz. As Chief-of-Engineers in the Paraguayan service he made some of the fortifications which kept the Allies five years at bay. His new Map of Paraguay, recently engraved at Vienna, is a grand work, the

result of 15 years of labor. He says his friend Admiral Leverger, of Matto Grosso, is now 85 years old, having been at one time President of that province, although a Frenchman born, and made valuable surveys of all these rivers, as Captain Page also attests. Col. Wisner has the intention to visit B. Ayres, to make the acquaintance of the Austro-Hungarian Minister, Chevalier Hoffer von Hoffenfels. The late Gen. Asboth had promised the year before his death to come and visit Col. Wisner. Everybody has a kind word for the good old soldier, who is a gentleman of the Louis Quatorze school, surrounded by a numerous and interesting family.

IV.

ASUNCION TO CONCEPCION

Aug. 29th—At two p.m. I embarked in the Cecilia for Curumba, and at the same time the Jauru left with a cargo of emigrants for the same port. It seems Brazil spares no pains in advancing Matto Grosso, reducing import-duties to 5 per cent, and giving free passages to emigrants for Curumba.

Asuncion has an imposing aspect as you ascend the river, the public buildings standing out in bold relief, while historical events of 3 centuries crowd upon the memory. The city is 50 years older than Buenos Ayres, yet its population hardly exceeds ten thousand souls: probably it had as many inhabitants in the time of Yrala or Antequera. No doubt the founder Ayolas expected

for it a great future, and at the beginning of the 19th century it was quite as important a place as Montevideo. After the fall of Rosas and the opening of the rivers it received an impulse which was on a steady increase for more than ten years; if Carlos Antonio Lopez had lived till the present he would perhaps find himself at the head of one of the most prosperous South American States. But it is useless to moralize.

The steamer skirts the Chaco and we pass three huts occupied by French families, who settled here four years ago and have raised small farms in the midst of a dense jungle.

Villa Occidental, on the north bank of the Con-fuso, is about 15 miles above Asuncion. Gebeler's saw-mill forms the most conspicuous feature; it was put up four years ago, but the captain tells me it never sawed a log of timber. Lopez established a French colony here in 1855 and called it New-Bordeaux; some of the colonists died, the rest, after great hardships, were conveyed home by the French Government. At present there are a few Italian and Paraguayan wood-cutters, who have survived the Argentine evacuation. I think if Pres. Grant saw the place he would hardly take the trouble to arbitrate about its ownership.

After sunset we pass a rock called the Peñon, which rises precipitously in the middle of the

river, very like the Pfalz rock on the Rhine, near Bingen. Lopez had some idea of fortifying it.

Aug. 30th.—Along the Paraguayan shore we have seen but two huts since leaving Asunción, although in Lopez's time there were Guardias at short distances to prevent inroads by Indians from the Chaco. The latter now give no more trouble, perhaps because this part of Paraguay has now neither cattle nor inhabitants. Passing the Peribebé we come to Embuscada, where Lopez had a cattle-estancia for 14 miles along the river.

Numerous alligators are seen on the bank as we reach Uaraguatay, another old estancia of Lopez. A river nearly choked with water-plants debouches on our right; a league from its mouth is the village of Rosario, now in ruins, 90 miles from Asunción. Capt. Page found here large quantities of Guayaba Blanca, so called from white wax deposited on it by ants, which is used for making candles.

Some Indians appear in the Chaco, a few hundred yards from the river; they are said to be very poor and harmless, their sole subsistence being fish. Further on we see on the Paraguayan shore a large tiger, resting under the shade of a tree; he looks at the steamer as unconcernedly as possible, and is such a noble-looking animal that it would seem a pity to fire at him. The passengers set up

a tremendous shout, and after some reflection he gets up and retires into the jungle.

Monte Lindo is a long stretch of palm-woods on the Chaco bank ; after which we see on the opposite side the mouth of the Jejuy, a river which rises in Sierra Amanbaly in the heart of Paraguay, traverses the country of the Cayngué Indians and the Yerbales, and empties itself near the hamlet of San Pedro.

Abreast of Pedrenal at sun-down : river 1200 yards wide. After dark we pass a raft, on which a candle throws a feeble light ; some wood-cutter is taking down timber to Asuncion or Corrientes. It is a lovely moon-light night as we pass the mouth of the Ypané, and we shall reach Concepcion about midnight.

*FROM CONCEPCION TO THE
CADUVEO INDIANS*

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Aug. 31st—Concepcion was before the war one of the principal towns in Paraguay; being the next port after Asuncion in trade and population. It is now a straggling place of a few huts with a church and Comandancia, the inhabitants subsisting by the Yerba trade. The Yerbales cover 3 million acres, beginning about 70 miles inland; they were worked for many years by the Jesuits, who first exported Yerba, and from this circumstance it is often called Jesuits' tea. In the time of Lopez the annual exportation of yerba-mate reached $4\frac{1}{2}$ million lbs., or 180,000 arrobes, chiefly to Buenos Ayres, representing a value of \$1,093,000 (say £200,000) according to the Budget of 1860. At pre-



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sent there are 25,000 arrobes lying at Concepcion without a buyer, and the price asked is about a dollar per arrobe.

The ruin of the yerba trade is due to the following causes—1st. There is in Paragnay an export duty of $\frac{1}{2}$ dollar, say 50 per cent ad valorem; then there is at B. Ayres an import-duty of 45 per cent nominally, but in reality much more; so that between the Paraguayan and Argentine Governments this valuable product is burdened with 100 per cent duties. No wonder people are giving up altogether the use of mate, and this is perhaps a leading cause of the fearful increase of drunkenness in the River Plate. Brandy and gin are taking the place of Yerba-mate.

We are now in the tropics, since a few miles below Concepcion, yet the heat is not excessive. Some of the passengers sleep on deck in hammocks. A great fire is seen in the Chaco, the Indians dancing round it; they are making a clearance with a vengeance; the crackling of the flames sounds like musquetry, as the tongues of fire leap upward to the sky, sweeping onward in their terrific course, and making the air quite hot. At this distance you would think the Indians were in the midst of the fire.

At daybreak we pass Aquidaban, a small river on whose bank, some fifty miles inland, Lopez was

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killed in March 1870. His eldest son, Pancho, was killed, close by, an hour before. Mrs. Lynch and Dr. Skinner were with Lopez to the last, and fell into the hands of the Brazilians, who treated them with courtesy.

Salvador, site of the Alston-Stewart colony, stands on a pleasant hill over the river, and is the last habitation of any note in Paraguay. Before the war it was a charming place, surrounded with farms and plantations. At the close of the war, in 1870, there remained here only 8 men and a dozen women; some Matto Grosso Indians came down, killed the men and carried off the women. There are now 30 well armed colonists, who keep a close look-out against a second descent. The church and barracks are conspicuous, but we see no colonists, as they are probably out planting coffee.

Sept. 1st.—In the small hours of morning we passed Confluencia, where Lopez had a Guardia at the mouth of the Apa. This is now the frontier between Paraguay and Brazil, although Francia and Lopez always claimed all the territory up to Rio Branco, 100 miles further north. Siete Puntas is a picturesque range, of which we can discern the outline by moonlight.

As morning dawned, cloudy and misty, we were approaching the superb group of hills from which Pan de Azucar rises abruptly to a height of 1350

feet. The Paraguay seems to have forced its way through these hills, which rise on either side, while one stands in the middle of the river as if to bar our progress. There is a channel both eastward and westward; we take the latter which is 140 yards wide. The island in mid-channel is called Fecho dos Morros "the mountain gate," with a height of 1,300ft., clad in the most charming and varied foliage. The situation is unrivalled, but fatal as the shades of Erebus; whoever resides here a few days is seized with a kind of dropsy, his legs and body swelling like the pot-bellied trees we see on the hill-sides, which are therefore called Barrigones. The Brazilian Government had some idea of removing its force from Fort Coimbra to this point, as being so much more strategic. An officer was sent here in 1871 in command of a dozen men; he lived but a few weeks, and his grave is marked by yonder wooden cross in front of the charred timbers that were once the Comandancia. Some of his men also died, and the survivors were removed to Asuncion. The Indians burnt the range of buildings, whose remains are still visible. It seems the hills around the pass partake of this dropsical tendency affecting both men and trees. The scenery of this point well repays a journey of 1500 miles from Buenos Aires. As the sun breaks through a cloud it shines on a

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belt of trees in yellow blossom, that look like burnished gold. Purple and dark-green foliage diversify the landscape, and a flight of Toucans, birds of brilliant plumage and large yellow beaks, lends some life to a scene otherwise mournful from the surrounding solitude and silence of these desert wilds.

We are now 400 miles from Asuncion, and we have yet a thousand more to go, to Cuyaba.

On our right is Pan de Azucar, like a sentinel of Brazilian territory, for this is Matto Grosso. On our left is that portion of the Chaco which seems to belong to Bolivia. In 1853 Capt. Page and his Lieutenant, Mr. Carter, ascended Pan de Azucar, which took them 3 hours in the ascent. The view commanded a boundless stretch of Chaco, plains of grass and palm-trees as far as the horizon, in the direction followed by so many daring Spanish adventurers in quest of Peru and its rich mines of silver.

Ayolas, founder of Asuncion, ascended to this point and landed here Feb. 2nd, 1537, calling the place Candelaria; then sending back his lieutenant Irala to Asuncion he ordered him to meet him here by August 2nd, with provisions, or wait his return. Accordingly setting out with 200 soldiers he crossed over to Peru and then returned by the same route, but not finding Irala or any vessel he began to

build a fort here, and was surprised by Indians, who put to death Ayolas and the whole party.

Irala set out five years later with 90 soldiers and 800 Indians, the latter under the Cacique Aracaré. The expedition failed, after great hardships, whereon the Viceroy, Alvar Nuñez, cruelly caused Irala to hang Aracaré.

Alvar Nuñez started in person in 1543 from Pan-de-Azucar with 400 soldiers, including 12 horsemen, but was unable to pass the flooded country of Xarayes. Returning to Asuncion he was deposed and sent home in irons to Spain.

A fourth expedition was at last successful in 1548, composed of a thousand Indians and soldiers under Irala, who safely reached Charcas and then sent forward three soldiers to Lima. The latter returned with 40 other Spaniards and a flock of sheep and goats, the first ever seen in Paraguay, which caused Irala's return to be hailed as a great achievement. After the death of Irala, which occurred at Asuncion in 1557, one of his favorite officers, named Chaves, founded Santa Cruz de la Sierra in the Bolivian Chaco, on the route for Peru. All these expeditions were previous to Garay's foundation of B. Ayres, and nearly all started from Pan-de-Azucar, perhaps because this peak is visible 40 miles in ordinary weather.

The next point of interest, after 6 hours' ride

voyage, is Fort Olympo, on the ridge of same name, on the Chaco side. The hills may be 600 feet high and are thickly wooded, the fort standing on a spur only 45 feet above the river. It was built by Charles III. in 1798 to keep back the Portuguese, and after several changes of masters was finally dismantled by the Paraguayans in 1865; the outer wall, 100 feet on each side, is almost perfect, 14 feet high by $2\frac{1}{2}$ thick; but the bastions have been pulled down, as well as the quarters inside the fort. A stone wall runs up the side of the mountain, formerly used to shut in cattle from Indian marauders.

Plains of grass only a few feet above the river now succeed for many miles till we come to another palm forest on our right (province of Matto Grosso), called Neboleque. Here we see some wigwams, and as the steamer approaches numbers of Indians leap into canoes and dart into the middle of the river across our course. At least twenty canoes surround us, although the steamer does not stop, and it is a marvel how some of them are not crushed by our paddles. If these Indians were armed we should certainly think they wanted to take the steamer by boarding, as they dash against our sides. Some have soldiers' jackets, others pantaloons, and the Cacique wears an officer's cap with linen cover, but most of them are nearly naked.

Muscular, broad-chested, copper-colored, with a bold and daring expression, decidedly handsome, or at least manly in their physiognomy, they seem undisputed lords of these vast wilds. As our captain throws them ship's biscuits they dart after the prizes in their swift canoes, some throwing themselves into the water, others grinning and displaying fine sets of teeth, others calling out for more or holding up some tiger-skins to signify their readiness to trade if our steamer will only let them come aboard. Over 100 other Indians are looking at us from the shore, as we keep on at full speed. We can count some 40 cows grazing close by, and these are supposed to be descendants of the cattle found at Salvador when some of these Caduveo Indians destroyed that town in 1871, and carried off the women and cattle. These Cadaveos are at constant war with the Shamacoques on the Chaco side: they have some fire-arms, and it behoves Dr. Stewart's colony and that of Cerro Morado to keep a constant and careful watch. The Caduveos do not eat cattle, but sell a cow to passing steamers in exchange for brandy and shirts.

VI.

*FROM THE CADUVEOS TO
CURUMBA*

Sept. 2nd—Salt-plains are succeeded by a forest of Quebracho. On either side the river-banks are hardly 6 feet over the water, and interminable plains stretch away to the horizon. This part of the Chaco belongs to Bolivia; as we pass Bahia Negra and the Otuquis territory we are reminded of the sad fate last year of Col. Paradis, who attempted to establish an Anglo-Bolivian port and colony here. During his visit to Buenos Ayres, in 1875, he bought some jewellery for his wife, and was shortly after murdered by his servants in crossing from Bahia Negra to Santa Cruz de la Sierra. The captain of this steamer, the Cecilia, rescued the survivors of Paradis's colony at this

point, in an exhausted condition, having been nine days subsisting on fish and water-hogs. Dorado, pacú, palomita and other fish abound here, often weighing 20 lbs.

The Oliden-Vernet grant extends along the Paraguay river from 17.45 S. Lat. to Fort Coimbra, covering an area of 5,000 square miles, watered by the Otuquis. It was ceded to D. Manuel Oliden by act of the Bolivian Congress 17th Nov. 1832, with right to import merchandize for planters, paying only 5 per cent duty. He founded the following year the Colony of Santiago, and a traveller who visited the place in 1836 describes it as a flourishing settlement, with several fine houses and large farms of rice, coffee, mandioca, sugar, cocoa &c.; the population amounting to 1380 souls. Gold and silver were found in the hill-ranges. Subsequently Mr. Oliden tried to form a company in London, unsuccessfully, and transferred his rights ultimately to Mr. Vernet of Buenos Ayres. This gentleman's son-in-law, Captain Cilley, formerly of the U.S. Navy, led an expedition from Bahia Negra in 1874 to Santa Cruz de la Sierra, and returned after suffering great privations; he expressed himself in very sanguine terms of the revival of the Oliden concession.

Approaching Fort Coimbra we see wooded hills rise on each side of the river to a height of 450

feet. That on the western bank runs down close to the water, and on a projecting point stands the Fort with the Brazilian flag flying over one of the bastions. Some 12-pounder guns are mounted in the embrasures, facing both up and down the river, which is here about 600 yards wide. This is the first habitation we have seen for 1300 miles on the western or Chaco bank, since leaving Santa Fe, except Villa Occidental. Soldiers lean over the battlements, and we see women and children in the huts outside the fortress. The walls are of massive stone: the upper part of the 'enceinte' has been quite newly built. In the centre are officers' quarters, two stories high, with tile roof.

We only delay a few minutes to receive some despatches from Major Cunha to the Commander of Curumbà; and have not time to visit the wonderful cavern a mile inland. Captain Page describes it as about 2,000 square feet in area, with immense stalactites and stalagmites like rows of sentinels. One of these weighs about 250 lbs, and a German gentleman last year presented a smaller one to the 'Standard' Museum. Among the trees on these hills several were Barrigones, like those noted at Fecho dos Morros, and it is perhaps to prevent their fatal influence that the hill-side all round the fort has been cleared. The distance to Curumbá is 120 miles, but the garrison can always obtain

supplies from the Christian Indians of Albuquerque and Bom Conselho, who are industrious farmers, a few leagues inland on the Chaco side.

The river makes many bends, and passing a forest of Aguaribay we hear some song-birds, the first since leaving Buenos Ayres. We see a tall white bird, with black head, called Martin Pescador, also three monkeys on a tree, and several storks. At times deer are seen on these plains.

At noon we pass the magnificent peak of Conselho, rising from the river bank 1500 feet high, clad in richest timber of variegated foliage, with lower hills that are lost in the Chaco. On the opposite side, higher up, is the River Miranda, leading to a village of that name, famous for the largest cattle in Brazil.

All that we have seen of beautiful scenery in the way of islands and forest is surpassed by what unfolds itself now at every bend of the river. Some times youder Saddle Mountain is on our right, sometimes on our left, and the Sierra of Albuquerque forms the background.

A group of ranchos forms the port of Albuquerque: the village is a league inland at foot of the Sierra, described as a charming place in the midst of groves and plantations, the inhabitants forming a model Indian mission, and raising fine crops. A league higher is Port Piuva, where we

see numbers of children; the inhabitants raise poultry, goats and pigs.

At midnight we pass the Ladario Arsenal, now next in importance after that of Rio Janeyro. Mr. Lavigne, naval contractor, leaves us here; he has spent 7 years in the dockyards of France and England, and now takes charge of a department of this arsenal, where there are over 1,000 workmen. Another hour takes us to Curumba, and by moonlight we can discern the outline of the place on a steep 'barranca.' Here we change steamer to-morrow, Sunday, for a steam-launch, to ascend to Cuyabá, 600 miles higher, a journey of 8 days.

VII.

PORT OF CURUMBA

Sept. 3rd, Sunday.—At sunrise the town of Corumbá was seen on the hill, some 70 feet over the river. A fort newly built on the barranca had guns pointed east, north and south. Several officers in uniform came aboard, along with a Customs officer. This is almost a free port, all import duties being reduced to 5 per cent, which is partly the cause of the rapid progress that Corumbá is making.

A zig-zag road leads up the hill, the rock overhanging on either side. The Custom-house, Post-office and Capitania are well built, close to the

river. On reaching the hill-top we see a town covering a large space, with some 3,000 inhabitants. Only 23 years ago, when Captain Page was here, he found only 6 ranchos, a dozen soldiers and 30 women and children, of mixed breed. The town is sheltered by a range of wooded hills, said to be much infested with tigers. Several of the shops are as well stocked as in B. Ayres, and the merchandize is cheaper; I saw nice alpaca coats marked 3 patacons, hammocks 10\$.f, sun umbrellas 12 reals. I am told the hammocks are made in Manchester, and are excellent imitations of those made here which are much dearer. The Ville de Strasburg is one of the best shops, in front of the chapel. The bells were ringing for Mass; a band of 30 musicians belonging to the garrison acted as orchestra. A new stone church is being built, the present one being a small tile-roof house. There are 3 clergymen here; one of them is an Italian Capuchin friar, who came last year from Bolivia. Two brothers, Hebrews from Strasburg, have a house of business, but there are few Europeans, except a sprinkling of Italians, and an Irishman named Leadbeater, a boiler-maker.

Besides the fort there is a spacious Comandancia built of stone; nothing could be neater than the look of the soldiers, in blue jackets and linen pantaloon. The merchants carry umbrellas in the

streets, as in Rio Grande and other parts of Brazil. I entered a very fine shop kept by a Brazilian gentleman, who spoke to me about Captain Page, whom he remembered here in 1853, when the latter made him a present of a pointer. He said Corumbá suffered greatly by the war, but is now quickly reviving. So great was the amount of cargo which we had in the Jauru for this place that she had to take a schooner in tow from Asuncion, and for this reason we were transhipped to the Cecilia, Captain Juan Manzoni, to whom I take this occasion to return my acknowledgements for a pleasant trip of five days from Asuncion. This evening we tranship to the Coxipo, for Cuyaba, capital of Matto Grosso.

Corumba supports 3 lines of steamers to the River Plate, namely that of Conceigao of Montevideo, the Imperial Mail-line, for which three fine steamers have been recently built in England, besides the Cuyaba and Itajahy at present running, and the cargo-steamer Jauru in which I have come, the Itajahy being at present refitting at Montevideo. This company also runs a line to Cuyabá under Government contract. The other two lines do a large cargo traffic with B. Ayres, running the steamers Inca, Gualaguay and Feliz. The last-named leaves to-morrow for Asuncion and Buenos Ayres.

Captain Manzoni tells me this place is growing in population and trade more than any other on these rivers down to Buenos Ayres. The farmers round about are very wealthy and often spend 1,000\$ when they come into town. Some of them are famous tiger-hunters. The late Baron Villa Maria was a regular Nimrod, of the most fearless kind.

It is very pleasant to see the air of security and good order that pervades every Brazilian town however remote, the unmistakeable sign of good Government. Here, at 2,000 miles in the heart of Brazil, I see the same order and evidence of law as in Rio Grande or the other provinces of the Empire. There are no iron bars on the windows, which are thrown wide open to admit the morning breeze and sunshine. The inhabitants have not the anxious look of people who sleep with revolvers under their pillows or get up every morning with rumors of revolution. Corumbá must be a dull place to live in, but it possesses that security for life and property which is the first right of every peace-abiding citizen, and the first duty of every well-organized Government.

You cannot travel in Brazil without admiring the orderly habits and kindly bearing of the people, who impress you as being well-bred, no matter what their condition or color. They are also

most hospitable, and shew a deference and respect to the fair sex, whether native or foreign, that one is accustomed to regard as the touchstone of gentle breeding.

The Coxipo is about to weigh anchor, and Captain Manzoni comes to say good-bye. This gallant sailor is a subject of the Emperor Francis Joseph, having been born at Lissa, of which great sea-fight he was a spectator. He is very careful of his vessel and attentive to passengers, and seems always on deck, night and day.

We have about 20 passengers for Cuyabä, and it is a matter of doubt whether we shall be able to get to Barranca Alta or San Antonio in the steamer as the river is very low. The Coxipó only draws 24 inches.

VIII.

*SAN LORENZO AND CUYABA
RIVERS*

We left Curumba on Sept. 3rd, passed the magnificent Cerros Dourados next day, and on the 5th entered the San Lorenzo river, in which we met several canoes full of Guato Indians. Entered Cuyabà river on the 6th, and for two days saw not a house or inhabitant. Both banks of the river are low and swampy, fringed with timber, and abounding in alligators, water-fowl, snakes and monkeys. We saw an alligator swimming away with a 12-foot snake in his mouth, holding him by the head, still alive. At 3 places we passed deserted huts, whose inhabitants were killed by Indians some months



ago; even the chapel of Melgaso is now abandoned, and we observed some burnt ranchos near. Large red deer may be seen near the Melgaso hills; we saw about a dozen.

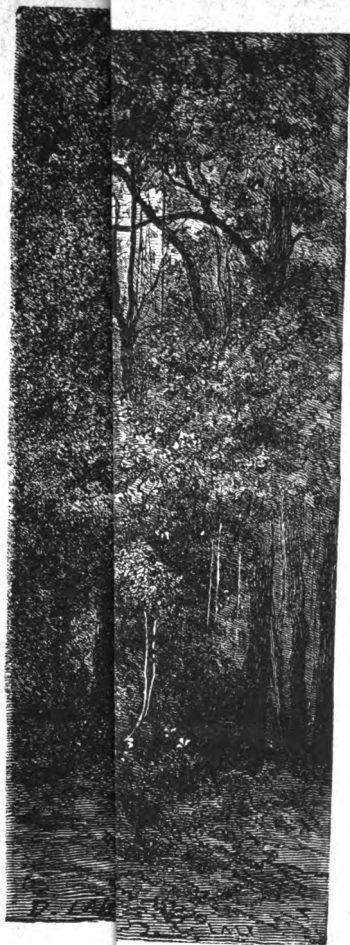
On referring to my diary I find that the Dourados mountains are said to run over 100 miles in almost a direct northerly line from the Bolivian side of the river. They present a wild, barren appearance, and are uninhabited, except in one place where there is a village whose inhabitants rear some cattle and manufacture whet-stones. We passed a deserted farm and ruined house, whose owner as the pilot told me, had either been killed by Indians or eaten by a tiger. An old Scotchman named Youle lives, with his family, some 30 miles from here, and makes frequent trips in his canoe up or down between his farm and Corumba, where he owns some houses and shops.

Near the mouth of the San Lorenzo, we passed the farm of Jose Luis, who has two sons studying law at San Paulo; he is reputed very wealthy, but lives on dried fish and cultivates his farm with the aid of a few slaves. At Bananal we took up a planter, who had recently sold the place and was deserting it, the new owner not having arrived. It was very painful to see the despair of the poor dog left behind to starve; he whined and howled piteously as the steamer left.

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Habitations become very scarce when you ascend the San Lorenzo, all the higher parts of that river being infested by Coroados: these wage implacable war to white men, whose heads they cut off and carry away for trophies whenever they can surprise them. The river makes numberless bends, and is still thickly wooded. One morning we called at a rancho standing on a neck of land where we saw some poultry; the owner, a good-humored old fellow with straw hat and linen drawers, sold us some hens for a few dollars. The steamers have regular places where they call for fuel and poultry. On the day in question we halted about sundown at a rancho similar to the one just mentioned, and saw an old Brazilian just a counterpart of the one in the morning. One of the passengers asked him if he had any hens for sale, to which he replied 'No! You took all I had this morning.' It was the same old fellow and the same rancho; only this time he came out of the back-door instead of the front. We had travelled I know not how many miles by bends and turns of the river, and the Captain took in a fresh supply of firewood; we were only 50 yards by land from the place we had passed in the morning.

Near the Boca de San Juan we met an Igarite with a sail, coming down stream. It belonged to an Italian, one of our passengers, a native of Lucca,



who had emigrated to North America at 14 years of age, worked for some time as a boatman on the Mississippi, and afterwards come to Brazil; he was for many years a mule-driver and had crossed nearly every forest, river and Sierra in the whole empire, in pursuit of so dangerous and profitable a calling.

Above the Boca de San Juan is a group of huts whose owners were surprised and killed by the Coroados only 4 months ago; the pilot says he thinks only one or two were killed, the rest escaping under cover of the woods to the nearest Christian settlement. A cross has been erected in front of one of the deserted homes; the sugar-crop has been cut, and the place now betrays the marks of hastening to ruin. This Cuyaba river is narrower than the San Lorenzo, but similar in other respects; sometimes the trees break in upon us and knock down the water-bottles on the cabin-table, our steamer having no sides, but only a wooden awning overhead. At night when the boughs come crashing in, with dust, leaves, insects and a fearful noise, you would think the vessel had altogether come to grief: now and then we have to delay to saw off an arm of a tree inextricably entangled and too strong to snap across.

For a couple of days and nights we were constantly on the watch for Coroado Indians, and at

one place having broken our rudder we had to moor the steamer to some trees all night, while we made a fire and improvised a foundry to mend the steering gear. The Coroados have never been known to attack a steamer, but the boatmen of the Igarites always anchor in mid-stream and keep a close watch at night. This deserted portion of the Cuyaba river would be an interesting place for the naturalist or botanist. Dozens of alligators lie on every bank or promontory that we pass; they wink at us with a hideous leer, as if to say 'your rifle-bullets cannot get through our skin,' and if by chance you fire at them the ball hops off their back, while they sometimes do not even take the trouble to glide into the water. They measure as long as 13 or 14 feet, but are harmless compared to the Amazon or Orinoco alligators, against which the boatmen have to carry small hatchets when the alligators playfully try to catch the boat's sides and upset it.

Some of the deer we saw in the wood-openings were as large as you see in Scotland; a few were white as snow. Tigers are very plentiful here, and at times monkeys may be seen perched in the trees, attentively watching the steamer and the passengers. Clouds of white birds sometimes settle on a tree, making it difficult to distinguish them from Payna, a woolly cotton ball, larger than an orange,

growing on high trees and much used by the natives for making pillows. Snakes of many kinds are so numerous that they are almost as great a danger to travellers as the Coroados; boas, rattlesnakes and others are much dreaded by the natives. Some are so deadly that a person bitten survives only a few hours. The Boa does not bite, but swallows you up whole, having first squeezed you into jelly and then licked you all over. Happily this terrible enemy of mankind is very rare, and generally lives on cattle, but sometimes he suddenly snaps up an unwary traveller or negro-slave passing through the forest, the Boa being coiled round a tree watching for his prey. No less deadly than the Boa is a kind of spider, or rather bee, perfectly blind, which if it strikes against your face causes instant death.

It was a relief after some days in these wilds to come upon the friendly rancho of Juan Agustin, where we rested and were offered refreshment. The poor man has one arm dead, caused by a tiger tearing the shoulder muscles. He has many tiger skins, some of which he sells us at 5 hard dollars each. As we ascend the river the plantations become more frequent, and wherever we stop the inhabitants treat us most kindly and hospitably. Some of them tell me I am very like Captain Baker, an Irishman who commanded a Brazilian

war-steamer in these waters during the Paraguayan war.

Sept. 10th—We left the steamer and proceeded up-river in a canoe pushed by 8 Indian Zingadores, so called from the Zinga or pole they use: travelling nearly 2 miles per hour against a strong current. Plantations of tobacco and sugar-cane lined both banks as we advanced, till we went ashore at San Antonio for a short-cut overland, marching about 6 miles through the wood, and halting at various farms where we were very kindly treated, the women invariably vying with each other in courtesy to my wife; they had never before seen an English woman. Some of these farm-houses were large and well built, with numbers of slaves; others mere huts, with a hammock, guitar, gun, fishing-net and harpoon. Every house is full of children. The inhabitants live on fish, and raise pigs and poultry merely to sell. Every farm has a sugar-mill, and in many cases a plantation of orange-trees. Masters and slaves seem to live on easy terms, and every night the whole household assembles for prayers; the slaves usually live in ranchos apart from the house; some of them are nearly one hundred years old.

Sleeping in a canoe is not very comfortable, especially for ladies. At midnight a storm came



on, and the Indians pulled us in under a barranca for shelter. Next day we continued up-river, and by sundown saw the city of Cuyaba, built on several hills. A gun was fired from the Arsenal to announce that the canoe with the monthly mail-bags was in sight. On arrival I found an officer with a polite invitation from the President, General Hermes, but as the city was two miles inland I preferred to accept the hospitality of Mr. Texeira, a Portuguese merchant, whose house was close to the port.

IX.

CITY OF CUYABA

Next morning at sunrise we set out on foot for the capital, there being no coaches, horses, mules or sedan-chairs. A rocky and uneven road climbs up and down two rows of hills, between the port and Cuyabá city. In spite of the hot sun and rough road one cannot but admire the picturesque grouping of the hills, some of which have a few pretty houses, and one is crowned with the Seminario, a square massive building of 3 stories high. Ascending the last hill you have a complete panorama of the city, which runs along several slopes in an irregular manner. The cathedral and palace form one side of the principal plaza, and the towers of 4 other churches form prominent objects in the picture. All the houses have tile roofs, some being two-storied, and the town reminds one of Santarem or other small cities in Portugal. On

yonder hill are the tents of a military encampment.

As we proceed through the narrow streets the shop-keepers, soldiers and townsmen salute us, lifting their hats to the English lady of our party, while the women peep at us through half-opened blinds to see the rare spectacle of European travellers and the more wonderful sight of a live Englishwoman. Their curiosity has not the least tinge of rudeness; on the contrary, whenever we enter a shop or halt at a street-corner we find everybody most friendly and glad that we can converse with them in their own language.

In front of the Military Hospital a company of soldiers was going through drill, as numbers of country people arrived with oxen laden like mules. Cows are so much cheaper than horses that they seem to take their place as beasts of burthen, and are trained to the saddle for travelling long distances. I am told that formerly the passengers on arriving at the port of Cuyabá usually proceeded to the capital mounted on cows or oxen. Crossing a bridge over one of the rivulets that intersect the city I met a German doctor named Johann Adolff Josetti, a native of Hamburg, who has been here nearly forty years; he holds rank in the Brazilian army, and is surrounded by grand-children in his green old age. There is a shop-keeper

named Martin Guillermo, also a German, of Jewish extraction, the principal merchant of the city. Some few Frenchmen, one a stone-cutter, have recently settled here, and half-a-dozen Italians. There is not a single Englishman of any description.

We breakfasted with the President at the palace. The ante-chambers were full of staff-officers and aides-de-camp. The audience-hall contains a full-length portrait of Dom Pedro Segundo, and another of Pedro Primero is in the drawing-room. Mme. Vasconcellos, the President's daughter, plays the piano with considerable skill; her husband is a very intelligent and polished gentleman.

There are at present 4,000 troops of the line in this province, most of them in detachments at various parts as a check upon the Coroado Indians. I proceeded on foot to the Bau camp, overlooking the city; one of the soldiers had recently found a nugget of 4 oz. of pure gold, in breaking some stones near his tent. After rain-showers it is common in the streets to find small particles of gold. The city was founded by Portuguese gold-diggers in 1722, under the name of Bom Jesus de Cuyabá, and for twenty miles around there are traces of gold-fields of the last century and an aqueduct now in ruins. The present population is about 16,000 souls.

Cuyabá has two printing-offices, which publish weekly papers; almost destitute of news. Every month an overland caravan arrives from Goyaz, 300 leagues, with tobacco and other products. The city has several schools and only one billiard-saloon; the latter is kept by an Italian, from Lombardy. There is no hotel of any kind, but the people are so hospitable that a hotel-keeper would starve. The climate is also so healthy that even Dr. Johann Adolff Josetti would find it hard to live but for his army pension. Numbers of females have goitrous necks, but only those born here are subject to this infirmity.

September 15th. The view at sunrise from Mr. Texeira's house took in the line of beach downwards as far as Coxipò, and upwards till lost in one of those hill-ranges supposed to teem with gold deposits, where the Indians will allow no white man to set foot. Numerous 'igarites' or covered canoes lay in port, and people of all shades of skin were bathing in the river, while women wearing red blankets carried on their head baskets of fruit or fish, and cakes of sugar.

Proceeding on foot to the city I called on Baron Melgaso, better known as Admiral Leverger, formerly President of Matto Grosso. The venerable old man, now nearly 80, tells me he left France in the year 1819, served many years in the Brazi-

lian navy, and has resided in Matto Grosso over 40 years. He enquires for many people in Buenos Ayres now dead, most of them having left the busy world before the present generation was born. Among the few now living in whom he feels an interest is Capt. Page, who commanded the United States expedition to Cuyaba in 1859, and whose steamer, the Alpha, is still in these waters under the same name. Baron Melgaso shews me a letter he received to-day from the Brazilian Government in reference to maps of these rivers; although his particular study is hydrography he has a well-stocked library of general literature, and regularly receives the *Revue des Deux Mondes*, the only connection which, he says, has for years united him with the world of science and literature. He still speaks French as fluently as if he had left his native place, St. Malo in Bretagne, only a few years ago. Surrounded by his grand-children and enjoying the esteem of the inhabitants as well as the rank and honors conferred on him by the Emperor, he is quietly descending the vale of years, while his manners blend the frank cordiality of a sailor with the courtesy of the 'ancienne noblesse.' I fancied there was a slight touch of regret in the admission that he had never revisited his native country; he spoke with manifest interest in the affairs of France, and also of England, prolonging

our interview as if he regarded me as an old friend or compatriot, and begging me at my departure to convey his kindest remembrances to Col. Wisner of Asuncion and Capt. Page.

Nothing at Cuyaba has greater interest for the traveller than the Military and Naval arsenals, where 300 boys receive suitable education in various trades. The former is under the charge of a Lieutenant-Colonel assisted by Lieutenant Monteiro Tapajos, to whom I am indebted for much politeness during my stay. There are two divisions in this Arsenal, each comprising over 100 boys; the first consists of orphans under 12 years, the second of apprentices over that age, who serve six years and receive a certain pay for their labor, as carpenters, smiths, cabinet-makers, tailors, hatters, shoemakers, silversmiths, turners, tin-workers, &c. Lieut. Tapajoz presented me with a handsome mahogany case, the work of one of the boys. They are smart-looking, well clad and fed, respectful to their officers, and have an excellent brass band. Such an institution reflects great credit on the Brazilian Government and on the officers in charge. The same may be said of the naval arsenal, which counts 80 boys.

In Cuyabá you see neither idlers nor mendicants, and I am told crime is almost unknown. It is in truth a very hum-drum place, but suits the inha-

bitants so completely that nothing ever disturbs them unless when they are shocked by the news of somebody having died. You see very old people at every house, and everybody has such a good-humored expression that this is probably the secret of their longevity. The Bishop is one of the oldest prelates living, having already held this diocese 46 years. All the clergy of Matto Grosso are educated here, the Seminary serving both for lay and clerical students: besides the faculties of theology and philosophy the scheme of studies embraces French and English (by native masters), and the ordinary classics in Portuguese and Latin, but no Greek. There is also a Normal school for teachers, whose scope is confined to ordinary rudiments of public-school teaching, and some geometry and algebra.



RETURN FROM CUYABA

Before leaving Cuyaba I tried to procure some articles made of native gold, but did not succeed although the precious metal is often picked up around the city by the slaves when their masters give them a holiday. In the last century, as Southey tells us, cats were so valuable here, that the first sold at Cuyaba fetched over £300 sterling, and some of the earliest kittens were sold for their weight in gold.

In 1862 some efforts were made to revive certain gold-washings 150 miles from Cuyabá: a band of 20 Frenchmen and Italians started, with an insufficient supply of necessaries, which compelled them to return after 3 weeks, having lost three of their party. It is said that 70 years ago an old Portuguese came to Cuyabá with two mule-cargoes of gold-dust from the interior, and died soon after.

Since then the hostility of the Indians has checked further discoveries. Mr. Jehu Hitchen of London was the latest explorer. Diamonds are found chiefly at Diamantina, but the locality is so unhealthy that several Germans and Americans have died here, and others found diamond-picking a very poor business. In some places water is not to be found for fifty miles, and the traveller has to depend on whatever supply he takes with him. About 35 miles from Cuyabá there is a fertile range of hills where an American has begun growing coffee and cotton with great success, the place is healthy, being 5,000 feet over sea-level.

The trade of Cuyabá comprises exports to the amount of £120,000 sterling, mostly hides and ipecacuanha, besides £16,000 worth of gold and diamonds. About 60 tons ipecacuanha are exported yearly, but the supply is inexhaustible in the country about Villa Maria, as well as of cinchona and vanilla.

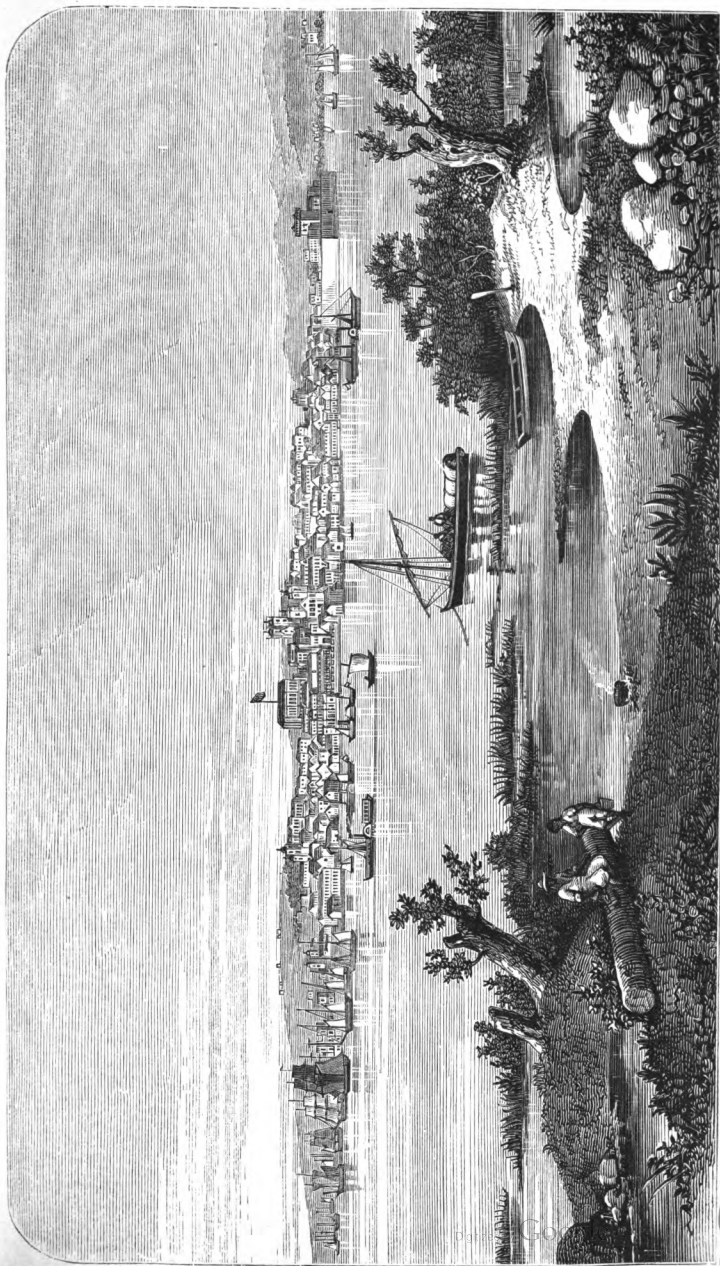
Villa Maria is 150 miles west of Cuyabá, the intervening country being a plain interspersed with sugar plantations, woods and hill ranges. It stands in 16. 3. 55 S. Lat. and carries on a considerable trade overland with the Bolivian city of Santa Cruz, the mules from which fetch £30 a head at Villa Maria. About 8 miles higher is the mouth of the Cabezal, a stream famed for its gold-washings.

The province of Matto Grosso covers an area of 836,400 square miles, between the Amazon valley and Bolivia. Its name indicates a dense forest, and as the country has been only partly explored little is known of its pathless woods and sierras. Captain Palm and Mr. Lloyd, in making the surveys of Viscount Maua's proposed railway from Curitiba on the Atlantic to Matto Grosso and Bolivia, traversed the intermediate country for over a thousand miles in safety, and imparted valuable information. Captain Palm died when at the point of completing the surveys, of which Mr. Lloyd furnishes all details.

President Hermes and Dr. Pedra (Chief of Police) kindly offered me an escort to travel in the interior, but the excessive heat deterred me. Having seen everything of note in the city, my wife and myself took leave of our hospitable friends, and again embarked in the covered canoe for San Antonio. The voyage down stream was much more rapid than the ascent. In 5 days we reached the port of Curumbá, where, after a short stay, we took steamer for Asuncion, and again put up under the friendly roof of the Brazilian Minister. Some days were pleasantly spent in riding excursions about Asuncion, and we finally reached Buenos Ayres after a absence of 3 months having travelled over 5,000 miles.

RIO GRANDE DO SUL

LONDON : PRINTED BY
SPOTTISWOODE AND CO., NEW-STREET SQUARE
AND PARLIAMENT STREET



CITY OF PORT ALEGRE, PROVINCE OF RIO GRANDE, BRAZIL.

UNIV
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RIO GRANDE DO SUL

AND

ITS GERMAN COLONIES.

BY

MICHAEL G. MULHALL.

LONDON:

LONGMANS, GREEN, AND CO.

1873.

PREFACE.

LAST SUMMER I made an excursion to Rio Grande, where I was astonished to find so many thriving German colonies, of which little is known in the River Plate or in Europe. The only works I could find referring to so interesting a part of the Brazilian Empire were a pamphlet written in German and reproduced in French at Paris some twenty years ago, and a 'Cuadro Estadístico' by the engineer Camargo, published at Port Alegre in 1868. My impressions and notes of travel through the colonies were too voluminous for reproduction in the columns of a daily paper, and for that reason I publish them in the present form, including some letters which have already appeared in the Buenos Ayres 'Standard.' To my readers I

will only say, that for a pleasure-trip during vacation I can strongly recommend Port Alegre, its beautiful scenery and kindly people, so little known to the outer world, although only twenty days from London by steamer, and three from the River Plate. Passengers from England would have to change at Rio Janeiro from the ocean-steamer to Lamport and Holt's line, and again at Rio Grande to Proudfoot's lake-steamer 'Guayiba.' Those from the River Plate can take Lamport and Holt's fortnightly steamer from Monte Video, the passage to Rio Grande averaging thirty hours. The artist or sportsman will find plenty of occupation ascending the Jacuhy, Sinos, Caby, and other fine rivers which have their confluence at Port Alegre. Should this little book be of any utility, my recollections of a vacation spent among the German colonies will be all the more pleasurable.

M. G. MULHALL.

BUENOS AYRES : *June 10, 1872.*

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RIO GRANDE DO SUL.



INTRODUCTION.

THE Empire of Brazil has made great strides in the last few years, not only in all branches of material progress, but also in the enlightened policy which has found such strenuous supporters in Dom Pedro Segundo and his minister, Viscount Paranhos do Rio Branco. The Emancipation law of 1871 is now being followed up by an extensive programme of English and German immigration, and a great effort to diffuse instruction among the lower orders of the people.

It may not be out of place to give the reader an outline of this immense and fertile region, which occupies the half of South America, and contains twenty provinces, each of which is larger than an empire or kingdom in Europe. The largest, Matto Grosso, is ten times the size of

England; the smallest, Espirito Santo, is almost as big as Belgium and Holland put together. The coast-line on the Atlantic is nearly 4,000 miles long. The water-courses are unrivalled; steamboats can navigate the Amazon and tributaries a length of 22,000 miles, and for the last twenty years a regular line of steamers has plied between Para and Tabatinga, on the Amazon proper, a distance of 1,800 miles. Numerous mountain chains are met with, the highest being Serra Itatiaia, over 10,000 feet in elevation. Forests cover a great portion of the interior, and the mineral wealth, especially in gold and diamonds, is very remarkable. The population is put down at 11,000,000, including 1,400,000 slaves, and 500,000 untamed Indians. By the new Emancipation law, which provides for gradual abolition, there will be no slavery by the close of this century. The institutions of the country are extremely liberal, the Government being a kind of Federal Republic, with an Emperor instead of a President. The established religion is the Roman Catholic, but the utmost liberty and equality may be said to exist in this and all other matters affecting foreigners, who find also the greatest protection for life and property. The

army, in time of peace, counts 25,000 men; the navy, consisting chiefly of iron-clads and gun-boats, is manned by 5,546 sailors.

The growth of the national revenues is prodigious: at the accession of the present Emperor, in 1832, they amounted to 11,000,000 mr. (say 1,100,000*l.*); in 1864 they had risen to 60,000,000, and in 1871 to 94,000,000, or 9,500,000*l.* sterling, the budget for this last year (at 10 milreis per £) standing thus:—

<i>Revenue</i>	<i>Expenditure</i>
Import duties . . £5,250,000	Imperial household £140,000
Export „ . . 1,896,000	Senators and deputies 70,000
Licenses 1,080,000	Army and navy 2,150,000
Railways 400,000	Justice 340,000
Property tax . . . 350,000	Foreign affairs . . . 80,000
Miscellaneous . . . 424,000	Interior 177,000
	Railways and steamers 700,000
	Post and telegraph . 130,000
	Immigration 85,000
	Public institutes . . 300,000
	Worship. 125,000
	Finance 1,600,000
	Interest on debt . . 2,332,000
	Surplus 1,171,000
	<hr/>
	£9,400,000
£9,400,000	

The Emperor's salary is 40,000*l.* per annum, that of the Empress 4,800*l.* The budget for 1872 puts down 93,000,000mr. for income, and 86,000,000 mr.

for expenditure, leaving a surplus of 7,000,000 mr., or 700,000*l.* sterling.

The national debt amounts to 650,000,000 mr., or 65,000,000*l.* sterling, of which one-half has been caused by the Paraguayan war, its growth being as follows:—

1865 . . .	£30,800,000	1869 . . .	£59,000,000
1866 . . .	38,100,000	1870 . . .	64,400,000
1867 . . .	50,500,000	1871 . . .	64,900,000
1868 . . .	58,000,000		

The national debt is made up thus:—

	Millions sterling
Foreign loans	16
Government stock or home debt	30
Paper money	15
Orphan fund, &c.	2½
War bills unpaid	1½
	<hr/> 65 millions

Henceforward this debt will go steadily downwards, as the budget each year shows a surplus. Meantime a debt of 65,000,000*l.* sterling is only trifling when compared with the revenue or population of the empire, being only seven years' income, or equal to 6*l.* per head of the population.

Brazil has no fewer than seven loans in London, the balances due on each standing thus:—

1852	.	.	.	.	.	.	£685,800
1858	.	.	.	.	.	.	861,500
1859	.	.	.	.	.	.	335,200
1860	.	.	.	.	.	.	944,100
1863	.	.	.	.	.	.	3,035,700
1865	.	.	.	.	.	.	6,573,600
1871	.	.	.	.	.	.	3,459,600
							<u>£15,895,500</u>

It will be seen that two-thirds of the money borrowed in England went to the expenses of the war, the total cost of which is officially stated at 39,000,000*l.* sterling, so that about three-fourths of this amount was raised in the country by home loans, paper money, or taxation. It is right to note here that besides 151,000,000 *mr.* in Government notes the bank of Brazil has an issue of 36,500,000, and other banks 2,000,000 in paper money, making the total of paper currency 189,500,000 *mr.*, or 19,000,000*l.* sterling.

So far from the Paraguayan War causing the trade or products of Brazil to fall off, the increase in that period was wonderful, as will be seen in the three great staples which make up the exports of the empire, comparing 1870 with 1860, thus :—

	1870		1860
Coffee	186,841 tons		151,794 tons
Sugar	129,243 „		115,210 „
Cotton	41,188 „		14,295 „

This shows that, in spite of the war, the products have increased enormously, viz.—twenty-four per cent. in coffee, twelve per cent. in sugar, and nearly two hundred per cent. in cotton. Of this last staple San Paulo alone yielded last year 30,000 tons.

If we compare the returns of the year (1864) previous to the breaking out of the war with the subsequent ones, the result is equally satisfactory. The tables are in arrobes of thirty-five lbs. each.

Year	Cotton	Sugar	Coffee	India-rubber
1864	1,350,465	8,016,127	8,183,311	23 ,235
1865	1,726,015	7,483,107	10,806,336	232,417
1866	2,899,004	9,158,065	9,940,566	230,900
1867	2,689,206	8,167,685	13,048,464	325,636
1868	3,386,692	8,719,023	14,546,770	343,422

Thus we see that in four years the produce of the country almost doubled, the increase under the various headings being—in cotton one hundred and fifty per cent., sugar nine per cent., coffee eighty per cent., India-rubber forty-four per cent. If we take the four items in one bulk we find Brazil exported in 1864 about 300,000 tons of produce, and in 1868 over 450,000 tons. The value of these four items in 1864 was 54,000,000 hard dollars, and in 1868 was 74,000,000.

The imports and exports of the various provinces in 1869 stood thus :—

	<i>Imports</i>	<i>Exports</i>
	£ sterling	£ sterling
Rio Janeyro . . .	9,000,000	9,000,000
Pernambuco . . .	2,560,000	2,310,000
Bahia . . .	2,350,000	2,160,000
Pará . . .	820,000	1,080,000
Rio Grande do Sul .	770,000	856,000
Maranhao . . .	520,000	607,800
Ceará . . .	325,600	488,800
San Paolo . . .	230,000	1,780,000
Eight other provinces .	84,400	1,986,000
	<u>£16,660,000</u>	<u>£20,268,600</u>

Brazil takes half her imports from England, one-fourth from France, and the rest from the River Plate, United States and Portugal. She exports half her produce to England, one-eighth to France, one-eighth to North America, and the rest to other countries. Her coasting trade, not included above, stands for about 5,000,000*l.* sterling, being carried on by 3,200 vessels, averaging 200 tons each, and manned by 45,000 sailors ; besides 120 coasting steamers.

There are eighteen banks in Brazil, which may be briefly set down thus :—

	Capital	Observations
Bank of Brazil . . .	£3,300,000	Emission 4,000,000 <i>l</i> .
London and Brazilian . .	1,500,000	Branches at Bahia, Santos, &c.
English Bank . . .	1,000,000	Branches like above
Rural Bank . . .	800,000	Deposits 2,000,000 <i>l</i> .
Commercial Bank . . .	1,200,000	One-sixth paid up
Campos Bank . . .	100,000	Dividend 11 per cent.
Bahia Bank . . .	800,000	Emission 180,000 <i>l</i> .
Bahia Reserve . . .	400,000	Half paid up
Bahia Mortgage . . .	120,000	Dividend 7 per cent.
Bahia Savings . . .	300,000	Dividend 7 per cent.
Bahia Commercial . . .	560,000	Dividend 7 $\frac{3}{4}$ per cent.
Bahia Economy . . .	62,000	Dividend 7 $\frac{1}{2}$ per cent.
Pernambuco Bank . . .		In liquidation
Alagoas Bank . . .	30,000	Dividend 12 per cent.
Maranhao Bank . . .	100,000	Dividend 13 $\frac{1}{2}$ per cent. .
Maranhao Commercial . .	200,000	Half paid
Para Commercial . . .	80,000	Deposits 200,000 <i>l</i> .
Rio Grande do Sul . . .	100,000	Dividend 11 per cent.

The prosperous condition of Brazilian finances and trade, causes the national securities to be in great request as well in England as in Brazil. The Brazilian bonds on the London Stock Exchange are usually above par, and the Home Debt six per cents. at Rio Janeyro may be quoted at par, while the 'gold bonds' are at ten per cent. premium; the last amount to about 3,000,000*l*. sterling, with coupons payable in specie instead of paper money, which causes them to be a favourite investment with people abroad, as it gives them five and a-half per cent for their

money. Besides the local six per cents., there are also a series of four and five per cents., the entire home debt being, as above stated, about 30,000,000*l.* sterling.

There are four principal lines of railway open to traffic, besides numerous branches or lines of less importance, and about 1,800 miles of telegraph actually working.

The Pedro Segundo Railway was begun in 1857, and the first section, 30 miles, opened in the following year to Queimados. At present more than 150 miles are open to traffic, and the line is being prolonged to the Tocantins river. The Government has expended over 3,000,000*l.* sterling on this line: the gross receipts average ten per cent. and the net proceeds more than six per cent. on the cost of construction.

The San Paulo line has already cost over 2,500,000*l.* sterling, and belongs not to the State but to an English Joint Stock Company, the Imperial Government possessing shares to the value of 100,000*l.* The net proceeds average over five per cent., and when the new branches are open the traffic will be much increased. The working expenses are only one-third of the gross receipts.

The Bahia line was opened in 1860, and its

traffic was so small that for nearly ten years the annual receipts did not cover working expenses; the deficit had to be made good out of the seven per cent. guarantee of the Imperial Government. At the close of 1868 the aggregate deficit for eight years amounted to 120,000*l*. Since then the affairs of the line have been every year improving. The Government shares represent 20,000*l*.

The Pernambuco line cost 1,825,000*l*., being fifty per cent. over the original estimates upon which the Government guarantee was given, on a length of 80 miles. The Imperial Government holds 700,000*l*. worth of shares. The working expenses are two-thirds of the gross receipts, and the shareholders' dividend chiefly depends on the Government guarantee.

There are no fewer than fifteen lesser railways or branches being constructed, besides numerous roads, canals, bridges, docks, and other public works of the most useful description. At the same time a submarine cable to unite Brazil with Europe is being contracted for by Baron Manà, who engages to have it complete before the end of 1874. Another great enterprise is the diversion of Bolivian trade from the Pacific to the Amazon by means of Colonel Church's Mamorè and Madera

Railway, which will connect the settled parts of Bolivia with the head-waters of the chief affluents of the Amazon.

But far surpassing all other schemes in magnitude is that of importing thousands of Germans and Englishmen to colonise the splendid provinces of Rio Grande, San Paulo, Santa Catalina, &c. Messrs. Crawford, Kitts, and Hodgskin have arrived in Rio Janeyro to arrange for sending out 150,000 English emigrants in batches up to 10,000 yearly. At the same time contracts have been concluded for 40,000 Germans to San Paulo, 60,000 to Rio Grande, and other smaller numbers for elsewhere ; showing that colonisation is now the great aim of the Brazilian Government.

I.

PROVINCE OF RIO GRANDE.

At the southern extremity of the vast empire of Brazil we find the rich and favoured province of Rio Grande do Sul, otherwise called San Pedro, which, although one of the smallest provinces of Brazil, is yet three times the size of England, having an area of 8,925 square leagues (of 16 square miles each), or 142,800 square miles English. Its situation between the twenty-ninth and thirty-fourth parallels of south latitude, gives it a finer and more temperate climate than any other part of the empire.

It is bounded on the north by the provinces of St. Catherine's and Parana, on the south by the republic of Banda Oriental, on the east by the Atlantic Ocean, and on the west by the Upper Uruguay, which separates it from the Argentine Misiones and Corrientes. By the treaty of 1852,

the frontier with the Oriental Republic was defined as the mouth of the Chuy on the Atlantic, and the mouth of the Quareim on the Uruguay. The frontier line had been a constant bone of contention in the time of Spaniards and Portuguese, and no fewer than three special commissions, in 1759, 1789, and 1790, were sent to mark the limits on the part of the two Crowns, and at last agreed to the mouth of the Pepiry-Guassù, which is now the point of demarcation between the Brazilian and Argentine territories.

Its greatest measurement from east to west is 500 miles, and from north to south 400 miles. A range of hills, called the Coxilha Grande, traverses the country from north to south, forming two watersheds, the eastern with an area of 4,325, the western 4,600 square leagues. At the same time an equally remarkable bisection of the country is made by the Serra Geral, running east and west, all the northern half being high and mountainous, the southern low but undulating. The Serra Geral is sometimes called Serra do Mir, and all the other ranges, Serra Herval, Tapes, Pinhal, San Javier, are so many ramifications.

The country is magnificently wooded and watered, and the mountain ranges add to its picturesque

appearance, although no higher than the hills of Derbyshire. The highest point of the Sierra Geral is Passo Santa Victoria, 3,200 feet over the sea-level.

The principal rivers are—the Jacuhy, Gravatahy, Sinos, Cahy, Guayiba, Camaquan, San Gonzalo, Yaguaron, Quarahim, Pepiry-Guassù, Ibicuhy, Upper Uruguay, and tributaries.

The Jacuhy is the most considerable of the four affluents which form the splendid estuary of Guayiba. It rises near Cruz Alta in the Serra Geral, waters the towns of Cachoeira, Rio Pardo, Santo Amaro, Triunfo and San Jeronimo, and debouches in front of Port Alegre: it has often a width of 700 feet, and the current sometimes runs up to five miles an hour. It is navigable for steamers to Rio Pardo (120 miles), and in times of high water to Cachoeira, 80 miles higher up. Among its tributaries are—Rio Pardo, which bathes the Santa Cruz colony; Taquary, the most rapid water-course in the province; and Arroyo dos Ratos, famous for its coal-fields.

The Gravatahy rises in the Coxilha das Lombas, and is only navigable about 20 miles, but in high water, boats go up to Aldea dos Anjos, 50 miles from the embouchure at Port Alegre.

The Rio dos Sinos is 120 miles long, from its head-waters at Pedras Blancas to its mouth, and takes its name from its sinuous course. It is the most important river in the province as an industrial highroad, being the great outlet for the products of San Leopoldo and many of the other colonies. It is navigated by steamers daily, at all seasons, from Port Alegre to San Leopoldo, 56 miles, and, unless at low water, as far as Mundo Novo, 60 miles higher.

The Cahy has its head-waters at Cima da Serra, and runs 120 miles, being navigable for half that distance, from Port Alegre to Port Guimaraes; one of its tributaries, the Cadea, has a waterfall of 730 feet perpendicular near the Herval colonies, and is navigable some 20 miles up to Hortense-schneitz. The Marata, which washes the Paricy and other colonies, is also navigable for lumber-boats. Several other tributaries water numerous German colonies in their course.

The majestic Guayiba, formed of the above four rivers, forms a beautiful estuary or inland sea, in the midst of which rises the picturesque promontory on which stands Port Alegre, the capital of Rio Grande. After a course of 35 miles it debouches into Lake Patos, where its mouth is

guarded by the peaks of Stapoia and Morro da Formiga.

The Camaquan rises in Santa Tecla hills near Bagè, and has a rapid course to Lake Patos, debouching by three mouths.

The San Gonzalo is a canal 50 miles long, connecting the two great lakes, Mirim and Patos, and watering the important city of Pelotas. It is the medium of an active trade with Rio Grande and the outer world, and the dredging of the bar, which is now going on, will facilitate its navigation to vessels of large burthen. The Arroyo Pelotas is a tributary navigable for 20 miles, and the Piratinin, which debouches 35 miles above the city of Pelotas, is remarkable for a grand stone bridge recently erected by Government.

The Yaguaron rises in the Serra Asseguà, near Bagè, and falls into Lake Mirim, after serving for frontier limit between Brazil and the Republic of Uruguay. Twenty miles from its mouth is the important town of Yaguaron.

The Quarahim, or Cuareim, which serves as the frontier limit with Banda Oriental, is an affluent of the Upper Uruguay.

The Pepiry-Guassù is the limit between Brazil and the Misiones of Corrientes, and falls into the

Uruguay about four miles above the waterfall known as Salto Grande.

The Ibicuy, which has no fewer than thirty-five tributaries, debouches into the Uruguay a little above the town of Uruguayana.

The Uruguay in its entire length has a course of 1,000 miles, from the Serra do Mar, in the province of Sta Catarina, to its confluence with the Paranà in forming the estuary of La Plata. It flows for 600 miles through Brazilian territory until reaching the mouth of the Cuareim: this portion may be termed the Upper Uruguay, inaccessible to vessels unless in great floods, there being numerous rapids and waterfalls. At Cachoeira do Mulato three barriers of rocks are met with, each about 30 feet high; at Xapécò the rapids extend for two miles, and are generally impassable; at Fortaleza a wall of rock runs across the river, and in flood-time the central part looks exactly like a fortress. But the finest of all is the Salto Grande, which is 35 feet in height and 2,500 yards long, running not across the river but longitudinally, leaving a channel of 45 yards on the left bank: in other words, a river of 700 yards in width is here compressed into this narrow channel for half a league. A scientific

expedition sent hither in 1863 discovered cylindrical cavities in the rocks similar to those mentioned by Lyell as found near Norwich in 1839, and known in France as '*puits naturels*.' From Salto Grande, descending the Uruguay, sundry small cataracts are met with before reaching the mouth of the Cuareim. In flood-seasons, steamers of light draught ascend from the River Plate and Lower Uruguay to the city of Uruguayana, near the mouth of the Ibicuy. That part of Misiones traversed by the Uruguay in its earlier course is mountainous and thickly wooded: at times, basaltic rocks rise on either side of the river, which has an average width of from 300 to 500 yards, and runs seven miles an hour. The first signs of habitation are met with at Passo Fundo, where there are sugar and yerba factories, and here also the muleteers of San Paulo cross the Uruguay, which is about 35 feet deep. Then a stretch of 400 miles, through varied scenery, is wholly uninhabited till reaching the town of San Borja, opposite to which is the old missionary village of St^o. Fomé, in Corrientes. Lower down are the town of Itaquy and city of Uruguayana.

Besides its great river system, Rio Grande possesses two immense lakes which are also conve-

nient high-roads for commerce. Lake Mirim, called by the Indian and Spanish settlers Mini, is a vast inland sea 115 miles long by 15 wide, fed by the rivers Yaguaron, Taquary, and twenty lesser streams, one-half of which have their rise in the Banda Oriental, between which country and Brazil this lake serves as frontier, but its waters are declared Brazilian territory by the treaty with Monte Video. Lake Patos, like the former, is at the same level as the ocean, from which it is only separated by a strip of low sandy territory, and is larger than Mirim, its greatest length being 140 miles, and its greatest width 40. The two lakes communicate by the San Gonzalo river, and the waters of both form the estuary of Rio Grande, which runs 50 miles to the sea, washing the seaport city of the same name and debouching into the Atlantic over a dangerous bar. The entire coast-line of the province is low and sandy, beaten by the Atlantic, and without any accessible port or entrance save the dangerous one at the bar.

The geological formation of the country plainly shows that the coast-line of the Atlantic formerly followed the Serra do Mar, Itapoa, and the Tapes and Herval ranges; the low-lying sandy formation about Lake Mirim and Rio Grande is more

recent. The city of Rio Grande is only 28 inches over sea-level. Geologists might be able to fix the period at which all this portion of the country was covered by the Atlantic, from the fact that oyster-shells have been found at Itapoa Hill, 14 feet above sea-level. Along the sea-shore there is a line of dunes, or sand-hills, which shift their position under the action of the wind. Mr. Frederick Sellow reports the hill-ranges of Herval and Tapes to be of primitive formation, and all the country north and west of basaltic rock, besides transition porphyry in many places, adding that this is the only part of Brazil where basalt and porphyry are found, and that geologists for a long time denied the existence of such formations east of the Andes. Another geologist, named Plant, says the mineral wealth of this province holds out promise of a glorious future. Iron and coal are found in many places; the western hill-ranges are rich in metals; gold abounds in the Cuñapiru district near Banda Oriental. At the same time the forests which cover almost the entire country, and the navigable rivers in all directions, offer every incentive to industry, and present (says Mr. Plant) such a combination of favourable circumstances as would indicate that

Providence had destined Rio Grande to play a conspicuous part in the world's progress. The minerals are as yet unexplored for the most part, but two companies have just been formed in London for the working of the coal-fields of Candiota and Arroyo dos Ratos, which were first discovered in 1809, and have at various times been worked at intervals. Near the Uruguay and its affluents are found quantities of agate, cornelian, rock-crystal, opals, &c., which are exported to Europe. Councillor Correa Camara gives a list of minerals found at various places, which may be summarised thus:—

Gold at Piratiny, Encrusilhada, and San Gabriel.

Silver, iron, and granite at Piratiny; also nitrate of potash and Glauber salts.

Copper in the Misiones, bordering on Upper Uruguay, and at Caçapava.

Marble and malachite at Caçapava, Bagè, and Rio Pardo.

Iron at Encrusilhada, Caçapava, and Cachoeira.

Coal at Candiota, Arroyo Ratos, Curral Alto, and Cachoeira.

There is little or no trace of volcanic agency in any part of the province, but the inhabitants of

Port Alegre say there was a shock of earthquake in that city in 1811; and a water-spout, accompanied by a loud report like cannon, occurred at the mouth of the Jacuhy in 1822.

In the vegetable kingdom this province is extraordinarily rich. The late distinguished Austrian botanist, Martins, classified the chief products in his work on the Flora of Brazil. The woods which cover the Serra Geral and its branches, and which are so luxuriant in the valleys of the Uruguay, Jacuhy, Taquary, and other rivers, abound in excellent timber for building, such as cabriuva, angico, cedar, guajuvira, timbanba, grapia-punha, açouta-cavallo, iron-wood, black and brown canella, rose-wood or jacarandà, ipè ortecoma speciosa, peroba, cambosin, pinho, tajuba, cangerana, capororoca, sobragy, louro, caroba, pine, vinhatico, &c. The largest trees belong to the genus known among botanists as dycotyledons, embracing the various families of urtigacea, euphorbiacea, laurinea, leguminosa, myrtacea, &c. In the forests are also met with, in great profusion, ferns, orchids, bromelia, convulnacea, aroidea, bignonia, cipò, paniflora, lichen, liliacea, and an infinity of creeping plants. Among the brushwood are shrubs of some estimation, such as araucaria braziliana, cocus flexuosa, schinus terebinthifolius,

balsam, agave, bromelia bracteala, malvacea, apocynæa, &c. The medicinal plants are numberless, the principal being—quinine, ipecacuanha, rhubarb, sarsaparilla, cipò mucunà, paraguay tea, poaia, &c. The fruits of the tropics as well as of cold climates thrive admirably, such as the orange, lime, banana, apple, pear, fig, Damascus cherry, plum, apricot, grape, lemon, amygdalus pessica, jaboticadeira, pitangeira, goyabeira, ananazeiro, marmello, jambo, arazà, ameixa, amora, melon, gabiroya, cidra, melancia, &c. The cereals and crops comprise—maize, mandioca, beans, rice, tobacco, sugar, cotton, arrowroot, indigo, wheat, barley, flax, potatoes, linseed, oats, oil-plant, &c. The soil is so rich as to be inexhaustible, and needs no manure. Fully one-half the province is still covered with virgin forest, and in the water-shed of the Uruguay there is a tract of 40 miles in width by 400 in length, where the timber is gigantic.

The climate is what an Englishman would consider rather warm, but mild and agreeable compared to that of India, or even to the temperature of the northern parts of Brazil. It is not unlike that of Sicily or Algiers, but probably not so dry, and proves exceedingly healthy not only to native Brazilians but to the thousands of German colonists.

Summer commences with January, autumn with April, winter with July, and spring with October; but the seasons are not so clearly defined as in Europe, and may be properly divided into the cold and warm. In the higher lands the cold season is sometimes accompanied with snow; and when the Minuano, or icy wind from the Andes, blows you will often see a thin coating of ice on the lakes, which, however, melts before the noon-day sun. The month of May is remarkable for what is termed *Veranico de Mayo*, which something resembles the Indian summer of North America. The coldest months usually are June and July. In summer the average temperature of the hottest months, January and February, is 72° at 6 in the morning, 90° at noon, and 81° at 6 P.M., but it sometimes touches 95° at noon. In winter it ranges from 50° at sunrise to 65° at noon, and 60° at sunset. The days vary little in length all the year round, as is a necessary consequence of the latitude. The greatest variations of temperature occur usually at 2 in the afternoon and the same hour in the morning. Fogs are very common in May and August, lasting till about 11 A.M., and often followed by heavy rain, with thunder. After the west wind, or Minuano, has

blown the atmosphere clears up, and frost ensues, the ice in such elevated points as Cima da Serra lasting for three or four days. The north-east wind begins at the close of winter, usually in October, and lasts till January or even March. It clears the atmosphere of the miasmas which arise from the overflow of lakes and rivers in the winter, and often brings rain and thunder for a couple of days. The north and nor'west winds bring a rise of temperature, with rain and thunder. The south and east winds are unhealthy and variable, the former sometimes blowing for two or three days consecutively in winter. The west wind is known to blow ten or fifteen days without intermission. The Atlantic sea-board is lashed with frequent storms. Rainy weather is generally accompanied with thunder, at all seasons ; hail-storms are rarely seen.

The naturalist or sportsman would find abundant occupation in this country, the forests, rivers, and mountains teeming with animal life, and offering the same rich and varied fauna as the rest of Brazil, for the most part strange to an European. Among the larger animals we find the ape, ounce, wild boar, carpincho or river-hog, tatù or dasypsus, raposa and guarà of the wild

dog species, quati or *nasua solitaria*, tamandua or *myrmecophaga*; among the reptiles, the rattlesnake, crocodile, surucucu and jararaca snakes, the latter very deadly, and known as *trigono-cephalus*, with numbers of frogs and toads. Among the fishes are—piaba, dourado, bagre, suruby, trahira, carà, &c. The dourado is of the carp species, and well known in the River Plate waters; in the estuary of Rio Grande are found crabs and other salt-water fish. The birds are in boundless variety, including cardinals, sunbirds, canaries, humming-birds, partridge, duck, turkey, ostrich, jacù, jacutinga, urubù, gaviao, pintasilgo, coleiro, prince, sabia, &c. The sunbird is called by the natives ‘urutao,’ from a sound which it makes, and keeps its eyes fixed steadily on the sun from early morning till sunset; it is found in the woods of the Uruguay valley, and is also known in North America. Among the insects we find silk-worms, bees, ants, and scorpions. All the domestic animals of Europe are in great abundance and thrive admirably.

The Indian tribes that were found here by the Jesuits when the country was first settled were the Minuanos and Charruas in the lower grounds, and the Tapes and Coroados in the mountains,

all of which waged a fierce war with the Portuguese until many of the natives were converted to Christianity, and formed into seven reductions under Jesuit rule, near the valley of the Uruguay. After the expulsion of the Jesuits most of the converted tribes, as elsewhere in South America, relapsed into barbarism, but there are still numerous vestiges which show the handiwork of the natives under such masters, and the degree of advancement they had attained to. At present the remnants of the above tribes are found in a savage state among the woods of the Serra Geral or the Uruguay, from which they sometimes make incursions on the nearest farm or settlement; or else you may see a few scattered groups of 'civilised Indians' in the villages of Nonohay and San Nicolao. The number of aborigines is not known, but is relatively small. A census taken in 1814 showed the Indian population of the seven missions of Uruguay to be as follows:—

			Population
San Miguel	founded in 1632	.	706
San Luis Gonzaga	„ „	.	1,412
San Nicolao	„ 1627	.	1,545
San Francisco Borja	„ 1690	.	1,424
San Lorenzo	„ 1691	.	434
San Juan Baptista	„ 1698	.	554
San Anjo	„ 1707	.	320
			<hr/> 6,395

When the inhabitants of these missions were subsequently scattered, the Government tried to form new reductions with Franciscan and other friars, but their success was very different from that of the Jesuits.

In 1860 there were six Indian villages, San Vicente, San Nicolao, Nonohay, Sta Isabel, Guarita, and Pontam, with an aggregate population of 2,107. At present there are only two, Nonohay and San Nicolao, and the inhabitants are described as naked, filthy, and squalid; the first has 590, the second 212 inhabitants. The unreduced savages of Serra Geral occasionally give annoyance to the colonists; in 1867 they murdered a German family, and carried off some children. The Coroados are one of the most savage tribes met with in Brazil, and are supposed to be descended from an ancient powerful tribe known as Goytakazes. Some of the earliest Portuguese settlers came into Rio Grande in 1680 from the neighbouring settlements of San Paulo and San Vicente. The character of the present inhabitants is observed to partake much of the Spanish nature, owing to the proximity of this province to the dominions that belonged to the crown of Spain.

The first census taken was in 1803, by Governor

Paulo Da Silva Gama, at the direction of the Portuguese Cabinet, and it showed 36,721 inhabitants, without including infants under twelve months, the troops of the line, and about 4,000 peons who had no fixed residence, but went about from one saladero to another: the returns were thus :—

Port Alegre	3,927
Viamao	2,065
Triumpho	3,037
Dos Anjos	2,718
Rio Grande	8,390
Estreito	1,713
Mostardas	1,187
Villa Principe	3,739
Sant Amaro	1,661
Taquary	916
Cachoeira	3,283
San Antonio	2,199
Vaccaria	815
Arroyo	1,041

In 1814 the population was found to be 70,656, made up in this manner :—

Whites	32,300
Slaves	20,611
Indians	8,655
Free coloured people	5,399
Infants under a year	<u>3,691</u>
	70,656

During the following thirty years it doubled, but the increase was still more rapid after the

close of the ten years' civil war; and, in Dec. 1862, the return showed 392,725, of whom 77,419 were slaves, or one-fifth of the total population. The districts were as follows:—

	Free	Slaves
Port Alegre	77,872	17,924
San Antonio	25,875	5,333
Rio Pardo	30,385	9,467
Caçapava	15,231	3,285
Bagé	16,316	5,837
Alegrete	20,304	4,564
Cruz Alta	39,114	5,976
San Borja	17,272	2,396
Piratiny	24,846	11,266
Rio Grande	41,969	11,371
Army, &c. . . .	6,122	—
	<u>315,306</u>	<u>77,419</u>

If we allow an increase of twenty-five per cent. for the past decade it would give the present population of the province at 500,000 souls, which is rather under than over what I believe is the reality. It is more than the Republic of Uruguay can boast, and about the same as the population of the province of Buenos Ayres. The troops of the line in the various cities and frontier posts usually number 4,000 men. The national guards comprise 26,000 cavalry, 17,000 infantry, and a small battery of artillery.

The favourite occupation of the native inhabit-

ants is raising cattle, the first estancias having been marked out in 1715, when Juan de Magalhaes came hither with a band of adventurers by order of the Governor of Santa Catharina. The killing of cattle for the exportation of hides and jerked beef also gives employment to thousands of persons in the various charqueadas or saladeros at Pelotas and elsewhere. Agriculture is almost exclusively left to the German colonists, who number about 80,000 souls, spread over forty-two colonies, chiefly in the valleys of Jacuhy, Sinos, Cahy, and Taquary. A large number of native Brazilians devote themselves to the raising of yerba-mate in the forests of the north and centre. Others act as boatmen and carriers on the numerous rivers, bringing down lumber and produce. Mining industry is in its infancy; some trifling gold-washings at Sant Antonio das Lavras, and the coal-fields of Candiota and Arroyo dos Ratos. Official papers show that a concession for digging coal was taken out so far back as 1809; the industry is now being renewed simultaneously at both the above places, and a railroad, eight miles long, will connect San Jeronimo with the Arroyo dos Ratos coal-fields. There are three shafts from 180 to 200 feet deep, and it is estimated the coal-

deposits amount to 7,000,000 tons. The forests are being turned to good account by the establishment of numerous steam saw-mills on the estates of wealthy proprietors.

The great drawback is the want of roads, which paralyses the industry of the colonists, although they supply potatoes, butter, cheese, maize, farinha, &c., to Port Alegre and Rio Grande, and even export large quantities to Rio Janeyro and other distant ports. The rivers in some cases supply the want of roads; thus the Jacuhy offers 200 miles of easy traffic for the towns of Rio Pardo, Cachoeira, San Jeronymo, and Port Alegre. The last-named place being the centre of the fluvial system and capital of the province, it is proposed to draw hence three great highways; one by the Jacuhy valley to San Barja on the Uruguay; another from Port Alegre to the seaport of Des-terro, which is the capital of Santa Catharina; a third by the Taquary or Cahy valleys to Cima da Serra. The river highways are navigable for steamers as follows—

	Miles
Rio Grande	40
San Gonzalo	48
Lake Mirim	96
Jaguaron	20
Lake Patos	144

	Miles
Guayba	36
Jacuhy	192
Taquary	24
Cahy	60
Sinos	56
Maquine	44
Cadea	20
Gravatahy	20
Pelotas	20
Piratinin	24
Uruguay	336

There are three steamboat companies on the line between Rio Grande and Port Alegre, a distance of 240 miles ; two plying between Rio Grande and Monte Video : two of Lamport and Holt's steamers every month to Rio Janeyro ; and a multitude of small steamboats on the rivers above enumerated.

The various cities, towns, and villages of the province, with the date of foundation and present number of inhabitants, are as follow:—

	A.D.	Inhabitants
San Borja	1698	2,000
Viamao	1741	400
Rio Grande	1737	18,000
Concepcion do Arroyo	1742	700
Sant Antonio da Patulha	1760	1,000
Rio Pardo	1769	2,000
Port Alegre	1772	40,000
Caxoeira	1779	2,000
Taquary	1795	2,000
Triumpho	1795	1,500
Encrucilhada	1799	1,500

	A.D.	Inhabitants
Piratingy	1810	1,800
Bagè	1812	2,500
Pelotas	1812	13,000
Cangussu	1812	1,800
San José do Norte	1820	800
San Leopoldo	1824	3,000
Camaquã	1833	1,200
San Gabriel	1837	1,800
Cruz Alta	1834	3,000
Bocca do Monte	1837	1,000
Caçapava	1833	1,500
Baumschneitz	1838	1,000
San Patricio de Itaqui	1837	1,500
Yaguaron	1846	6,000
Uruguayana	1846	3,000
Alegrete	1846	2,500
Passo Fundo	1847	200
Sant Ana do Livramento	1848	1,000
San Jeronymo	1851	1,000

The more important of these towns will be fully described in subsequent chapters. They are well provided with churches, hospitals, schools, and other public institutions. The Bishop of Port Alegre is diocesan of the province, which is divided into seventy-five parishes. There are 168 public schools, and ninety-two private ones, which are attended by 11,932 children, two-thirds boys. The hospitals and orphan asylums claim the admiration of strangers: at Port Alegre there are five hospitals, including the French, German, and Portuguese; the latter have also hospitals at Rio Grande and Pelotas. There are four fine establishments for

orphan girls at Port Alegre, including that of the Sisters of Charity; and another is at Pelotas. Besides the State bank at Port Alegre and the Bank of Brazil and English Bank at Rio Grande, there are branches of the Mauá Bank at Rio Grande, Port Alegre, Pelotas and Bagè. Baron Mauá is a native of this province, and has laboured much for its advancement.

The revenue and expenditure of the province are small, say a dollar a-head, or one-fourth of what the provincial budget of B. Ayres amounts to, with an equal population. The revenue averages 110,000*l.* per annum, showing a small surplus each year, viz. :—

President and staff	£3,500
Provincial legislature	3,500
Bishop and clergy	800
Schools	17,500
Police	13,500
Collection of taxes	15,000
Emigrant subsidies	5,000
Conversion of Indians	600
Half-pay servants	2,000
Orphan asylums	2,000
Hospitals	4,500
Arsenal boys	800
Subsidies, &c.	14,000
Interest on public debt	11,000
Sundries	8,000
Surplus	8,300
	<hr/>
	110,000

The Imperial revenue derived from the Custom-houses of Rio Grande at Port Alegre averages 350,000*l.* per annum, of which two-thirds from import duties, one-sixth from export, and the rest from other taxes.

The trade with England, Hamburg, and the United States is considerable: the value of imported merchandise is about 600,000*l.*, of which one-third is from England, an almost equal ratio from Hamburg, and the rest from France, United States, and River Plate. The value of exports may be put down at 750,000*l.*, of which one-half is to England, one-fifth to the United States, the rest to France, Portugal, and La Plata.

This does not include the coasting traffic with Rio Janeyro, Pernambuco, Bahia, and other ports of the Empire, which is quite equal to the whole of the direct foreign trade. The exports to foreign countries consist almost exclusively of hides. The exports to other parts of Brazil are largely made up of cereals from the German colonies. The port of Rio Grande represents two-thirds of the total trade of the province, and Port Alegre one-fifth, the only other market of any magnitude being Uruguayana. The first-named despatches yearly a million hides, and from 30,000 to 40,000 tons of dried beef. The

Capitania returns show that one-third of the tonnage is British, one-tenth Brazilian, and a like ratio corresponding to each of the three flags, German, Dutch, and Portuguese.

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	A.D.	Inhabitants
Piratiny	1810	1,800
Bagè	1812	2,500
Pelotas	1812	13,000
Cangussu	1812	1,800
San José do Norte	1820	800
San Leopoldo	1824	3,000
Camaquã	1833	1,200
San Gabriel	1837	1,800
Cruz Alta	1834	3,000
Bocca do Monte	1837	1,000
Caçapava	1833	1,500
Baumschneitz	1838	1,000
San Patricio de Itaqui	1837	1,500
Yaguayana	1846	6,000
Uruguayana	1846	3,000
Alegrete	1846	2,500
Passo Fundo	1847	200
Sant Ana do Livramento	1848	1,000
San Jeronymo	1851	1,000

The more important of these towns will be fully described in subsequent chapters. They are well provided with churches, hospitals, schools, and other public institutions. The Bishop of Port Alegre is diocesan of the province, which is divided into seventy-five parishes. There are 168 public schools, and ninety-two private ones, which are attended by 11,932 children, two-thirds boys. The hospitals and orphan asylums claim the admiration of strangers: at Port Alegre there are five hospitals, including the French, German, and Portuguese; the latter have also hospitals at Rio Grande and Pelotas. There are four fine establishments for

orphan girls at Port Alegre, including that of the Sisters of Charity; and another is at Pelotas. Besides the State bank at Port Alegre and the Bank of Brazil and English Bank at Rio Grande, there are branches of the Mauá Bank at Rio Grande, Port Alegre, Pelotas and Bagé. Baron Mauá is a native of this province, and has laboured much for its advancement.

The revenue and expenditure of the province are small, say a dollar a-head, or one-fourth of what the provincial budget of B. Ayres amounts to, with an equal population. The revenue averages 110,000*l.* per annum, showing a small surplus each year, viz. :—

President and staff	£3,500
Provincial legislature	3,500
Bishop and clergy	800
Schools	17,500
Police	13,500
Collection of taxes	15,000
Emigrant subsidies	5,000
Conversion of Indians	600
Half-pay servants	2,000
Orphan asylums	2,000
Hospitals	4,500
Arsenal boys	800
Subsidies, &c.	14,000
Interest on public debt	11,000
Sundries	8,000
Surplus	8,300
	<hr/>
	110,000

The Imperial revenue derived from the Custom-houses of Rio Grande at Port Alegre averages 350,000*l.* per annum, of which two-thirds from import duties, one-sixth from export, and the rest from other taxes.

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forty-two presidents, from Viscount San Leopoldo to the present enlightened statesman, Homem de Mello: the only interruption was in 1835, when the civil war broke out, and President Fernandes Braga removed the seat of government to Rio Grande, while Vice-President Pereyra Ribeyro assumed power at Port Alegre. The actual President has been a staunch supporter of Viscount Rio Branco in the abolition of slavery, and his programme of government is—railways and immigration.

II.

CITY OF RIO GRANDE.

Rio Grande, November 13, 1871.

THE 'Camoens' entered port early this morning, and I found the city in unusual bustle owing to the inauguration of the Gas-works. Whatever side you turn you meet English engineers, some belonging to the water-works, some to the gas company, some to the Pelotas Dredge, some to the Government enterprise for deepening the Rio Grande bar: and as a natural consequence every stranger is immediately put down for an engineer. I have been asked more than once if I am for the Gas or the Water-works, and have not yet made up my mind which. The hotels are so crowded with English engineers that I should have been compelled to take up my quarters in a cockloft over M. Pascal's kitchen, had not a hospitable countryman received me with open arms and presented me with the freedom of his house.

Rio Grande at first sight is a poor-looking place, the approach for several miles from the bar being an interminable vista of sand-hills. It is a port of considerable trade, vessels of 250 tons coming to moorings alongside the shore: here you see the black peons shipping hides for England, yonder they are discharging Chilian flour from M. Video; some of these negroes are slaves, others are free and possess much money, but all are happy, good-humoured-looking fellows.

The streets are clean, irregular, well paved, and lined with houses in the Brazilian style, some four or five stories high, the fronts decorated with blue and white porcelain tiles, which saves one's eyes from the dreadful glare of Spanish whitewashed towns. The interior of the better class of houses reminds one of European comfort, but the most striking feature is the spacious dimensions of the rooms, which have, moreover, numerous windows, and are delightfully cool and agreeable. The house of Proudfoot & Co. is one of the best, situated in the Rua Pedro II., or main street; and close by is a handsome square building (with shops in the lower story) which cost 30,000*l.* sterling, and was erected last year.

Nearly in front of the Custom-house is the shop

of Messrs. Halliwell, chemists and druggists, a favourite rendezvous of strangers. The Foreign Club, with many-windowed saloons of vast size and cool temperature, looks out upon the port and lake, commanding a view of the fertile Ilha dos Marinheiros and the aquatic suburb of San José do Norte. The fruit market, as in most Brazilian towns, is well worth a visit, having abundance of fruit, vegetables, fish, &c., from Marineros Island; the market-people are mostly coloured, and one old woman is said to be owner of six slaves of her own colour; there are rows of trees through the market which give it a pleasant look. The plazas and some of the streets are also planted. Near the chief square is the Town-hall, a quadrangular building, where the municipal fathers meet; also the printing office of 'Echo do Sul,' one of the principal morning papers. This small city of 17,000 inhabitants boasts five daily papers.

There is a little theatre called '7 de Setiembre,' in honour of the anniversary of Brazilian Independence. But the finest edifice is the hospital, which is large enough for a city like Buenos Ayres. It is admirable how much the Brazilians excel in their situations for the relief of suffering humanity. The churches are small, and the

three I have seen possess nothing artistic or notable.

The police and public officials are courteous, respectable, and well dressed. In fact, at every turn you see the signs of healthy administration and good government; although I cannot omit to mention that the custom-house officers left us waiting half an hour in the sun, because the 'Vista' was at his breakfast. The hotels are small and uncomfortable, but the *cuisine* is good; charges reasonable, ventilation imperfect.

Notwithstanding the sand-hills round the town, the temperature is generally cool, owing to the almost daily sea-breeze; and in winter the cold is said to be intense. A few miles inland there is luxuriant vegetation. Mr. Crawford's quinta of Arrial, nine miles distant, reminds one of the shady avenues of Aranjuez, in the desert plateau of Old Castile; it produced last season 100,000 oranges.

Numerous steamers ply to Pelotas, Porto Alegre, Yaguaron, and other ports of Lakes Patos and Merim: the finest is the 'Guayiba' (in which I leave to-day for Porto Alegre), which was built in the Clyde for Messrs. Proudfoot & Co., the great English house wherewith the trade and progress of

Rio Grande is identified. There are also two lines of steamers connecting this city with the ocean ports of Brazil and La Plata. Nothing can surpass the elegant accommodation of Messrs. Lamport & Holt's coasting steamers 'Calderon' and 'Camoens,' built specially for this trade, and carrying the Brazilian flag as mail steamers of the imperial service. During the six months they have been running, they have never yet lost a day by the Rio Grande bar, which was often so formidable to the old line of steamers as to keep them a week inside or out at sea before they durst venture over it. This bar is a great obstacle, but the Provincial Legislature is desirous of removing it. Tug-boats are kept in constant service; and once inside the bar, the port is sheltered and secure for shipping.

The principal trade is in the hands of English or Germans, but the native merchants are also intelligent, active, and well educated, some of them speaking English as fluently as ourselves, although most of them have never been outside the bar of Rio Grande. This province has produced some very remarkable men; Baron Mauá, father of Brazilian steam-navigation, was born near Pelotas; Marshal Osorio, the *preux chevalier* of the empire, comes from the same locality; and the present

military governor of the city, General Salustiano, gained much distinction in the recent campaign.

There are two banks, those of Mauá & Co., which has its branches all over Brazil and the River Plate, and the London and Brazilian, established some four years ago. There are many wealthy capitalists here, and money is held as cheap as in the River Plate; the currency is almost exclusively paper, at a discount of ten per cent., which may be regarded as the fixed rate. Interest rules about twelve per cent. per annum, but some people prefer building for an investment.

The place will be much improved when it possesses water-supply and gas. The contractors, Messrs. Upward & Illingworth, who arrived here some four months ago, representing the San Pedro Brazilian Gas Company (limited), made the preliminary arrangements with the promptitude characteristic of our countrymen, and the streets were opened to-day at noon in front of the Custom-house to put down the first pipes. The municipal and other authorities were present, besides a large number of citizens, the editors of the local papers, and the chief English and German residents. General Salustiano, Colonel Ran-

gel, and the staff-officers of the garrison were in full uniform, the 7th battalion of the Line forming a guard of honour, and the military band playing national airs. An Irish sub-contractor with a gang of workmen deposited the pipes, and Mr. Upward advancing, presented a silver mallet to Don Francisco Jose Cunha, mayor of the city, who gave the pipes two strokes with the mallet and declared the works duly begun.

Mr. Upward addressed the Mayor in English as follows :—

‘Most worshipful mayor and city councillors of Rio Grande, right worthy representatives of this flourishing population, I come on behalf of the San Pedro Brazilian Gas Company to congratulate you on this happy occasion of laying down the first pipes to light your city with gas. I trust that before long, your streets, squares, and buildings will be illuminated, and that this great improvement will be, as it is elsewhere, the forerunner of such additional comfort and progress as to insure the prosperity and advancement of Rio Grande. The directors will spare no efforts in the matter, counting on the decided assistance of the Brazilian Government.’

The Mayor replied—‘Illustrious Senhor Up-

ward, I salute you as the distinguished engineer of the San Pedro Gas Company. The town council accept your invitation with pleasure, to assist at the inauguration of these works under your able direction, and all my fellow-citizens rejoice with me at the prospect of so great an improvement as lighting our town with gas. May Divine Providence protect the company and pour his choicest blessings on this our native city !’

Cheers of ‘Long live Dom Pedro,’ ‘Viva Brazil,’ ‘Viva la Compagnia Ingleza,’ &c. rent the air, simultaneous with rockets and strains of martial music, amid which the meeting dispersed, and some of the English strangers remarked that it looked irresistibly ludicrous to see so many umbrellas on a fine sunny day; but the heat is already sufficient to call for such shelter. In the afternoon Mr. Upward left by mail-steamer ‘Camoens’ for Rio Janeyro *en route* for Europe, and was accompanied aboard by the most of the leading citizens, Mr. Consul Callendar, and others. I had the pleasure of making the acquaintance of the Consul, who is much esteemed here, and of most of the foreign residents.

The city of Rio Grande has little attraction for an idle visitor, but is the chief commercial em-

porium in these waters. I am told that Port Alegre, 20 hours or 180 miles distant by water, is a terrestrial paradise, in the midst of the most delightful scenery; it has a larger population than this city, and is the residence of the chief authorities as well as of numerous German merchants.

Before closing my remarks on Rio Grande, I may observe that the place is proverbially healthy. Last evening I visited the English and native cemeteries, and chanced to meet the Town Clerk, Mr. Saa, a polished gentleman, who speaks English fluently, and who assures me that often a day or two passes without a single interment, although the average mortality for a place of 17,000 souls might be expected to range at 12 weekly. The only English names I noticed were Mr. Thomas Messiter, who died in 1860, aged 68 years, and Mr. Wm. M'Crae in 1862, aged 39 years. Both cemeteries are well kept. The land side of the city is protected by a strong wall with bastions and demi-lunes pierced by two gates, but in some places the sand has risen to a level with the top of the battlements. Wild dogs burrow in the sand and live there.

Returning from the cemetery you pass the bar-

rack, which holds 300 cavalry, and the Portuguese Hospital of Beneficencia. The Caridad, or city hospital, is a massive structure on the water's edge, of which I have already spoken. There are three public and as many private schools, but many people send their children to be educated at Rio Janeyro or elsewhere.

Strangers coming to Rio Grande should procure a letter of introduction to Messrs. Proudfoot & Co. as their best passport, for under the protection of Mr. Crawford they can be wanting in neither advice nor assistance.

III.

RIO GRANDE TO PORT ALEGRE.

THE immense inland sea known as Lagoa dos Patos, nearly 200 miles across, is navigated by numerous steamers plying between Rio Grande, Pelotas, Port Alegre, Yaguaron, and other ports of the interior. The chief trade is between Rio Grande and Port Alegre, which maintains three lines of steamers, affording bi-weekly communication. I took my passage in the 'Guayiba,' the finest vessel in these waters. We had over forty first-class passengers, and the accommodations were admirable, but the fare (twenty-five milreis or fifty shillings) seemed to me very high, and I am not surprised to hear that she has already given a handsome dividend. The engines are on the compound system of high and low pressure, burning only about four tons of coal daily.

We left our moorings at the company's wharf at twelve o'clock sharp, and as we bent away north-

wards by a circuitous route to avoid sand-banks, a slight shower of rain fell, which served with the light sea-breeze to cool the atmosphere. On the north shore, right in front of Rio Grande, is Mr. Proudfoot's farm of Coqueruto, where he made several efforts to plant cotton some seven or eight years ago, laying down considerable tracts of land, and putting up cotton-jins and machinery; but although the soil seemed suitable and the plants came up healthy and vigorous, they would not ripen in season, and the scheme had to be abandoned. The farm is now used for growing market produce, and managed by a Scotchman. Mr. Proudfoot has two other farms in the neighbourhood; in fact, wherever you turn you hear or see evident signs of the energy and enterprise of this representative man, one of the earliest foreigners who developed the resources of this part of Brazil, and who even now, while enjoying the fruits of a princely fortune in his native hills of Scotland, has his attention so fixed upon the progress of these countries, that every year he embarks in some new enterprise of steam-boats, telegraphs, railways, gas, &c., to aid in the march of progress.

The desolate hamlet of San José de Norte is

half buried in the sand-hills facing the port of Rio Grande, and sailing-boats make the run across in half an hour. We pass near enough to see that most of the houses appear untenanted, except some on the beach, one of which bears the legend, 'English ship store.' A good-sized church is in the background, but some day I fear a sand-slip will overthrow the place. One of the passengers remarks that these arid sands and white houses remind him of Suez, which is about the most inhospitable place known; yet we are told that half an hour's ride from San José takes you into a pleasant country where there is plenty of shooting, and here and there a chacra or farmhouse.

Passing a lighthouse and some cottages, we enter the Lagoa dos Patos, and see a magnificent sheet of fresh water without other land on the horizon than the Sierras of Pelotas. At the foot of those hills an Irish colony was established some twenty years ago, but it proved a failure; whether owing to the country, or the colonists themselves, I will not venture to say. Some of the settlers remained only a few months, alleging that they could not eat 'sawdust,' as they called the *fariña*; others removed to Buenos Ayres after a trial of

one or two seasons, and a stray vestige of the colony alone remains.

Our passengers on board are mostly Germans, for Port Alegre is in a manner a German settlement, the first colony having been fixed there in 1825, and now there are 60,000 Germans in the province. They never think of returning to Europe, but become, like the Irish in North America and Buenos Ayres, permanent settlers in their adopted home. Still they preserve the warmest recollections of the Fatherland, and in language, sentiment, and traditions are as true to their native country as if only travellers in a strange land. As the sun was setting behind the Pelotas range, one of the passengers struck up the 'Wacht am Rhein,' and the broad waters of the lake echoed to the chorus—

Fest steht und treu
Die Wacht am Rhein.

Memories of the Fatherland, traditions of the Rhine, stories from the recent battle-fields whiled away the hours of twilight, and the 'young May moon' was far on her midnight course ere we retired to sleep. Before sunrise I was again on deck to see the panorama of Itapoa, where the

estuary of Guayiba communicates with the great lake. Hills covered with forest come down on either side, leaving only a narrow channel, where the lighthouse of Itapoa stands. To the left is the rounded promontory of Barba Negra, where the old lighthouse stood. I may observe that the coasts of this lake have several lighthouses, and some of the narrow channels are regularly buoyed.

The Guayiba estuary is formed of four rivers—the Tacahuy, Lacuhy, Sinos, and Gravitahy; the whole, as seen from a neighbouring hill, resemble a man's hand, for which it is called Viamao. Nothing can be imagined more picturesque and delightful than the ranges of wooded hills surrounding this second lake, the banks of which are lined with farms and country-houses nestling in luxuriant foliage, and the shadows thrown by the clouds chase each other from hill to hill, while the alternations of light and dark green, the murmur of waters gently breaking on the shore, and the distant view of Port Alegre crowning yonder hill, form a picture full of charm and varied attraction. Arriving within cannon-shot, we reach Pedras Blancas, where the powder-magazine is kept, an island of immense loose stones,

piled one on another so fantastically, that you would fancy a person could push some of them down, though weighing several tons each. The city and port now unfold themselves before us in a picture of surpassing loveliness.

IV.

PORT ALEGRE.

NONE can have an idea what a paradise this place is. I have never seen anything so charming as the scenery by land and water all around.

On Wednesday we rode out by Baron D'Ornano's villa to a hill commanding the plain of Viamon, Sierras, and the wood of Matto-grosso ; and yesterday Mr. Coulborn, contractor for dredges, &c., took us in his steam-launch up the Jacuhy.

To-morrow there is another excursion fifty miles by water, and on Tuesday we start for the Colonies ; the nearest, San Leopoldo, is forty miles distant, and Messrs. Smith, Sawers, Turner, &c., are now making the railway from this city.

Port Alegre is a thriving place, and since the invasion by English engineers within the last few months the change is marvellous. The gas-works were inaugurated last week, and when the

railway and other works are completed, it will go ahead very fast. A concession is granted for a railway hence to Sta. Catalina (200 miles), to have a new and better port than Rio Grande.

This city has double the population of Rio Grande, probably 40,000 inhabitants, several fine shops, a splendid theatre, treasury, townhall, arsenal, college, &c. The Brazilian and Portuguese hospitals, German clubs, cathedral, plazas, &c. are also very fine. The water supply is admirable; fountains play in the streets, and every house has pipe-water service, by mains brought six miles from the mountains, and laid down in 1805 by a French contractor. The concessionaire of the gas is Baron D'Ornano, a Corsican related to the Bonaparte and Colonna families, and late French Consul here, who sold his concession in London. Delightful country-houses surround the city, the finest being those of Sor. Inocencio, manager of the Mauá Bank, Sor. Lisboa, an army contractor, Baron Gravitahy (whose house was the emperor's residence during his stay here), and numerous others.

Messrs. Gardner Brothers have established a foundry where they make saw-mills, coffee-mills,

&c., for the fazendas in the interior. Messrs. Armishaw have a large English house of business, and the other residents are Messrs. Dillon, Thompson, Maguire, &c.

The wonder of the province are the German colonies, summing up 60,000 people, who have converted virgin forests into waving corn-fields, interspersed with neat farm-houses and all the appliances of agricultural life: the first, San Leopoldo, was founded in 1825, and there are now many similar; there are three newspapers published in German, and the advancement of the country is mainly due to these industrious settlers. Even the negroes often talk German; in fact it is a German principality in the heart of the Brazilian Empire.

The Rio Grandenses are the nicest Brazilians I have met with, very kind and obliging to strangers, many of them talking English and French fluently. The signs of good government and administration are visible on all sides; the arsenal, city prison, &c. resemble what you would look for in England.

But that the steamer goes to-day I could write whole pages about this interesting and delightful

place. In my excursions on horseback or steamer, Messrs. Coulborn, MacGinity, Armishaw, Archer, &c. have kindly promised to accompany me. Mr. Coulborn is M.A. of Oxford. I have been exceedingly fortunate to fall in with such pleasant companions.

V.

THE SUBURBS OF PORT ALEGRE.

EXCURSIONS by land or water in the vicinity of this city reveal such a variety of enchanting scenery that one might spend months here without satiety, visiting every day some new point of beauty, for the panorama of Port Alegre is like a kaleidoscope with so many changes of lovely vistas. Last Wednesday I rode out with some friends towards the Caixa de Agua or reservoir, a few miles from town. The moment we passed the Caridad Hospital we got a view of the Guayiba valley and lake, and the splendid woodland scenery stretching away to Dos Irmaos and San Leopoldo. The country-houses in the outskirts are surrounded with gardens and orange-groves. The roads are good, but sometimes steep, with hedgerows on either side as in England. Green lanes, park-like wood and meadow, murmuring streams, tall palms, and at intervals a

wood-cutter's rude waggon or a troop of mules from the mountain; these are the characteristics of the country, but now and then you instinctively halt your horse to gaze upon the lovely landscape, in which the five rivers, like bands of silver, intersect the wooded valleys and enhance the tropical vegetation around.

The sun was setting as we gained the ridge overlooking Matto-Grosso, a thick forest which was much infested with robbers a dozen years ago. Returning towards the city we passed the country-houses of sundry noble families, and alighted at that of Baron D'Ornano, a Corsican, who received us with great courtesy: the Baron is a good linguist and speaks in high terms of the scenery and natural resources of this province, all of which he has travelled over during a residence of fifteen years. He showed us the records of his family for 1,200 years, and added that the long line ended with himself: he lives in an unfinished chateau that looks like the Castle of Otranto, some rude boards answering for the hall-door; and the chapel wing being used for out-offices: the owner died before finishing the structure and left his family but scanty resources. The ball-room and dining-hall are

splendid apartments, and from the turrets is obtained an extensive view. The Baron lives with a few servants and a little blue-eyed boy whom he has adopted.

On Thursday Mr. Coulborn invited me with a few other friends to an excursion in his little steam-yacht up the River Dos Sinos. The day was fine, with a cool breeze over the lake, and as we awoke the echoes of the Guayiba we had occasion to admire a long coast-line of elegant country-houses, among which that of Sor. Lisboa, a contractor during the late war, was remarkable for architectural taste. The line of railway to San Leopoldo and New Hamburg will run along this coast-line. Yonder is a neat villa with gardens in front; it is a second orphan asylum (besides Sta. Theresa) and accommodates forty little girls. The orange-trees are laden with fruit, and the negroes sing at their work as we pass. Ascending the Sinos we enter upon beautiful river scenery, the woods forming fantastic vistas and every shade of foliage from golden to dark green. At times we come upon cottages with a row of palms in front, or nestling in orange-groves, the children playing on the green sward, forgetful of alligators. Last year a German gardener who

lived hereabout lost a little boy of seven years old, a yacaré coming up from the river and carrying off the child before the distracted parents could run to its rescue. Large square-built villas are passed as we ascend, for some of these places are the property of wealthy 'fazendeiros.' At last we arrive at a bend of the river which discloses a handsome country-house and plantations, the residence of D. Bento Cyrio, an Italian baker, some forty years a resident of Port Alegre, where he amassed a large fortune and gained the reputation of a model citizen for honesty and persevering labour; he now lives with his numerous family in baronial affluence on his estate, and this is a favourite place for pic-nics by water.

We went some miles higher, meeting a steamer full of passengers from San Leopoldo and several sailing craft laden with lumber or other produce. By a circuitous route through the islands we got into the River Jacuhy, and returned this way to the city, coming out near the old powder-magazine in the islands.

To form a proper idea of the city we steamed round to the southern bay in direction of Santa Theresa. Looking towards the hill of Santa

Anna, where the citizens often go on holidays, we see the chapel of Menino Deos or the Infant Saviour, famed for the religious festivities celebrated here every Christmas, and lasting some twenty days. Nearer town is the seat of the late Baron Gravitahy, who earned his title in the war of Independence; the Emperor resided here in 1845, when he first visited this province; the architecture and plantations are the result of combined wealth and taste. Close by is the Villa of Sor. Inocencio, manager of the Mauá branch-bank; other houses and gardens fill up the background. We double the extreme west point, on which the prison stands, and land at the Custom House, after a delightful day's travel. The steam-yacht is a miniature vessel, the first of its size on the combined principle of high and low pressure, and goes easily twelve miles an hour (with the current we made fourteen), while the whole amount of coal for a day's excursion would fit in a small market basket; she requires only one man to mind the engine and another to steer, and can carry a dozen passengers or more. Mr. Coulborn says the cost, placed in South America, is about 500*l.*, and indeed nothing can be imagined more suitable for a private

family for pleasure parties. I forgot to mention that amongst our company was the editor of the 'Rio Grandense,' Mr. Berlink, a gentleman of varied information and a good French scholar.

Another pleasant ride from town is to the chapel of Menino Deos, overlooking the southern bay of the Guayiba estuary. The view at early morning is delightful, the mists slowly rising from the water, over which the shadows of the clouds sweep in fantastic forms, while the rising sun shines upon the white cottages embosomed in luxuriant vegetation, and the wooded hills behind seem to shut out all cares of the exterior world. It is only perhaps in the golden bay of Palermo, or from the hill which commands the 'lower lake' of Killarney, that such an atmosphere of repose, blended with all that is most beautiful to the eye, steals over the enraptured senses and hushes the very pulsations of your heart in mute admiration. If you ascend to Morro do Cristales or Belen you will also find lovely panoramas, as indeed you will from any commanding point in this earthly paradise.

VI.

ENGLISH ENTERPRISES IN PORT ALEGRE.

RAILWAYS, dredges, gas-works, coal-mines, foundries, &c. are the order of the day, all new enterprises in the hands of English engineers, the necessary capital in most cases being also raised in England. It is easy to predict a great and rapid development of industry in this part of the Brazils, the most favoured in soil and climate of all the vast empire.

The eminent engineers, Messrs. Sawyer and Turner, whose names are already favourably known in connection with the Bahia and Pernambuco lines, are constructing the New Hamburg Railway, which will open up an important trade between the German colonies and this city, which at present maintains three distinct lines of steamers, the distance by land being twenty-eight miles. When the first steamer was put on, a few years ago, it was doubted whether it would prove a paying business,

but before long a second was started, and the trade so much increased that further competition sprang up, and now the daily steam traffic is well supported. The originator of the New Hamburg Railway is Mr. John MacGinity, an old Scotch resident, who has a hand in every enterprise of progress in and about Port Alegre; he began life in Rio Janeyro as overseer of a department of Mauá's iron-works, and has since held responsible posts under the Brazilian Government in connection with steam-boats and machinery, besides taking contracts in construction of the prison, arsenal, &c. of this city, making surveys of the adjacent lakes and rivers, and using every effort to push forward the San Jeronimo coal-mines. Mr. MacGinity returned from England a few months since and is now superintendent of the railway works; he is also United States' Vice-Consul and agent for several English firms and insurance offices. He is a large landed proprietor, and offers free land-grants of 100 acres to each settler, on lands situate between two of the most flourishing German colonies.

The prospectus of the New Hamburg Railway, published at London last January, shows the capital of the Company at 292,500*l.* sterling, in shares of

20*l.* each, with a guarantee of 5 per cent. for sixty years from the Government of Rio Grande. The directors comprise the Brazilian Minister in London, Lord Claude Hamilton, Messrs. W. Austin, F. Furrell, Captain Rennie, and G. Steward. The engineer-in-chief is Mr. James Brunlees, whose representative here is Mr. Cleary, a gentleman of long experience in Brazil. The contractors, Messrs. John Watson and John Bevan Smith, have agreed to construct the line for 280,000*l.* sterling, or 10,000*l.* a mile, of which they take one-third payment in ordinary shares. This will be the cheapest line ever made in the Brazils, the San Paulo having cost 24,000*l.* a mile, and others even more; as the San Paulo is now yielding 5½ per cent., it may be predicted that the New Hamburg line will give more than double. This is the more probable when we see the steam-boat companies to San Leopoldo and Rio Grande give in many cases regular dividends of 30 to 60 per cent. per annum. The Government reserves the right of purchasing the line at the expiration of thirty years. The company's privilege prevents any other line being constructed within twenty miles. It cannot be doubted that the railway will tap a rich and increasing trade, the number of German

colonists being estimated at forty thousand, or nearly half the population of the department of Port Alegre. Besides grain and vegetables the colonies produce tobacco, butter, pork, &c.; and the settlers are so much pleased with the genial climate and well-ordered mode of Brazilian administration, which gives them security, tranquillity, and free land-grants, that they never return to Europe, but fix all their interests in the land of their adoption. The railway will certainly give a great stimulus to the colonies and a good return to the shareholders; the cost of construction is comparatively low, seeing the mountains, rivers, &c. to be passed; in some cases the cane-brakes are so thick that it is a work of some days to cut a passage through. The scenery along the route is magnificent.

The Government of Rio Grande, being sensible of the immense importance of facilitating commerce by clearing away bars and sandbanks between this port and Rio Grande, and deepening the river of Guayiba and its five grand tributaries, have just got out from the Clyde two powerful dredges and a steam tug. The former are being put in working order by Mr. Coulborn, the constructor, who came hither in person to do so.

These dredges are independent of two others (smaller) which arrived this week at Rio Grande for Mr. Albert Smith, to clear away the bar at Pelotas, besides others used for deepening the Bay of Rio Grande. Mr. Coulborn's dredges are adapted to raise each 300 tons an hour; they are 50 horse-power nominal, or 250 effective, and may be also used as screw steamers, the engines being on Elder's principle of high and low pressure combined, which makes an important saving in coal, each of these dredges consuming only $4\frac{3}{4}$ tons in twenty-four hours. The merit of this invention of the 'combined system' is due to a Swedish engineer named Wolff. Mr. Coulborn's dredges steamed out from England to this port in fifty-three days, encountering dreadful weather; strange to say, they sighted each other only once, entering St. Vincent within half an hour, arriving off Rio Grande at a difference of only two hours. The firm of Henderson, Coulborn, & Co., of Renfrew, is one of the greatest on the Clyde, the workshops covering $18\frac{1}{2}$ acres, and employing over two thousand men; at present they have fourteen steamers building, with an aggregate tonnage of 17,000 tons, and 6,000 horse-power, representing a value of a million and a quarter sterling; the establish-

ment was founded by John Henderson & Co. in 1850. Mr. Coulborn is a young man, little over thirty, and not only a clever engineer, but a good scholar, having taken M.A. and honours at Oxford. His father-in-law, the new Provost of Glasgow, is well known in that city for his munificence, having given 10,000*l.* for the new Glasgow Library. Mr. Coulborn has built some steamers for the Rio Janeyro and Corrientes trade, and intends visiting the River Plate next month, before returning home.

We lately witnessed the inauguration of the gas-works for this city by Messrs. Upward & Illingworth, who are contractors for the Company formed in England to light Port Alegre, Pelotas, and Rio Grande, the concession for which was taken out three years ago by Baron d'Ornano. The works at Rio Grande were inaugurated at the same time, and the lighting of these cities with gas will be an incalculable improvement, and probably give results as advantageous as in towns of even smaller population, such as Rosario de Santa Fé.

The coal-fields of Candiota, so much spoken of by Messrs. Nathaniel Plant and G. Law, and to which a railway is projected, are said to be much

inferior to those of San Jeronimo or Arroyo de las Ratas, for which a concession obtained by Mr. Johnson has been recently disposed of in London. Mr. Plant has also arranged respecting the Candiota mines with the banking house of Bischoffsheim & Co.

Messrs. Gardner Brothers have just established, close to the Arsenal, an English foundry, which promises to do a great and profitable business, owing to the demand for machinery in the 'fazendas' of coffee, &c. in the interior. Although only two months working, they are already putting up a saw-mill for Don Leonardo Macedonio, of Caxoeira, 200 miles inland, and a coffee-grinder and saw-mill for Messrs. Fontoura & Mariante, at Taquary, 100 miles distant, besides a brick-making machine and other works elsewhere. At the foundry I observed a shearing and punching machine, by Craig & Donald, of Glasgow, a screw-cutter, Shields' patent fan, &c., the whole driven by a six horse-power engine of Marshall & Co., of Gainsborough. Most of the workmen are English, with native apprentices. This foundry is sure to do a great business, and will be most useful for the increasing steam-boat traffic.

VII.

THE NEW HAMBURG RAILWAY.

THIS will be the first railway constructed in the province of Rio Grande, and seems destined to be the main trunk from which other lines will branch out towards the Atlantic and the Uruguay.

The distance from Port Alegre to San Leopoldo by rail will be only 22 miles, or half the present route by water, and hence to New Hamburg is almost 6 miles, making the entire length 28 miles; the cost of construction will be unprecedentedly low (10,000*l.* per mile), the narrow gauge of 42 inches being adopted, as best suited for a mountainous country with light traffic. There are some engineering difficulties to be overcome, three rivers to be crossed, the Sapocaia range of mountains to be traversed, some woods and cane-brakes to be cleared, and an embankment to be formed along that part of the Guayiba at the foot of the city of Port Alegre. None of these, however, can be con-

sidered formidable, and although the bridges are designed for a double line, the biggest of them will hardly cost 10,000*l*.

About 5 miles from Port Alegre occurs the first bridge, crossing the Rio Gravitahy, with a central span of 80 feet, and two others of 48 each, in all 176 feet. It will have longitudinal wrought-iron girders on cast-iron piers with stone abutments, the height of the bridge being 5 feet over flood level. There are several culverts of much cost and labour, but the alleged swamp, which was the bugbear of the line, turns out harmless and easy to cross. At Sapocaia there is another iron bridge, with a span of 30 feet. The greatest work on the line will be the Sinos bridge at San Leopoldo, *en route* for New Hamburg, half a mile above the former town : it will have 7 spans, the longest of 60 feet, in all 244 feet, the river-spans constructed the same as the Gravitahy, the iron-work weighing 250 tons ; it will be 15 feet over ordinary water-level. As I have said above, all these bridges are to be for a double line, though at present the railway will be laid down a single one.

The line is straight for more than half its entire length, the remaining portion being a series of curves, but generally so easy (1,200 to 1,500 feet

radius) as to give no anxiety. The sharpest is 819 feet radius, which in England would be thought tolerably easy. It is necessary to make this sinuous route in order to avoid the hills, which must otherwise be either ascended or tunneled. The line crosses the Sapocaia range at its lowest pass, $2\frac{1}{2}$ miles from San Leopoldo, and here of course occurs the greatest incline—1 in 50—which is much less than found in England, where there are some even of 1 in 30. The ascent from the Port Alegre side stretches over 1,000 yards, and the descent towards San Leopoldo 1,200 yards, the maximum height attained being 150 feet over the San Leopoldo station.

The deepest cutting is 29 feet, the deepest bank 30. The sleepers employed are of one or other of the ten hard woods of the country already enumerated. At a place called Steinkopf is found a serviceable red sandstone, of which the abutments of the bridges and other works will be composed. The line will traverse, besides jungle and forest, a number of German farms, the prettiest of which is Spiegelberg, close to San Leopoldo. The contractors expect to open the line thus far in twelve or eighteen months.

Messrs. Watson & Bevan Smith are also in

treaty with the Municipality of San Leopoldo for an iron road bridge over the Sinos river in front of the town, which would cost about 10,000*l.* having 3 spans of 93 feet each. The Piratiny bridge, not much larger, cost nearly four times that sum.

Mr. John MacGinity has published an interesting and minute map of the colonies and that portion of the Province which the present railway must open upon its projected prolongation from New Hamburg to Caxoeira and Uruguayana, a distance of nearly 300 miles, to be completed in annual sections over a period of about ten years.

As it is supposed, with good reason, that the traffic between New Hamburg and Port Alegre will pay a handsome dividend to the shareholders (by taking up the present remunerative trade which maintains three lines of steamers), it is intended after the first year to ask the Government to transfer the 7 per cent. guarantee to a prolonged line to Taquary, *viá* Port Guimaraens, and so on successively to Rio Pardo, Caxoeira, St. Angelo, Santa Maria, San Pedro, San Vicente, San Francisco, Assis, Alegrete, and Uruguayana. These sections (except the last two, which are very long) average 25 miles each, passing through towns and

agricultural districts of great importance. The statistical returns show that most of the districts settled by colonists have a regular increase of 20 per cent. every year over the revenues of the preceding one.

Cheap, narrow-gauge railways can be made along the entire route at the cost of the New Hamburg line (10,000*l.* per mile) ; and as the Government will always be ready to devote 30,000*l.* per annum for subsidy or guarantee, this can be put forward every year for a new section according as the previous ones become self-supporting.

Another projected railway of great importance is that traced out from Port Alegre to Torres, on the Atlantic, in the Province of Santa Catalina, a distance of nearly 100 miles : this would cost 1,000,000*l.* sterling, and the harbour works at Torres are estimated by the engineers at half that sum. It would have the effect of opening up a trade at present too remote from the port of the Rio Grande.

The advancement of the Province of Rio Grande is of course mainly due to its German colonists, who have earned for it the name of 'Granary of the Brazilian Empire.' Its finances meantime are so

flourishing that last year it had a surplus of 17,600*l.* sterling, and being unburthened with any debt, it can devote every energy to the furtherance of railways, which are destined to increase the public and private wealth in a remarkable degree.

VIII.

THE COAL-FIELDS OF SAN JERONIMO.

ON Sunday morning we set out in Mr. Coulborn's steam-yacht from San Jeronimo, a village some sixty miles up the Jacuhy, at the mouth of its tributary the Taquary. At short distances along the route we saw farmers' and country-houses, indicating a thicker population than in the River Plate countries, and the inhabitants seeming to enjoy a comparative affluence. We met several craft with large square sails coming down stream, laden with timber or castor-oil nuts; the boatmen were in all cases natives, and sometimes had their wives and families aboard. There is nothing different from the scenery of wood and water already described of the Sinos, the first place of note being a charqueda, or saladero, near the mouth of the Arroyo dos Ratos, after which we pass the ruined mansion of the Alves family which was bombarded during the Garibaldi wars

and has never been restored. After six hours' steaming we sighted San Jeronimo and Triumfo, two villages on opposite sides of the river. The latter, on the right, is older than Port Alegre, and was of some importance in the last century; it presents a handsome appearance, crowning the hill-side with a twin-turreted church in the centre and several well-built houses.

We land at San Jeronimo, on the left, as this is the nearest point to the fields, and find it a straggling place of 800 or 900 inhabitants. An old Welshman, named Thomas Jones, gives us a cordial welcome, and prevails on us to proceed to his house on the top of the hill, about a mile off. On the route we fall in with Major Marcos, an old Brazilian officer, who speaks French, and offers his services in any way he can be useful. We halt at a tavern kept by a German, and find a crowd of fifty persons, Germans, Brazilians, negroes, &c., engaged in a brutal cock-fight. A little farther we come to an extensive factory belonging to M. Daixon, a Frenchman, who carries on the whole yerba trade of the district, employing a great number of people. The factory being closed, and the villagers amusing themselves, we called to pay a visit to

the Frenchman, who received us very kindly, and talked about the coal-fields, yerba, &c. I learn from Major Marcos that M. Daixon was a hatter, and came here some fifteen years ago, but instead of following his trade, he got into partnership with a French merchant of Rio Grande, who gave him funds to start this business, now the sole trade and support of San Jeronimo: it has proved highly lucrative, and M. Daixon is reputed to be worth over 30,000*l.* sterling.

Arriving at Mr. Jones's cottage we rested under the shade of his orange-trees till dinner was ready: he is the only Englishman in the village, and has resided here twenty years. There are, however, some Welsh and Irish families ten miles inland, who were formerly occupied in the coal-fields before they stopped working. A coal-wharf still exists at San Jeronimo, where the steamers used to take in their supply. Efforts were made by Mr. MacGinity and his friends to pump out the water which flooded the mines, but owing to the want of proper miners the works had to be abandoned. Mr. Johnson, a Cornishman of some experience, has obtained a new concession and prevailed on parties in England to advance him money for another trial, with which purpose he

has just arrived in Rio Janeyro to be followed by a staff of miners. These mines, usually called of Arroyo dos Ratos, must not be confounded with those of Candiota for which Mr. Nathaniel Plant is concessionaire.

On Monday morning we were up before sunrise to start for the coal-fields, eight or ten miles inland. Major Marcos kindly lent us a couple of horses. Before setting out we had occasion to admire the splendid view from Mr. Jones's door, looking down at the meeting of the waters of the Jacuhy and Taquary, nearly a mile wide. We were all well mounted, our party comprising Messrs. Bevan Smith, Sawyer, MacGinity, Jones, Coulborn, and myself. The country was undulating, almost bare of timber, and thickly settled, our road lying across a high range of hills.

After two hours' ride we got sight of the coal district, sloping down from a hill-range to a wooded valley; and we halted at the house of a Welshman named Davis, whose wife expressed great joy to see us. Her husband was away near Pelotas. The house was neat, though poor; and Mrs. Davis told us of a series of misfortunes which had befallen them since their arrival, eighteen years ago. Her eldest boy, with two

others of an Irish family, was blown up in a powder explosion near the works more than ten years ago. At another time her house was burnt down, and all the family stock of books, clothing, &c. consumed. Again, when the mines stopped working they were thrown out of employment, and ever since eked out a living by raising vegetables. Last year the poor woman tried her hand with a small grocery shop; but the natives, who were her customers, proved so dilatory in their cash payments that she had to close the door. Her children and grand-children had the bright eyes and flaxen hair of Britain, but no other language than Portuguese, although I believe they understood a little of what they heard in English or in the old Erse tongue of their parents. I observed a Welsh bible and some family portraits, which they had saved from the fire; and it was pleasant to see how the old woman's eyes brightened when we spoke of the old land, to which her heart still yearned as when she first left its shores, although she can hardly entertain a hope of ever again seeing her native hills. She told us that another Welsh family lived in the district, as also an Irishman named Peter Logan; and another, Patrick Garraghan, on the other side of Arroyo

dos Ratos. I thought to myself, how hard the lot of these folks, after twenty years' separation from their country-people spent in persevering labour, in comparison with the flourishing condition of the Irish sheep-farmers in Buenos Ayres!

Leaving Mr. Davis's cottage, we proceeded to the mines, where pieces of machinery were lying about near the abandoned works. I picked up samples of the coal, which seemed to me very slaty; but it is said to answer when mixed with a better description. I am glad to say that Mr. MacGinity yesterday prevailed on the President to subscribe for 10,000*l.* in shares. As yet it is premature to descant on the immense advantages which these coal-fields may yield to Brazil and to the commerce of this part of South America.

It seems that Messrs. Johnson and Moura have sold their interest for 30,000*l.*, the new Company being called 'Imperial Brazilian Collieries, Limited,' capital 100,000*l.* The concession is for thirty years, and it is proposed to raise 300 tons a day, the present seam being 4 feet 8 inches thick, and estimated at 6,000,000 tons. This coal took a prize at the Paris Exhibition. A tramway will

be laid down to San Jeronimo, and Johnson obliges himself to place the coal on board in that port at seven shillings a ton, which the Company will sell at twenty-four shillings at Port Alegre, whereas English coal costs sixty shillings.

IX.

EXCURSION TO SAN LEOPOLDO.

ON Friday morning we left Port Alegre in the steamer 'Balastraca,' the oldest on the line. Ascending the Rio dos Sinos we soon began to feel the sun very hot, the thick woods on either side excluding the breeze, which moreover was from the north and came on us at intervals like a puff of the Sirocco. The captain of the steamer was a German, and treated us to a breakfast of trout and roast-beef, the former quite as good as what Gil Blas speaks of in his travels.

About twenty miles from Port Alegre, we passed the charming fazenda of Bento Cyrio, and higher up came to a place where they were making bricks. The river has innumerable bends, the scenery being a continued luxuriance of vegetation which at last almost wearies you. Foliage of every shade, beautifully blended, forest

openings here and there, umbrageous trees like sycamores, wild cane-brakes that suggest tiger-jungles, tapering palms, and the lofty 'timba-uva' with orchids and other parasites in its highest branches; all these, interspersed with wood-cutters' huts, hedges of rhododendron, canoes with children fishing, and various kinds of water-fowl, make up the picture of all or any of these rivers. Sometimes you come on a clump of burned trees where the negroes have begun clearing a patch of ground. In many places the banks of the river have given way and large forest trees fallen into the stream, their trunks or branches often sticking out in the middle of the current, which must make night travelling very dangerous. It would be easy for the Government to employ a small steamer to drag away these snags and clear the rivers.

The high-water mark of the flood-tides is observable on the cottages that we pass, some 8 feet over the present level. The current is about 2 to 3 miles an hour. Most of the wood that lines the river-side is said to be comparatively valueless, but the Province of Rio Grande can boast at least ten good qualities of timber, chiefly hard wood, viz. ipé, black canella, cangerana, cacao, lauro, ta-

rama, cabri-uva, tajuba, angico and grapiapuño, of which the railway sleepers are made.

The sportsman would find abundance of game in all variety, from tigers to water-hens, and the follower of Isaac Walton might open up new kingdoms in the piscatorial world, for the rivers teem with the finny tribe, and Professor Agassiz reports two thousand new kinds of fish as proper to Brazilian waters. Of amphibious animals the yacaré has a coat said to be impervious to rifle-ball, and the best chance of shooting him is when he opens his ponderous red jaws to yawn, as he basks in the sun ; there is also a kind of river-hog called capibari, not different from the carpincho of Argentine waters ; lizards of great size are also seen ; these animals seem to prefer the swamps, where there is no noise of steamboat to disturb them. All, even the tigers, will flee at the approach of man, but the sportsman who goes tiger-shooting should have complete confidence in his rifle and the steadiness of his nerves, or it may fare ill with him. A large tiger-skin is worth even here 3*l.* or 4*l.* sterling. The water-fowl comprise divers, boobies, cranes, gulls and vultures ; I saw some of the last-named feeding on the carcase of a lamb that was floating down stream.

Sometimes through wood-openings, we get a glimpse of Mount Sapocai, the river making so many bends that the peak is one time before us, another right astern, and the sun shifts in like manner till you fancy the mariner's compass has gone quite out of order. At one place, where a saw-mill is working hard by, the turn is so sharp that the steamer has to force its way through the branches of the trees and hug the shore. At last we come upon scattered cottages of neat exterior, and flaxen-haired children run out to look at us, just as the Gothic spire of San Leopoldo comes in view, with an opening vista of the town.

San Leopoldo, founded in 1837, is famous for children and potatoes, in the same way as Kidderminster for carpets, Naples for macaroni, or Sèvres for porcelain. I had heard this ever since my arrival in Rio Grande, and was not surprised, when our vessel got abreast of 'John Muller's tannery,' to see a troop of chubby-faced little boys marching past under the direction of a priest. The moment you land you are struck with the neat German cottages on all sides, and the incredible number of children. But for the tropical luxuriance of the gardens you would fancy yourself in some pleasant country-village of Northern Europe :

the windows have white curtains, between which you see some fair-haired girls or house-wives peep out at the strangers. We proceed to Ernest Koch's hotel in the main-street, which recalls a thousand associations of Fatherland. In front is Her Meitzell's 'bierbrauerei,' next door Julius Fillman's bakery, further on Mr. Huhnfleisch the hat-maker, another shop belonging to a 'buchbinder,' and the large two-story house is the office of the 'New Hamburg and Port Alegre Railway Works.' You hear nothing but German spoken around you. The atmosphere is German, nor can you realise that you are hundreds of miles in the heart of Brazilian forests. Saw-mills wherever you turn, and the hum of industry, giving assurance of peace, progress, and civilisation.

The Germans are a wonderful people : you may call them phlegmatic or what you will, but Nature evidently intended them for colonists *par excellence*. In the United States there are 5,000,000 German settlers (including their children), all thriving farmers, as Mr. Maguire testifies in his work on 'the Irish in America.' They are steady, peaceable, and industrious, and it is not a small merit in a new country that they are eminently domestic and rear up large families in the manner to form

good citizens and useful members of society. The German who visits the Port Alegre colonies will find reason to be proud of his countrymen, who form one of the largest and most flourishing communities on this continent. They are also the happiest people on the face of the earth, and you see it depicted on their countenances. Long may they enjoy the Golden Age of their Arcadian simplicity and virtue !

While we were seated at dinner in the hotel, Major Johann Schmidt, commander of the district, came in to pay us a visit accompanied by Mr. Philip Matte, one of the richest colonists ; neither of them spoke English, but we got on alternately with German and Portuguese. Mr. Schmidt was born here, but paid a visit to Germany in 1865, and was a spectator of the battle of Skalitz, in Bohemia. He gave me a great deal of information about the colonies, of which more hereafter. A friend of Matte's came in while we were playing billiards ; each of these men, I am told, is worth over 20,000*l.* sterling.

It is a lovely moonlight evening, and a number of children are playing on a heap of shavings in the middle of the street, of which presently they make a bonfire, dancing round it with German

cries and interjections. My bed-room in the upper story is the neatest thing imaginable, and I lie down to dream of Rasselas and the Happy Valley, the villagers of the Rhine-gau, and the sunniest recollections of a life of travel.

The bell which summons the workmen to their labours, from the neighbouring Gothic steeple, awoke me about sunrise. I sallied forth to have a view of the place, and after a stroll on the river's bank, my attention was called to a refrain sung by children's voices in the church already mentioned. It was a Litany which some 80 boys and girls were singing, under the direction of a Jesuit father, who played the organ, just as we may suppose the Psalms and Litanies to have been sung in the Misiones in the last century, before the expulsion of the Jesuits. The children were all Germans, and their morning prayer echoed in the vaulted aisles of the Gothic building, which was supported by 8 pillars, and lighted by stained glass windows. I remarked that each of the children brought a bunch of flowers and left it in the portico of the church. There is a Protestant church at a short distance, and the foundations have been laid for a Municipal Hall.

The saw-mills were busily working, and the

children going to school with books and bottles of milk, when the town clock struck eight, and the heat was already excessive. I saw strange waggon (12 feet by 3) driven by boys, with loads of timber. Here and there I looked into the shops, which seemed well stocked, until the scorching sun drove me for shelter to the hotel.

As soon as the stately palm-trees began to cast their evening shadows athwart the streets the casements are again thrown open, and the little households seem to breathe the cool air with enjoyment. There is a sudden bustle in our street, as a procession of nine or ten couples, the men wearing white gloves, and the women in gala attire, came out of the Evangelical chapel, having just registered the vows of a bride and bridegroom, who lead the procession, and are the observed of all observers. They are young, honest-looking people, just the *beau-idéal* for colonists, and are followed by old ladies and gentlemen who have probably watched this Paul and Virginia couple from earliest infancy, and now accompany the bride to her new home, wishing her a long career of health and happiness such as has made up their own simple annals. I learn that the harmony between Catholics and Protestants is so great that intermar-

riages are frequent, and you will often find the good man of the house a Catholic and his help-mate a Protestant, or *vice-versâ*. In numbers the two persuasions are about equally represented, many of the colonists coming from the Rhenish or other Catholic provinces of Germany.

I have learned a good deal about the colonies from Mr. Curtius, editor of 'Der Bote,' and Mr. Philip Leopold Matte, which will form the subject of a separate chapter.

X.

*INAUGURATION OF THE SAN LEOPOLDO
RAILWAY.*

Sunday, November 26.

THE little town of San Leopoldo has been all astir since before sunrise, on account of the inauguration, which takes place this afternoon, of the railway works to Porto Alegre. The steamer yesterday brought numbers of people from the capital, who were at some difficulty to find quarters for the night, and sundry merchants and others from Porto Alegre availed themselves of the fine moonlight to make the journey on horseback, a ride of four hours, arriving here in the small hours of daylight and keeping our hostelry in a state of noisy excitement.

By the first streak of dawn you might see the Germans and natives coming in on horseback from the neighbouring hills while the church-bell was ringing for Mass, and the railway people were hurrying about in final preparation for the *fêtes*.

The President, Bishop, and party, in three steamers, were expected from Porto Alegre by 11 o'clock; the Municipality to receive the distinguished guests, at the water-side, and conduct them to the church and sing a Te Deum. Mr. MacGinity had fixed 7 o'clock A.M. for starting from Porto Alegre, but possibly the low state of the river has caused a delay, as up to the hour I write (2 P.M.) the steamers are not yet in sight.

The church is tastefully decorated, with garlands of evergreens hung between the nave and sanctuary and around the high altar. The villagers are all in holiday costume, numbers of farmers are mounted on steady nags, wearing white ponchos and ponderous silver spurs. All the factories and saw-mills are still, as becomes the Sabbath morning; but the shops and houses are open to receive the crowds of country visitors. Yonder comes a cavalcade of horsemen and women, crossing the river nearly abreast of the church; the water barely reaches to the horses' bellies.

The scene of the day's celebration is the temporary station, about a mile hence, which has been fitted up in admirable style. The building measures 70 feet by 22, and is surmounted at one end by the Brazilian, at the other by the British,

flag; all the enclosure of four acres round is decorated with flags of various nations flying from high poles, and in the middle is an awning, where President Mello, after receiving the Bishop's benediction, is to lay the foundation-stone. A stand-house in front, covered in from the tropical sun, is set apart for the ladies who grace the occasion. Just outside the enclosure is a 'ramada' of green boughs, under which the 'carne con cuero,' or beef in the hide, is to be roasted for the multitude. The interior of the station is fitted up as a banquet-hall, with four tables for 160 covers, the walls around being hung with bannerets. Over the President's chair are suspended the Brazilian flag and a crown of flowers and bay-leaves; in front is the chair for the Bishop, the rest of the table being arranged for the local authorities. At one end of the hall is a large German flag, at the other the stars and stripes of the great republic.

The silver trowel and spade for the occasion are of elegant workmanship, made at Porto Alegre, the handles being of a dozen kinds of inlaid native wood. The mortar-board is a beautiful piece of cedar, highly polished.

Nothing can be imagined more charming or picturesque than the view on all sides from the

station. Northward are ranges of wooded hills, terminating in a line of 'cerros,' the loftiest of which are known as the Dois Irmaos, or Two Brothers; eastward the woods come down so close as to shut out the view, but as we carry our eyes to the south, it rests on the mansion of Spiegelberg, nestling in a plantation which extends to the summit of the hill behind; to the west we descry the Gothic spire of San Leopoldo over-topping the orange-trees of the suburbs, among which also peeps out Mr. MacGinity's chacra, or country-house. The town is not visible through the luxuriant foliage, though barely 700 yards distant.

3 P. M.

The squire of Spiegelberg gives a grand ball this evening, besides two others in San Leopoldo. The brass band of the town is playing lively airs through the streets, and the policemen are letting off rockets; but the President is not yet come.

The steamers have just arrived, and the President, Bishop, and party are gone to sing Te Deum in the church. The heat is so excessive that the inauguration is put off till six o'clock.

At the appointed hour the scene of festivity is crowded with three thousand persons, chiefly Germans. Major Schmidt has the police force of

the town (six men), guarding the triumphal arch. The military band from Port Alegre announces the approach of the President and Bishop, who are received at the entrance by Messrs. MacGinity, Bevan Smith, Cleary, Sawyer, Turner, &c., and conducted to the place where the stone is to be laid. The President wears the uniform of Senator of the Empire with the Star of the order of the Rose; the Bishop has a purple soutanne under a lace rochette, and is accompanied by a Jesuit priest and some others. The stone is a ponderous slab of red sandstone. The Bishop gives the signal to uncover and pronounces the usual prayers on such occasions, lasting about ten minutes, after which the police let off rockets, the band strikes up the Brazilian hymn, and the people cheer. His Excellency President Mello next delivered a very appropriate and eloquent speech, expatiating on the benefits which the enterprise was destined to produce, wishing every success to those Englishmen under whose intelligent direction it is to be carried out, and promising his steadiest co-operation towards prolonging the line to the Argentine frontier.

Mr. King, a clever photographer, takes a view of the ceremonial at the moment when Messrs. MacGinity and Bevan Smith are depositing a box

in the hollow of the foundation-stone containing coins, local newspapers, and such like. Then the laying of the stone is gone through, the engineers presenting the silver trowel to the President of the Province, and the spade to the municipal guild of San Leopoldo, the inscription on the latter being—‘This spade was used by Pres. Mello to turn the first sod at San Leopoldo, of the New Hamburg Railway, in presence of John MacGinity, concessionaire; H. Bleary, engineer; Bevan Smith, contractor; and an assembled’ multitude, this 26th day of November, 1871.’

We now proceed to the banquet-hall, where the tables were sumptuously spread, and I chanced to be placed near the President and Bishop. During the dinner the President assured me that General Mitre was highly respected in Brazil, as well as our actual chief magistrate, President Sarmiento.

The first toast was given by Mr. MacGinity—‘The Government of President Mello, under whose administration every enterprise for the advancement of Rio Grande found the most cordial support.’ (Cheers.)

This was warmly received with three times three, the band playing a Portuguese melody.

Mr. Thompson, an Anglo-Brazilian, in propo-

sing the next toast said—‘On an occasion like the present we must not forget the claims of the Legislature of Rio Grande, which came forward with a liberal subsidy in the form of a guarantee on the capital, to stimulate the introduction of railways into this Province. It was a purpose which enlisted all their sympathies and patriotism, for the legislators felt that the locomotive was the great civiliser of new countries, the conqueror of modern times, uniting peoples and communities, founding societies where before was desert, and therefore more glorious than the destroying cannon which men are too apt to regard with honour. He trusted all present would unite with him in toasting the Legislature of the Province.’

Dr. Guzman, Secretary of State, said—‘There is yet a meed of honour due to one now absent, I mean ex-President Sartore, who contracted for this great work, and whose health I give you.’ (Cheers.)

Dr. Teofilo Ribeyro, Secretary of Government, rose and said—‘Ladies and gentlemen, I look on this happy festivity as the inauguration of a new era of peace and labour still more prolific than any we have yet seen in Rio Grande. The whistle of the engine will awaken the echoes of our virgin

woods, and at the same time our telegraph system, already connecting this Province with Rio Janeyro, is now pushing forward rapidly towards the countries of the River Plate; while the growth of our German colonies is marvellous and our immigration spontaneous. May Divine Providence continue His blessings to this favoured land! ’

The last speaker having made allusion to the River Plate, of which I was the only representative present, I felt bound to say a few words. I assured the Rio Grandenses that their neighbours of La Plata would feel most happy to learn of their progress in enterprises like the present, for which I offered them the warmest congratulation, adding that I hoped this railway would be pushed on, as proposed, to the frontier of the Argentine Republic, to unite neighbouring peoples in the lasting bonds of international traffic.

The next toast was given by Dr. Ferraz, ‘To the foreigners who came among us to develop the resources of the country, and make Rio Grande a free, prosperous, and enlightened State.’

Some one next proposed the Fourth Estate, coupling with it the names of Guttenberg and the Rio Grande Editors.

President Mello rose to thank Mr. MacGinity in the first place for having proposed his health, and then begged the company to join him in a toast to the Paranhos Cabinet, for having carried out two of the greatest measures that could fall to the lot of any statesman, the Judicial Reform and the Abolition of Slavery; the latter by far the greater, since it consecrated the precepts of the Gospel which regarded all men as entitled to equal rights. This great measure, he repeated, would immortalise the name of Viscount Rio Branco. The toast was drunk, all standing, with three times three.

Mr. MacGinity, in a very graceful manner, proposed the Municipality of San Leopoldo, expatiating on their civic visitors, and afterwards gave the health of Mr. Bevan Smith, of the firm of Watson Smith, contractors for the line (cheers).

Mr. Guzman proposed the Engineers, and especially Mr. Cleary. The latter replied in a finished Portuguese speech, and proposed 'The New Hamburg Railway Company.'

Mr. Bevan Smith proposed 'The Ladies, who cheer our rugged road of life, and help to keep us in the track of honour and duty.' (Enthusiastic cheers.)

President Mello, in conclusion, gave the health of His Majesty the Emperor and the Imperial family. 'Every Brazilian had reason to be proud of Dom Pedro, the first citizen of his country and a model ruler. In his present journey through Europe, he has been everywhere received as a liberal monarch, sound statesman, and advanced scholar, while he is still better known in Brazil as a man of domestic virtues and polished taste, an encourager of industrial enterprise, a friend to the poor, and a true patriot. May he long be spared to pilot the destinies of the vast empire over which he rules.'

The band struck up the Brazilian hymn, and the feast concluded at 8 P.M.

Monday, 11 A.M.

The President having invited Mr. Smith to remain till this afternoon and accompany him to Port Alegre, I am enabled to add a postscript. Whilst I write, the band is playing a march to the riverside, where His Excellency lays the foundation-stone of the bridge to be placed for public traffic over the Rio dos Linos. Afterwards the school-children have some amateur theatricals in reference to the Railway Inauguration, at which President Mello and the Bishop will assist. The

balls last night were brilliant and well attended. Some of the principal townsfolk are sending in mineralogical curiosities and other little souvenirs to Mr. Bevan Smith to take with him to England. All the neighbours evince the liveliest interest in the railway. The engineers accompany Mr. Smith to Port Alegre, and I start in the morning for three days' ride through the woods to the great waterfall in the Tea-forest.

XI.

A RIDE THROUGH THE COLONIES.

THE traveller who would visit each and all of the German settlements in the district of Port Alegre must devote at least a month to the task ; but as the whole forty-four are very similar in character, it will be enough to make a tour of four or five days from San Leopoldo through the Baum-schneitz valley, New Hamburg, Acht-und-Vierzig, Tea-forest, Caffee-Schneitz, and intermediate ‘picadas,’ under the guidance of a good ‘vaqueano,’ to form an accurate idea of the colonies. Without a personal visit of this kind it is difficult to realise the nature and importance of these settlements. Imagine to yourself, reader, a country nearly as large as Belgium or Holland cut out of these Brazilian forests, where the inhabitants are exclusively German, and speak no other language ; where chapels and schools meet you at every opening in the wood ; where the mountain-sides have

been in many cases cleared to make room for corn-fields; where women travel alone through the forests in perfect security; where agricultural and manufacturing industry flourish undisturbed; where crime is unknown and public instruction almost on a level with that of Prussia; in a word, where individual happiness and the welfare of the commonwealth go hand-in-hand, surrounded by the rich, tropical vegetation of Brazil, and favoured by the great advantages of a healthy climate, and the blessings of peace, order, and good government.

Among the townsfolk of San Leopoldo, few are more obliging than Herr Philip Matté, and through his agency I found an excellent guide, one Cornelius, who also provided horses for the journey. At 6 A.M., on November 28, we started, under the auspices of a cloudy morning, and crossed the Rio dos Sinos near where the proposed bridge is to be built, the water being above the horses' bellies; in wet seasons it is impassable. On the opposite bank are some neat cottages, and a large house belonging to one Schmidt. Emerging from the town, we find an open country of some extent, with a half-moon of hills in front, and on the left a series of undulat-

ing woods. Yonder is a stone cross in memory of Johann Stievenbach, who was dragged with a lasso from San Leopoldo, and murdered on this spot by one of the contending factions in the civil war of the Farapos.

My guide tells me of several deeds of atrocity in that dreadful time. The Germans had hoped to be left undisturbed in their little farms, but first the rebels, and then the government troops, dragged them away from their homes and families, impressing them for the war. In this manner it often happened that father and son were ranged on opposite sides. The colonists were ruined, and had no means of escaping from the country, which was a scene of bloodshed and desolation for more than ten years, till the pacification of 1845 put a stop to these horrors, and allowed the colonists to pursue peaceful pursuits.

Ascending the slope of Lomba Grande, we meet some waggons bound for San Leopoldo, with a blue-eyed *fraulein* sitting on the sacks of Indian corn; and now we get in view of Hamburger Berg, crowned with a little chapel, behind which we soon discern the roof-tops of New Hamburg. This picturesque village covers the hill-side, and down in the valley my guide points out the house

of the richest colonist, a mixture of Swiss cottage and English farm-house. The village inn is neat and comfortable; in the parlour there is a picture of Shakespeare's Seven Ages of Man. Passing the Protestant chapel, and a fine house belonging to an apothecary named Kastrup, we emerge from New Hamburg, the terminus of the first section of the Port Alegre railroad, and enter at once into a woody and mountainous country.

We are now in the Schwabe-Schneitz, so called from the Swabians who made the first clearing here. At intervals we come upon water-mills, rustic school-houses, troops of mules carrying grain to San Leopoldo, and at every wood-opening we see the colonists, men and women, busy at their daily labours in the field. The usual hours for work are from six to eleven in the morning, and two to seven in the afternoon, thus avoiding the intense heat of mid-day.

At some of the steepest passes the colonists have made a paved road, practicable either for mules or the peculiar little cart of the country. From one of these points we have a splendid view of the surrounding country, generally known as Bom Jardim, with the twin peaks of Dos Irmaos,

and in the distance New Hamburg and San Leopoldo.

The forest scenery varies at every turn, in weird vistas of grandeur and solitude. Wild orange and fig trees appear at times among the thick woods of valuable timber of a dozen different kinds, and brushwood and creepers are so closely intertwined that it would be difficult to force your way through. We begin to descend, and a view opens upon us of the Baumschneitz Valley. As we enter the village a bridal procession sallies forth from the Catholic chapel, just such a building as you see on the Rhine, with a wooden belfry: the bride is young and fair, and the whole cavalcade start off to accompany the happy pair to their new home in the woods.

At Baumschneitz there is a good inn, kept by Carl Merkel. Travellers going to the Tea-forest and Waterfall generally finish the first day's journey here, as the route over the mountains is very fatiguing. Nevertheless, as the day was cloudy, I resolved to make a double day's journey and push on for the Waterfall.

The main street of Baumschneitz is lined with orange trees. The houses are models of neatness. At the farther end we find the Protestant

chapel and minister's house ; then the houses are more scattered and less tasteful. The better kind are of bricks, with a wooden half-story under the sloping roof. Many, however, are of mud and canes, or made in a species of framework, with the large cross-beams conspicuous, as in most of the hamlets of Germany. Beneath the cottage, however humble, is a basement used for storing implements, which keeps the habitations very dry. No bars or bolts are visible, and the windows are often without glass.

Crossing Millersberg, we see the mountains around us cultivated to their summits, and ahead of us, perched like an eagle's eyrie, is Woolff's Nest, a well-known wayside inn. Away to the left the hills recede till lost in an outline of woods in the direction of Caffee-schneitz. Not far from thence it is proposed to establish an Irish colony, and Mr. MacGinity, concessionaire of the railway and other enterprises, intends to give settlers free land grants of 100 acres. The soil is excellent, and peculiarly favourable, it being so near the railway now in construction.

Ascending Fritzberg the road becomes little better than a dry river-bed. Wood-pigeons abound here. At last, after arduous toiling up hill, we

reach Woolff's Nest. What a lovely panorama! In the foreground the Dos Irmaos and Sapocai, at our feet the peaceful valley of Baumschneitz, and on all sides a diversified picture of woods, plains, farm-houses, and undulating hills, till the blue line of the horizon is broken on the far right by the white buildings of Port Alegre, fifty miles distant as the crow flies.

Herr Woolff and his wife are hospitable people, and do a thriving business, their house being a general store of dry goods, groceries, &c., and on Sunday evenings the neighbours meet here to dance. The ball-room measures 40 by 36 feet, with a corner set apart for the orchestra. Everything about the place bespeaks neatness. The woods close it in on either side, while the mountain rises up precipitously behind. A steep ascent conducts us to the summit, where a cross-road occurs, and now we are on the top of a ridge commanding a delightful view, whichever way we turn. The road to the right leads into the Tea-forest. Before many minutes we seem plunged in the heart of dense woods, which create a feeling of silence and solemnity, as if you were beneath the vaulted roof of some old Gothic cathedral. We journey on for nearly an hour in this manner, and suddenly come

upon a cavalcade of a dozen persons. It is the Grafin von Eberstein, a German baroness of sixty summers, who is at present making a tour of the world *à la* Ida Pfeiffer, and whose arrival last week at San Leopoldo caused some sensation. She is attended by an ugly maid-servant, a muscular courier, three or four of the colonists, a guide, the parson of Baumschneitz, and some others. She rides a strong cob, seated in a kind of arm-chair, and has made a difficult journey to and from the Waterfall, apparently without fatigue. We are again in the depths of the forest. What splendid ferns! What stately trees, all interlaced with creepers and parasites!

Emerging from the forest we saw the sun descending behind the woods of the Rosen Thal, when our road diverged to the right and left at a little chapel, near which there was no house for us to ask which way we should follow. Beside the chapel was a tasteful churchyard, or 'God's acre,' as the Germans call it, with sundry stone crosses and flower-beds. My guide resolved on taking the lower road, to the left, with some uncertainty as to whether we should have to pass the night in the woods. But before darkness set in we came to a turn in the mountain which disclosed a group of

cottages. Passing a small cloth-mill and another chapel, we began to ascend another range of hills, for my guide now remembered the locality, and said we should have to pass the night at the shanty of Herr Rost, near the Waterfall. At times the path was so precipitous and full of loose stones that we had to alight and lead our horses. The full summer moon was sailing on her course as we reached Herr Rost's, where we found a frugal supper and clean beds of Indian corn straw, after a long day's ride of thirteen hours.

XII.

*FROM THE WATERFALL TO THE DEVIL'S
GLEN.*

It was my purpose to see the first rays of the sun fall on the Caté cascade, and some time before sunrise we were making our way through Herr Rost's wood-clearing, where patches of beans and flax alternated with felled timber. The descent into the ravine is no longer so dangerous as formerly, but you must beware of the loose stones.

The first view of the waterfall disappoints you, the quantity of water being insignificant; its height by degrees impresses you, for it is 375 feet over a sheer precipice, the woods on either side coming down to the brink, while the waterfall like a silver ribbon descends to the valley; there is no visible outlet for the water, which is caught in a pool that has never been sounded, and the neighbours have a tradition of a man who fell in and was never seen to rise, his body having been probably

carried away by some subterranean current. At the falls of the Anio, in Tivoli, there is a similar pool, called Neptune's Grotto, with a subterranean outlet.

A thin vapour rises from the cascade, which assumes many colours as the sunbeams fall on it. An Englishman took a photograph of this waterfall some time ago, and to give an idea of its height, he caused twenty men to stand in a line with their hands joined, over the precipice. The noise of the fall is trifling, but in winter the volume of water is much greater, and often carries down cattle with it.

From the waterfall my route lay again through the Tea-forest to Baumschneitz, from which I intended making a *détour* by the Devil's Glen and Acht-und-Vierzig. In the middle of the forest we met two women on horseback; as a rule the women in these colonies ride like men, for the same reason as in the mountainous parts of Italy, since side-saddles would be very insecure. The only birds you hear in these forests are the Tanzen-Vögel or Dancing-birds, the 'blacksmith,' 'carpenter,' &c. The dancing-birds are blue with red tops: five of them perch in a line on the branch of a tree, the leader sings, and the others hop backwards and

forwards like soldiers on drill. The blacksmith is a white bird with black top: the noise he makes seems at a distance like a hammer striking on an anvil. At rare intervals you see a monkey.

Descending from Woolff's to the valley we meet numbers of children coming from school, two on each horse, boys and girls, making their way through the woods homewards. We arrive at Carl Merkel's inn at Baumschneitz in time for dinner, and halt here for the night. The landlord was formerly a soldier of Rosas in Buenos Ayres, some twenty years ago, and came hither just before the campaign of Caseros which overthrew that ruler.

About sunset I took a stroll through the quiet village, where the housewives were throwing open their doors and windows, the children were playing under the orange-trees, some fowlers were coming home from the forest with bags full of game, and a group of people was gathered at the smithy watching the operation of shoeing a restive horse. I turned into the graveyard of the Catholic chapel and read the inscriptions which tell the simple annals of the first settlers, some born by the North Sea sands, some by the foaming Danube, some in the Black Forest, some by the sunny Rhine; the oldest date I could find was 1837,

showing that this colony must have been ten years after San Leopoldo. An avenue from the graveyard leads to the Jesuit glebe hard by, where half-a-dozen fathers reside belonging to the surrounding settlements. There is neither doctor nor apothecary in the village, no prison or police; the inhabitants are simple in their habits, marry young, have large families, and are usually long-lived. During the Paraguayan war the place had to furnish a contingent of twenty-six men, of whom only five returned. It is pleasant, as the shades of night descend, to watch the wood-cutters' fires, or the lights from the little homesteads on the mountain sides. The fire-flies flit about, and the village is settling down to repose; the smithy is shut, and the moon rises, pouring her silvery light upon wood and mountain. It is worthy of note that the fire-flies in the River Plate carry the lantern in their tails, but here it is on their heads, and the light is clearer.

An hour before sunrise I was again on the road, by moonlight, leaving the valley of Baumschneitz behind. At a short distance the path plunged into a dense forest, and before we emerged from it we could see the first beams of morning shining on the tree-tops. The magnificent woodland scenery

fully compensates for the difficulties of the path: every now and then we have to bend low or sideways to avoid the species of wild vines that hang like ropes from the lofty branches, forming the most fantastic network from tree to tree. After a couple of hours' riding, in which we met nobody, a forest-opening occurred, and we saw a field of magnificent palms, passing which we were again in the woods, until the crowing of a cock announced that we were near some human habitation, and presently we found ourselves at a comfortable farm-house, the owner of which, in reply to my guide's questions, pointed over a thickly-wooded ridge towards Acht-und-Vierzig, adding that the way was almost impracticable. He sent his little girl to open for us the gate of the fence which separated his holding from the glen. The descent at once began to be steep, the path stony and difficult, and before a quarter of an hour I almost repented not having taken the farmer's advice and turned back. At one place it was like descending a rickety stone staircase, as we led our horses gently by the head, and even so the poor beasts stumbled so often that at times I feared they should fall on us. At last we reached the foot, where a valley spread out ahead of us, the steep

sides being clad with thickest timber, and a small river running in the middle of the low ground, which we skirted. A peculiar noise called my attention, and I was puzzled to think what it might be, until my guide said it was caused by apes holding a morning confabulation; the din being caused by the animals striking their mouths with their paws.

The colonists see little of the apes, which generally make their haunts in secluded woods, near fresh water, and dislike the proximity of human beings. Crossing the stream we came to a large cavern or hollow of the mountain, that leans over the path as if ready to overwhelm the traveller. On the top of the cliff are farm-houses invisible to us, and yonder we see some little boys with satchels making their way afoot to the school of Acht-und-Vierzig: the woods are still thick, and the scenery charming at each fresh vista. Here we come upon a fine orange-grove near the ruins of a house; a woman is driving a cow before her. As the valley again opens we see in the distance, overtopping the woods, the turret of the village chapel, which crowns the hill-side. The river running through the valley is crossed by a massive stone bridge, 400 yards long and 30 feet

high, which cost over 30,000*l*. Formerly numbers of colonists and others perished in trying to cross here in rainy seasons, and whether from this circumstance or from the gloomy scenery around, the place is called the Devil's Glen.

A steep ascent leads from the bridge to the village on the hill. The principal trader of the place is Herr Kossel; a good shop is also kept by Frau Blauet: the inn is clean and comfortable, and as usual there is a large ball-room, 40 feet square, with a gallery for the musicians: here the villagers have their monthly balls. The chapel is built in the same style as all the rest in the colonies, but it is to be noted that the Protestant chapels have no turret or belfry. The graveyard has but few tombstones, and in a meadow hard-by we see a Jesuit reading his breviary.

Riding through the village we attract the notice of the inhabitants, and as we pass the school the children seem well-ordered at their tasks. As we ascend Bergsmerberg, a long and gentle acclivity, we observe gardens, cottages, and a Protestant chapel, in a very diversified landscape. Half-an-hour farther finds us in dense woods, where we meet two ladies unaccompanied and riding side-saddle. As the woods open we come out on a

cloth-mill built over a little stream, with a jolly-looking miller and comfortable residence. A couple of miles farther we come to a wayside shop kept by a smart-looking woman, who kindly gave us permission to rest, for the sun was now hot. She had neither meat nor eggs, but sent out her little boy to dig some potatoes for us (these people are great vegetarians), and offered to borrow some hay from a neighbour for our horses. As we were, however, very hungry, having had nothing all day but a cup of coffee at Acht-und-Vierzig, we resolved to push on to San Leopoldo for dinner. Wild, bare mountain scenery succeeded, affording us a fine view of the country: to the left we are leaving behind us the Dos Irmaos, and to the right lies the Caffee-schneitz, while ahead of us is the Farapoi Wood, famous for guerilla combats in the civil war. Below the wood is a pleasant valley, and yonder snug farm-house belongs to Carl Wilk. A few paces from our path we are startled to observe the body of a man: as we proceed to dismount, Cornelius remarks to me that he must have died of a fit or exposure to the sun. The body was not quite stiff, but to all appearance dead, until Cornelius exclaimed, 'It is warm, he cannot be dead;' and turning up the face, we saw it was

a poor old negro slave, who presently opened his eyes. The smell of cashaso was intolerable, for the old fellow had been on a drunken spree, having probably obtained a holiday from his master, Herr Wilk. Had he remained there a few hours longer the sun must have killed him. We meet several waggons returning to the hills, most of them with oil casks, having left their produce at San Leopoldo, the church of which is now distinctly visible. Traversing some miles of low, sandy ground, from which the glare of the sun is most distressing, we reach the Rio dos Sinos and wade it at a depth of five feet, arriving at Koch's comfortable hotel in time for dinner.

XIII.

*THE GERMAN COLONIES: THEIR ORIGIN,
GROWTH, AND PRESENT CONDITION.*

THE first colony was that of San Leopoldo, established by the present Emperor's father, Dom Pedro I., in the fertile lands of the old Féitoria Real de Canhamo (Royal flax factory), still called Féitoria Velha, on the banks of the Sinos river, now forty-seven years ago. The first batch of settlers, comprising 26 families and 17 unmarried persons, arrived on June 25, 1825, to the number of 126 souls, and were followed some months later by 157 families numbering 909 persons. In the four subsequent years the arrivals reached 3,701; but the civil wars which ensued put a stop to immigration until the renewal of peace in 1844, the number of arrivals in 1846 amounting to 1,515. A census taken in 1854 showed the colonists to number 11,172 souls, including 3,680 children born in the country, occupying 2,083 houses. The increase by

births over deaths was amazing, and the number of colonists was also increased by the disbanded battalions of German chasseurs and grenadiers after the war, who received, like the soldiers of Augustus, free land-grants, that they might turn their swords into reaping-hooks, and each man sit down under the shadow of his own fig-tree. In 1866 the Inspector of Colonies reported the number of Germans (including children born in the country) at 25,000 in the single district of San Leopoldo, and their farm-lots ranged in value from 10 to 28 contos (say 1,000*l.* to 2,800*l.* sterling).

When we bear in mind that the colony at the very outset had to encounter a civil war which lasted nearly twenty years, and in which the colonists themselves were forced to take part on opposing sides, it is simply marvellous what progress San Leopoldo has made, now 'the richest, most productive, and most populous district in the Province of Rio Grande.'

The first settlers received free-grants each of 130 acres uncleared land, besides farming-implements, seeds, and a subsidy for their support: this subsidy consisted of a pataca (about a shilling) ahead per day for the first year, and half a pataca the second. The total number of immigrants alive in

the colony in 1854 was 7,492, the rest having either died naturally or perished in the wars, at the conclusion of which in 1846 San Leopoldo was found to be only a heap of ruins.

Peace, however, no sooner smiled upon the country than the growth of this colony was prodigious, and it has gone on increasing since the formation of the municipality in 1854. Now every year hundreds of young men leave San Leopoldo for the districts of Triumfo, San Jeronimo, Taquary, Bocca-do-Monte, forming new settlements which radiate in all directions, clearing away the virgin forests and extending the fruits of industry far and wide.

In 1854 the exports of San Leopoldo represented 91,200*l.* sterling; in 1867 they were estimated at nine times that amount. In 1854 the commerce maintained 282 flat-boats; now it requires steam-boats and railways. In 1854 the lands of the colonists were valued at 600,000*l.* sterling, but now they represent ten times that figure. In 1854 the manufactures of San Leopoldo comprised 67,000 sets of harness and 3,300*l.* worth of tanned hides. At present it would be impossible to enumerate the saw-mills, oil-presses, breweries, tanyards, distilleries, sugar-presses, and manufactories of hats, fire-

arms, iron-work, &c. established at San Leopoldo, Hamburgerberg, Féitoria, Hortensio, and the country round. All the saddlery for the army, farmers, &c., is made here, as well as the lances, spurs, and accoutrements; and tanned hides are sent to all parts of the empire, while San Leopoldo also supplies Port Alegre with butter, eggs, fowls, pork, &c. The official report estimates the produce of San Leopoldo alone at 10,000 contos or one million sterling per annum.

Of late years the colonists have begun to cultivate vines, and now the yield is over a thousand pipes of wine yearly. They are also giving some attention to bees, for the production of honey and wax; and as flax and cotton are easily cultivated, there is an increasing home manufacture of these staples with the rudest and simplest appliances. At an exhibition of arts, products, and manufactures for the Province of Rio Grande, in 1866, more than three-fourths of the prizes fell to German colonists.

Meantime it is thought that the colonies would have made even greater progress if more care had been given to their first establishment. Major Schaeffer, who engaged the first colonists in Germany on the part of the Brazilian Govern-

ment, did not select the most suitable persons, such as small peasant farmers, but took them all as they came, and to the present day we find among the old colonists a mixture of shoe-makers, coopers, saddlers, charcoal-burners, &c., who in the beginning felt so little disposition for agriculture that when some of them were settled down here they sold their grants for a bottle of brandy. Then again the authorities had not properly measured and marked out the ground, which was considered a trifling matter; but when land subsequently became of value, the number of disputed titles was so confusing that a special commission was at last sent by Government to restore order and confirm rights, but not before some of the most industrious colonists had thrown up their farms in disgust and removed to the new German colonies that were being formed on the River Plate.

The municipal returns of San Leopoldo show that the exports of the district have almost trebled in sixteen years. The amount of duties levied in 1854 was about 800*l.*, and in 1870 was 2,200*l.* sterling. The municipal revenue of San Leopoldo is said to exceed that of Rio Grande city, and the imperial blue-books of the Rio

Janeyro speak of San Leopoldo as the most flourishing agricultural department in Brazil. The exports for the year ending June 30, 1870, were as follow:—

Beans, sacks	34,852
Maize „	42,783
Potatoes „	5,972
Starch „	177
Bacon, lbs.	220,000
Lard „	460,000
Tobacco „	105,000
Bark „	2,400
Yerba-mate, „	8,500
Hair „	110,000
Saddles	3,529
Lombillas	3,651
Caronos	3,918
Sandals, pairs	71,630
Slippers „	30,371
Cowhides	11,159
Swine, heads	172
Aguardiente, pipes	120
Firewood, measures	5,426
Lumber, value	£2,356

Add to this such important items as butter, eggs, poultry, &c., which are free of duties and not included in the above. To the general reader, who may be anxious to know what Lombillas and Caronos are, we can only say that they are parts of harness or saddlery which the colonists make especially for the army and exportation to the northern provinces.

The colonies which have grown out of San Leopoldo, or been subsequently established in Rio Grande, are now 43 in number, mostly radiating around the first settlement and promising to rival it in prosperity : they are—

Lomba Grande	Larangeiras
New Hamburg	Maratá
Costa da Serra	Bocca do Monte
Baumschneitz	Bom Jardim
Dos Irmaos	Novo Petropolis
Campo Bom	Germania
Caffee-schneitz	Silva
Achtundviersig-schneitz	El Rey
Hortense-schneitz	Santa Cruz
Picada Feliz	Mont Alverne
Picada Voluntaria	Soledade
Picada Solitaria	Sant Angelo
Picada Demanda	Cima da Serra
Sommer-schneitz	Sinimbu
Capibary-schneitz	Camaquam
Montravel	San Lorenzo
Mundo Novo	Estrella
Conventos	Tres Forquilhas
Merro dos Bois	San Pedro
Costa Cahy	Teutonia
Padre Eterno	Paricy.

Two of the above, namely Tres Forquilhas and San Pedro, are nearly as old as San Leopoldo, having been founded in 1826, but have not been so prosperous. The position chosen for them was remote and unsuitable, on the margin of Lake

Itapebe, separated by 120 miles of forest from San Leopoldo, and near the projected seaport of Torres between Sta Catalina and Rio Grande: the twin colonies were founded in this way. Ninety families were selected, and 53 of these (Protestants) were located at Tres Forquilhas, the remaining 37 (Catholics) being placed on a site called San Pedro de Alcantara, nearer Torres. The proposed harbour of refuge was never constructed (although official surveys have again been made recently), and the two colonies were cut off from all communication till 1849, when a road was made from the valley of Tres Forquilhas to Cima da Serra, where the river from which the colony takes its name has its head-waters. A little after the foundation of Tres Forquilhas many of the colonists became very much disgusted, and 17 families returned to San Leopoldo, the other 36 remaining to contend with the difficulties of their situation. For a quarter of a century they had neither roads nor communication with the rest of the province: their progress was, therefore, slow, but not the less certain. Latest returns show its population to have quadrupled, being 80 families or 700 souls, with 75 comfortable houses, a Protestant chapel and pastor, 2 schools (one paid by the State), 4 shops, 8 tanyards, 3

carpenters, 5 shoemakers, 3 boat-builders, &c.; besides ten flour-mills, 8 distilleries, and 28 'atafonas' for grinding mandioca. The colony is at present in a highly flourishing condition, the lands being well cultivated and yielding large quantities of sugar-cane, mandioca, and rice for exportation, not to speak of maize, beans, and potatoes for home consumption. Coffee is also found to thrive here, as well as the cotton plant. The colonists at the same time occupy themselves in handicrafts (as in each and all of these German colonies), and at every house you find a sugar-mill or distillery for aguardiente, or some of the family busy in making 'rapaduras,' of which they export 250,000 yearly. The other annual products include 3,000 bushels of mandioca, and about 500*l.* worth of minor articles, such as pork, cotton, &c.

San Pedro or Torres has a similar history to Tres Forquilhas, and since the 'renaissance' of 1849 has made the same remarkable progress, the latest returns showing 511 souls (in 86 families), of which there were 264 males and 247 females. The school is attended by 50 children. The colony is situated 12 miles from Torres Point, and counts 29 sugar-mills or distilleries, 31 'atafonas' for

mandioca, 1 beer-brewery, 1 tanyard, 2 oil-mills, 1 saddlery, 6 shops, 5 blacksmiths, 3 shoemakers, 3 carpenters, and a doctor. The annual produce of the colony includes 382 pipes aguar-diente, 250 cwt. of sugar, 4,850 sacks mandioca, 100 sacks polvillo, 500 sacks maize, 200 sacks beans, 250 sacks rice, 150 sacks potatoes, 40,000 tiles, 60,000 bricks, 190 sets harness, 1,000 lbs. glue, &c.

There are no tables extant of the amount of money laid out by the Imperial Government on the three colonies of San Leopoldo, Tres Forquilhas, and Torres, the settlers of which received their lands free, besides an absolute gift in the way of farming implements, provisions, &c. It is, however, admitted that any such outlay has been repaid a hundredfold in the income and duties from the single district of San Leopoldo. If the proposed railway from Port Alegre to Torres be carried out, the other two colonies will soon be equally prosperous.

The sons of the colonists of San Leopoldo soon spread themselves and formed the following new settlements, at short distances from San Leopoldo:—

Capibary-schneitz . .	14	farms, distance	12	miles
Sommer-schneitz . .	63	„ „	20	„
Picada Demanda . .	45	„ „	20	„

Picada Solitaria . .	40	farms, distance	30	miles
Picada Voluntaria .	30	" "	30	"
Morro dos Bois . .	50	" "	12	"
Costa Cahy	18	" "	25	"
Padre Eterno . . .	200	" "	12	"
Larangeiras . . .	100	" "	20	"
Santa Maria or Bocca } do Monte }	100	" "	200	"

But even before these there were Tomba Grande, New Hamburg, Costa da Serra, Bom Jardim, Dos Irmaos, Baumschneitz, Campo Bom, Achtundviersig, Caffee-schneitz, Picada Hortense, Cuatro Colonias, and Picada Feliz: these twelve settlements are very prosperous and count no fewer than 23 churches and 46 schools, the latter attended by 1,045 boys and 697 girls: 31 of these schools are maintained by the colonists, and 15 by the State.

In 1849, after the conclusion of the civil war, the Provincial Government of Rio Grande, under President Andreas, endeavoured to revive the above system of German colonisation, marking out free land-grants at Santa Cruz, 100 miles from Port Alegre, and 20 from the town of Rio Pardo, on an affluent of the River Jacuhy. The lands were fertile, the site excellent, and the colony has been a brilliant success. The first batch of settlers, thirteen in number, arrived in December 1849, two others in the ensuing year, and the

beginning of 1851 counted 145 souls in the colony, including thirty colonists' sons from San Leopoldo. The same year a contract was made by Vice-President Bello with Peter Klendgen to bring out 2,000 Germans in two years, the latter proceeding to Germany and offering land-grants, with the sole obligation of repaying advance for implements and supplies: he could not fulfil his contract—the people that were willing to come not being able to pay their passage. At last, in November 1854, a new colonisation-law was passed which gave an immense impetus to the rising settlements: the Government of Rio Grande advanced 5*l.* sterling per head for the passage of immigrants, and sold them the land at reasonable prices, payable in five yearly instalments, along with the above 5*l.* At the close of 1854 the colony only counted 891 inhabitants, occupying 304 land-grants, the Government having expended over 9,000*l.* in their assistance; each successive year saw the colony progress rapidly, and latest returns show 5,083 settlers, occupying an area of 240,000 acres. They have 3 Catholic and 4 Protestant chapels, 13 schools (including 3 supported by the State), 11 flour-mills, 2 'atafonas,' 11 sugar-mills, 5 oil-presses, 5 tanyards, 1 soap-factory, 1

yerba-factory, 1 rope-walk, 1 chandlery, 2 cartwrights, 11 blacksmiths, 26 tailors, 47 shoemakers, 3 saddlers, 51 carpenters, 41 stonecutters, 26 shopkeepers. The total population is 4,794, of whom 2,403 are Catholics and 2,394 Protestants: they compose 988 families, with 1,584 children. Most of the colonists are in the prime of life, only 180 being over fifty years. The exports of the colony are estimated at 18,000*l.* sterling, and the imports at 16,500*l.* Their annual crop is valued at 25,000*l.*, of which one-third stands for tobacco, one-fourth maize, and the rest beans, potatoes, barley, wine, sugar-cane, rice, flax, &c., including 5,000 pounds of cotton, and an equal quantity of honey.

Rincon del Rey was founded about the same time as Santa Cruz (1850), not by the State, but by Dr. Israel Barcellos, who induced a number of German families, chiefly from San Leopoldo, to settle on his lands near the town of Rio Pardo, which they supply with milk, butter, eggs, honey, vegetables, &c.: this colony is flourishing.

Mundo Novo was also founded in 1850, by a gentleman named Tristan Monteiro, on lands which he bought a few years before on the Arroyo Santa Maria, 30 miles north-east of San Leopoldo.

He sold the farm-lots at 30*l.* each, and soon found colonists, not only from San Leopoldo, but also from Germany, the situation being well chosen, on the high-road to Cima da Serra. Its progress has been wonderful: in 1853 it had only 4 shops, and now its import trade represents 45,000*l.* per annum, while its exports of maize, tobacco, wine, sugar-cane, beans, brandy, &c., are still more valuable. There are 2 churches; St. Mary's (Protestant) and St. Rose (Catholic), besides 12 mills for sugar, oil, and flour; 8 distilleries, 2 'atafonas' for grinding mandioca, 2 saw-mills, 1 brewery, 4 tanyards, 1 tobacco-factory, 7 blacksmiths, 11 shoemakers, 6 tailors, 3 waggon-makers, 3 carpenters, 1 hatter, 1 stone-cutter, and 40 shopkeepers. There are 9 schools, Catholic and Protestant, most of the inhabitants being of the latter persuasion; of the total 259 families, there are 195 Protestant, 54 Catholic, and 10 mixed. The colony includes, besides the village of Paquara, six 'picadas' or farming districts, between Cima da Serra, Padre Eterno, and the rivers Sinos and Tocano. Although this colony has been such a brilliant success, it is said that the founder did not make a great fortune by it.

Conventos was founded in 1853 by Fialho

Pereyra & Co., and is now the property of Fialho and Vargas, who brought out a number of families from Germany, gave them liberal advances for food, implements, and other necessities; the colony was located in the fertile valley of the Taquary, on the Arroyo Forqueta, an affluent of that river, about 90 miles north-west of San Leopoldo, and 40 from the town of Taquary. Messrs. Vargas are said to have lost money in the enterprise, but the colony is getting on well, comprising 83 families, chiefly dedicated to the cultivation of beans, maize, wheat, and flax, from which last they manufacture some good home-made fabrics. They also produce annually some pipes of wine for their own consumption; the exports consist of maize, potatoes, and beans.

Silva was founded in 1854 between Conventos and the town of Taquary on an area of 30,000 acres belonging to a wealthy Brazilian; and two years later Mariante and Estrella, all in the same rich valley, within easy reach of the great water-courses which form such easy highways. All these colonists are thriving.

Maratà also dates from the same period (1856), and takes its name from the Arroyo on which it is situated, an affluent of the Rio Cahy. The

lands in question were purchased by Andreas Kochenburger and Peter Schreiner (in 1855), who divided them into 120 farm-lots, which they disposed of to countrymen of theirs: the colony comprises 88 families in 3 picadas, or groups—St. Catherine, St. Andrew, and Good Hope, the total population being 560 souls. There are 42 Protestant, 37 Catholic, and 9 mixed, families; the school is attended by 70 children. The colony possesses 6 oil or flour mills, 3 distilleries, 1 brewery, 2 atafonas, 3 carpenters, 2 shoemakers, and 3 tailors, besides 2 large shops. Maratà is 30 miles north-west of San Leopoldo, not far from Port Guimaraens, to which the New Hamburg Railway will probably be prolonged.

Santo Angelo derives its origin from a decree of the Provincial Legislature, dated November 30, 1855, which also ordered the establishment of another colony at Nova Petropolis. The first batch of settlers, 119 in number, arrived from Germany in 1857, being joined by 7 Germans from San Leopoldo. The locality of Santo Angelo was admirably chosen, in productive soil, between the Rio Jacuhy and the slopes of Sierra Geral, 50 miles from the town of Caxoeira, and 200 from Port Alegre: the Jacuhy is navigable the whole

way from the colony to Port Alegre, and the colonists have two roads, one to the town of Caxoeira, another to the Jacuhy ford, 25 miles distant. The colony is supposed to cover 20,000 acres (29,500,000 square brazas), but barely one-fifth is actually settled on, the rest still awaits colonists. Farm-lots of 120 acres may be purchased for 45*l.* sterling, and smaller lots of 80 acres (100,000 square brazas) at 30*l.* Since the commencement the colony has been under the immediate and personal direction of Baron von Kalden, who is highly spoken of. The present population is 825, of which number one-third are German-Brazilians, and the rest from the Fatherland, except 22 from the Netherlands and France. There are 304 men, 245 women, and 276 children; forming 194 families. More than two-thirds (568) are Protestants, to whom the Legislature gave the sum of 400*l.* to build a chapel; the Catholics also have one, and there is a school for the children of each persuasion. There are 6 mills, 6 shops, 2 tanyards, 5 shoemakers, 2 tailors, 2 blacksmiths, 19 carpenters, 4 cartwrights, 1 saddler, and 5 stone-cutters. The annual exports of maize, tobacco, beans, rice, sugar-cane, &c. exceed 1,700*l.* in value, and the

imports 1,300*l.*, leaving a balance of 400*l.* in favour of the colony. The stock comprises 313 horses, 473 horned cattle, 3,811 pigs, 25 sheep, 8 goats, and 5,933 poultry. Several of the products were sent to the Paris Exhibition, and the tobacco obtained a premium, being considered quite equal to that of the Sta Cruz colony. The latest annual returns show 42 births, 7 marriages, and 12 deaths.

Novo Petropolis was founded on the part of the Provincial Government by Counsellor Ferraz, between the Rio Cahy and Sierra Geral as an entrepôt between Port Alegre and Cima da Serra; about 32 miles north of San Leopoldo. In 1858, the first batch of 80 settlers arrived from Germany, the terms offered being the same as in the Sta Cruz colony, viz., each family purchased a farm-lot of 80 acres for 30*l.*, payable in five yearly instalments, and the colonists to repay in like manner any advances made in their favour, besides the cost of transport from Rio Grande to the colony. The situation is well chosen, and there are three roads; to Picada Feliz, 12 miles, and Port Guimaraens, 30 miles, both on the Rio Cahy; and to San Leopoldo. The area is 140,000,000 brazas, or 100,000 acres, of which

one-fifth is actually under tillage. At first, much confusion was caused by the appointment of an improper manager, named Vidal, who was at last removed in March 1860, after wasting much money: he was succeeded by Mr. Frederick William Barthelemy, who restored order, marked out the boundaries of the settlers, and devoted much labour to the making of roads. There are now 344 farms, distributed in 8 groups or picadas, as follow:—

Olinda	76
Imperial	120
Piraja	55
Riachuelo	8
Barros Pimentel	30
Sebastopol	26
Christino	17
Nova Petropolis	12

These numbers do not include a group of 75 Americans, to whom the Imperial Government has given a land-grant between Barros Pimentel and the Arroyo Sinimbri. Many Americans, however, as well as others sent to Santo Angelo, left the colony in disgust; but they were not suitable people, being for the most part unmarried, unaccustomed to country work, and displeased with everything. The Government gave them a subsidy of 25 cents a day for their support, but they refused even to

help in clearing roads through the forest for the colony.

The Government tried to oblige the German colonists to pay for their lands in this way, by employing them in forest-clearings and deducting half their wages on account of the sums (in all about 9,000*l.*) they owed the State; but the colonists flatly refused, alleging that they were so poor as hardly to be able to support their families, much less work for half wages. Since then the State has spent a good deal of money on roads, the average cost for a clearance 20 feet wide being about 50*l.* sterling per mile. The first settlers received some annoyances from the Bugres Indians, and even so late as 1867 a band of thirty of these savages kept for some time prowling about the colony, at last making an assault on Michael Kerber's mill, where they were repulsed with such spirit that they retired without having done injury. Between the colony and Cima da Serra is a place known as Campo dos Bugres, where these Indians formerly lived. It is proposed to prolong the road from Cima da Serra to Nonohay, in the direction of Matto Grosso. The lands of Novo Petropolis are too elevated for cotton or tobacco, being nearly on a

level with the Sierra Geral table-land; but all kinds of wheat, flax, colza, maize, beans, &c. do remarkably well, and the colonists obtained numerous prizes and 'honourable mentions' at the Paris Exhibition. They raise as much flax as to suffice for all the home-made linen necessary for their own uses. The lands between the rivers Jacuhy and Cadea are found peculiarly suited for cereals. The population of this colony is returned at 991 souls.

Cima da Serra, otherwise called San Luis, is another of the colonies founded by the legislature of the province: it is situated in thick woods, and distant nearly 300 miles from San Leopoldo.

San Lorenzo was started by Mr. Jacob Reingantz, near Pelotas, in 1858. The Government pays a premium of 2*l.* a-head on whatever immigrants he brings out, Mr. Reingantz paying their passage from Germany, giving them supplies for the first year, and selling them farm-lots payable in instalments. The colony has been very successful, and comprises 1,637 souls, in 340 families, who cultivate 372 farms and raise large quantities of grain and vegetables for the Pelotas and Rio Grande markets. The colonists are as 3 Protestants to 1 Catholic and have two schools: they have a little steamer

to carry produce to Rio Grande, the colony being advantageously situated on the slope of Serra dos Taipes, on the banks of the navigable river Camequan. The State has founded a colony called San Feliciano on the same river; it is still in its infancy, and these two are the only colonies in the southern part of the Province.

Santa Maria da Soledada, like so many other enterprises of this kind, was ruinous to its founder, Count de Montravel, who obtained a concession from the Provincial Legislature in 1855, and, along with some capitalists of Port Alegre, marked out the new colonial settlement between the Rio Cahy and its tributary Ferromeco. The first settlers arrived from Europe in 1857, and in the beginning he would only have Catholics, which caused the colony to lose its German character, being largely mixed with Dutch, Swiss, &c. The Count also was too lavish in his expenditure, and when the colonists were heavily indebted to him he found himself ruined and gave up the enterprise, then taken in by the other shareholders with the assistance of the Imperial Government. The colony now prospers, having raised last year 83,000 bushels of grain, 240 cwt. of tobacco, and a large quantity of yerba, sugar, flax, and cotton. There

are 7 mills, 4 churches, and a state school. The farming stock comprises 7,300 head, besides 7,224 pigs and 22,000 poultry. The colonists are 1,571 in number (330 families), nearly two-thirds Catholics, and three-fourths of the whole number Germans, the rest from Switzerland or the Low Countries. The colony lies some 40 miles NW. of San Leopoldo, and 20 N. of Port Guimaraes, the proposed station of the prolonged New Hamburg Railway.

Monte Alverne was founded by the Rio Grande Government in 1859, on lands adjacent to Santa Cruz, close to the Arroyo Castelhana, an affluent of the Taquary. It was at first treated as a branch of the Santa Cruz colony, and the colonists for some years suffered great poverty. They have a public school, and are about equal in number, Catholics and Protestants.

San Francisco d'Assis and San Nicolao were founded by the Provincial Government in 1859; the first on the head-waters of the Ibicuy, the second near Encrucilhada, besides a third far in the interior on the banks of the Upper Uruguay; but none of these have made progress owing to the distance and impenetrable woods.

Teutonia was founded by a company of German merchants who bought some lands on the Taquary

and imported 40 families to settle on them. There are now 600 farm-lots occupied or marked out, and as the soil is good and the situation favourable, this colony promises to be a great success. It is 20 miles from the town of Taquary and 12 miles from the river, being close to the colony of Estrella already mentioned.

Sinimbu was founded by Messrs. Holzweissig of Port Alegre in the district of Maquinè, far northward, on the line of the proposed railway to Santa Catalina ; but until some such means of communication be established the colony must suffer from its extreme isolation.

Caseros is a kind of military colony established by the Imperial Government, near Lagoa Vermelha, 120 miles N. of San Leopoldo. It counts 65 men, 48 women, and 76 children, who have a chapel, school, and 46 wooden houses. Their stock consists of 104 head, and their crop consists chiefly of maize, besides 175 bushels of wheat and beans, and 12 cwt. of tobacco.

The inspector of colonies gives a shocking description of the immigrants engaged in New York by Mr. Bocayaba, in 1867, and brought to Brazil at the expense of the Imperial Government. A contingent of 157 of them was sent to Port Alegre

to be distributed among the new colonies in formation. A few that were married turned out well, but the rest are described as idle, worthless vagabonds, of whom only 13 were native Americans, and the others a mixture of English, Irish, Scotch, French, and Germans, that the police-authorities of New York (as the inspector insinuates) prevailed on Mr. Bocayaba to ship for Brazil with the hope of reforming them in the southern hemisphere. They arrived half-naked and shoeless, and insisted on the Government providing them with clothing: they refused to cook their own food and obliged the authorities to find them a cook; they bartered their bread for liquor, and to complete their misconduct burned all the benches, doors, and windows for fuel. On their way to the interior they committed some robberies and caused much trouble, and arriving at Nova Petropolis repeated their vandalism in the emigrants' house by burning all the wood-work and 100 yards of fencing. Some delay occurred in the payment of the subsidy promised them daily, and they proceeded to intimidate the authorities. Six of them were sent to Santo Angelo, where farm-lots and houses were given them, besides 2*l.* each in cash, but they took the earliest opportunity to run away, going probably to the Banda Oriental: 85

were sent to Novo Petropolis, most of whom also deserted. The inspector of colonies rejoices at this circumstance, for, he says, if they remained they would cause endless confusion. His report may be rather exaggerated, but it is impossible to shut our eyes to the fact that this kind of colonists was wholly unsuitable and the effort merely a waste of money. •

Very different are the inspector's remarks on the German settlers, and I gladly add my testimony to the truth of what he says:—

‘German immigration is the only kind that has done well in this province, and the success of these people is due to their patient and persevering industry in tilling the little farms they are proud to call their own, which they never could do in Germany. They are not only laborious, but also economical and able to bear privation or hardship, and hence their progress is sometimes slow, but always sure and steady. Look at what the first settlers had to go through in clearing the forests, facing the wild beasts and Indians, suffering want, exposure, and the effects of a new climate. But they overcame all obstacles, and in spite of ten years of war founded a vast and flourishing colonial system throughout our virgin forests. It is this

plodding perseverance, patience under privation, and simple mode of life which make the Germans superior to any other kind of settlers in a new country.

‘Meantime they have some defects, and the principal is a habit of routine which makes them averse to any change such as improved methods of agriculture or the use of machinery. In the United States, it is true, they imitate what they see around them and are carried along by the tide of improvement; but with us, who are rather sleepy in such matters, the German remains as conservative of old ways as if the world never advanced, and along with his simplicity of life and character (which is so admirable) he perpetuates the retrograde system of agriculture of past ages.

‘The German settlers as a rule speak their own language exclusively, their children preserving this bond of nationality the same as if born in the Fatherland, but they also understand Portuguese perfectly. I do not share in the apprehensions of those who say it is injudicious to have so large and powerful a foreign element in the province. The settlers and their children have a warm regard for the country and speak of the Emperor with almost child-like affection. Neither are they of a trouble-

some or ambitious character, but entirely devoted to the care of their little families and farms, forgetful of returning to the Fatherland, and making themselves heart and soul identified with their adopted country, as happens in the United States and Australia, where they are esteemed among the best and most useful citizens.

‘ The Swiss are everyway as good as the Germans, possessing the same character and qualities, which fit them for colonists. The Portuguese have also many things to recommend them, being sober, steady, industrious people, fond of agriculture and the labour of vineyards. In Serra dos Quevedos, near Camaquan, there is a thriving Portuguese community, remarkable for its fine crops, its spinning and weaving industry, and orderly habits, which make it an example to our own native people of the surrounding country who are plunged in indolence and barely raise enough food to support life. And if we make an excursion to Faxinal de Cangussu, we find the grand-children of a lot of Portuguese settlers who came hither in the eighteenth century and perpetuated habits of order, virtue, and industry which are now well preserved by their descendants. When speaking of Portuguese I would also include people from the Spanish pro-

vince of Galicia, who are very similar and equally laborious.'

For some years previous to 1860 the number of German arrivals averaged nearly two thousand, the Government paying a subsidy of 2*l.* per head to Messrs. Martin Valentin of Hamburg and Steinman & Co. of Antwerp on all such passengers. In 1860 this subsidy was suspended, and the immigration fell away more than half, at last dwindling down to 105 in 1866. During the Paraguayan war not much attention was given to colonisation, but at present a new era has begun which promises to increase largely the German and producing element of Rio Grande. The legislature has become convinced that whatever sums it expends in this way are speedily reimbursed by the enhanced revenue and productions of the colonists' industry. Several contracts have recently been signed for the introduction of German or Swiss settlers; one with Messrs. Holzweissig is for 40,000 immigrants. The Imperial Government has also contracted for 100,000 English colonists, at the rate of 10,000 yearly, to be sent out by a Bristol firm, and it is possible many of these will be settled in Rio Grande on account of its favourable climate and soil. Most of the Germans who come hither are from Pome-

rania or the Rhine-land, and one little district called Hundsweg, on the Rhine, has sent thousands. Last year it was stated to Government that there were two thousand families in Pomerania anxious to come out, if the Government would pay their passage. The colonists now coming out will receive farm-lots in the same way as those who came before: they will have to clear away the dense forests which are the only obstacle to the husbandman. The province is large enough for the aggregate population of half-a-dozen of the smaller kingdoms of Europe.

XIV.

ARRIAL AND PELOTAS.

FROM San Leopoldo returning to Port Alegre I halted a few days at the latter place and obtained from the Government a pamphlet published on the province by an engineer named Camargo, with much statistical and general information. Being desirous of visiting Pelotas, I took passage in the 'Guayiba' to Rio Grande. The night was so rough on the lake that almost everyone on board was sea-sick.

After a day's rest at Rio Grande I started with Mr. Crawford and his brother-in-law in a whale-boat for Arrial, and in three hours we cast anchor in view of Mr. Crawford's farm. The only incident on the voyage was shooting some black swans, which line the coast in thousands opposite Ilha dos Marineiros ; but we could not pick up those we killed, for the sea was running so high and a stiff

breeze filling our sails, that the boat was almost unmanageable and at times threatening to capsize. Our sailors were two good-humoured Portuguese, who knew their business well. As the wind was favourable we scarcely altered our course the whole way, keeping almost equidistant between the low sandy range of the mainland and the verdant island of Mariners, on which some neat farm-houses are observable. The coast-line from Rio Grande to Arrial is a succession of sand-hills for 20 miles without a sign of animal or vegetable life, and so heavy for riding that the voyage by whale-boat is the usual way of travelling.

Abreast of where we have cast anchor is the fazenda of Senhor Brun, who is believed to be descended from some English settler, possibly named Brown: the farm-house is a snug one, and the owner is said to be a very worthy old gentleman. While the sailors are wading in the shoal water, about to transfer us to a smaller boat, a market waggon comes down on the beach and José (for it is Mr. Crawford's gardener) drives into the water and takes us aboard a long narrow vehicle, such as one sees in the German colonies. After reaching *terra firma*, we meet old Mr. Brun on horseback, a hale-looking man for eighty summers.

A charming green lane, reminding me of the quiet country scenery in England, with over-arching trees and one or two cottages on either side, conducts us to the manor-house of Arrial, which is built in the ordinary Brazilian style, a flight of steps leading up to a spacious apartment like a ball-room, from which bed-rooms open off to the right and left: the basement is used for cellars and the like. Mr. Crawford purchased this place a few years ago for the trifling sum of 500*l.*: there are 40 acres of ground, one half planted with fruit-trees, the garden last year producing 100,000 oranges. A magnificent pine-tree, in the centre of the grounds, is ascended by a ladder, and from the branches views may be obtained of the whole country, Rio Grande being clear to the eye. After dinner we stroll through the garden, where some English apple and Monte Videan pear-trees are found among the tropical fruits of Brazil. This place is about fifty years old, having been laid out by a wealthy merchant of Rio Grande for a brother who had lost his reason. The proposed railway from Rio Grande to Pelotas would pass by here, bringing Arrial within half-an-hour of the former city. A delightful suburb for summer or winter residence might be laid out in these lovely green fields and

plantations. Meantime Mr. Crawford intends to procure from home a steam-yacht, which will run over to Rio Grande in an hour (15 miles), and thus permit him to reside at Arrial if so disposed.

The sun was setting as we stood on the high ground at the edge of the estate, overlooking the vast lake, with the jungle and thickets that intervene. This range of meadow-land would be well suited for any number of counting-houses, and Mr. Crawford entertains some hope of selling the ground to advantage as soon as the railway is carried out. At present he only comes to Arrial for a month in the summer, leaving it all the rest of the year to a Portuguese capataz named José, who had recently married a smart Irish girl, daughter of one of the Pelotas colonists, and Mrs. José keeps the house in apple-pie order: she was born at Pelotas, but speaks English as well as her husband does Portuguese.

The programme for the morrow was as follows: Mr. Crawford having to return to Rio Grande, his brother-in-law and I were to start at daybreak for Poro Novo and Pelotas, taking a native guide who would bring back our horses, as we should return by steamer to Rio Grande. Sullen peals of thunder ushered in the morning, and a black cloud to

northward presaged a coming storm ; but the horses were saddled and we resolved to run our chances, although Mr. Crawford advised us to put off the journey for a day.

An hour's riding over heavy sand was very tiresome, and the view flat and cheerless, a house or a few cattle being seen at long intervals. As the sun rose we descried ahead of us a wood, which our guide pointed to, saying 'There is Poro Novo.' When we reached the village it seemed to have no inhabitants: we rode down a long avenue of trees interspersed with ruined ranchos, from which not even a dog started out, and came up to the church in the plaza: the church was closed, but in front was a pulperia, where we obtained a glass of cashass and a box of sardines, by way of breakfast. The pulpero complained that the place was going to the dogs, and on my asking him what other inhabitants there were besides himself, he mentioned a shoemaker, or rather a man who used to follow that calling, but had now taken to drink, seeing the wretched state of things. During our stay of half-an-hour I did not see a living being about the plaza or church, but our guide told me of a terrible occurrence which happened here a few years ago. The cura, an Italian priest named

Jeronimo, was murdered on the steps of the church after saying the Rosary on Ash Wednesday evening: the criminal was suspected, but never punished. The church, although in decay, is a tolerable edifice of the last century, my guide's grandfather having been christened there: the cemetery is attached, contrary to custom in these countries, but there is little need to consult public health in the dismal group of ruins which bears the inappropriate name of Poro Novo.

The storm was visibly rising as we emerged from the thickets into the open country, and our guide despaired of our reaching Pelotas before it came on. Col. Carneiro, a hospitable Brazilian, lived a few miles to the west of our course, and I proposed we should make for the friendly shelter; but the guide said that in so doing we would expose ourselves to the chance of not reaching Pelotas for some days, as the arroyos intervening would become swollen and impassable. From a high slope we could discern the fringe of timber which marked the course of the Rio San Gonzalo, as the Pelotas river is called. Bleak, swampy country now followed, with ranchos few and far between, while the thunder rolled over our heads, and the rain, like a cloud of dust, came sweeping down from the

hills behind Pelotas. It was dismal enough, and we arranged our ponchos to meet the impending storm. At intervals in these swamps we have to proceed in Indian file, closely following our guide's steps, who tells us of different persons lost here from mistaking the passes between the lagoons, the bottom of which is generally a thick dark mud. At one place our guide halts in doubt, but speedily adopts the device of the Gauchos, in all such cases, of driving some animal of those grazing near across the stream. We had some difficulty in prevailing on a calf to show us the ford, and indeed it was so bad that I was not surprised at the reluctance of our four-footed 'vaqueano.'

The San Gonzalo woods were about 3 miles ahead of us, when the rain came down in torrents. The ground was so bad and uneven that we had to proceed cautiously. Before a quarter of an hour our ponchos were wet through; mine was 'guanaco,' and incorrectly supposed water-proof. The rain was very tropical, our poor horses reeling and staggering under its fury, while the thunder broke in deafening peals, and the lightning was so brilliant and beautiful as to lose its terrors.

It cleared up for a while as we reached the woods, through which there are bridle-paths in

many directions, and the trees are so thick that hardly a drop of rain had penetrated. For half-a-mile or more this sylvan scenery was uninterrupted, the paths so narrow that with difficulty could two horsemen pass each other. A large potrero or pasture ground intervened between the wood and the river, and we could see vessels going down with produce from Pelotas, the turrets of the church marking the position of that town some few miles higher up. To our annoyance we found a strong wire fence completely cutting us off from the river's side where the boats lay for ferrying passengers over. In one place the wires were partly broken, and after much trouble we got our horses through, regardless of what our guide said, that the owner had men posted to fire at trespassers. A dozen peons, mostly black slaves, were at work on a kind of causeway from the river-bank to a warehouse close by, and of them we enquired when we should be able to get a boat; but they were very insolent and only grinned at us, while the rain poured down again in a perfect deluge. The ground all about was a morass. We hailed boats going up and down, but they heeded us not. Just then a canoe from the opposite bank shot across the river, here some 200 yards wide;

it brought food for the peons. After much bargaining, the boatmen agreed to pull us up the river to Pelotas for 10 milreis (1*l.*). We had to lie in the bottom of the canoe the better to prevent its capsizing; and on reaching the middle of the stream we felt the full force of the current, but the boatmen pulled gallantly through and made for the opposite bank, saying they had to fetch something from their house. We found a pulperia or grog-shop, where we were glad to get a glass of cashass, for our clothes were now saturated and sticking to us. From this point to the town was five miles, and I proposed to my companion that we should walk instead of boating it, but as he had a sore foot we had no alternative.

Our guide from Arrial had started on his return journey before we crossed the river: the poor fellow was as wet as we were and had eaten nothing that day, but it is incredible what long journeys a gaucho will make on an empty stomach.

As we proceeded to re-enter the canoe, one of the men refused to come, saying his comrade could manage the canoe without him. We then found it was the intention to take us up to Pelotas under sail. It was no use our urging the

danger of such a voyage, for canoes are bad enough when propelled by paddles, but with a sail the risk is tenfold. The rain still poured down in torrents, and we trusted ourselves to the frail vessel with some such feeling as that even a dip in the river could not make us wetter. The boatman, who told us he was a Portuguese, sat in the stern steering with one hand and managing the sail with the other, while he took off our attention from any unpleasant reflections about the bottom of the river by pointing out on the bank the scene of a great battle, at Paso dos Negros, in the civil war of 1840, and some saladeros: the latter are larger and better constructed than in the River Plate, the city of Pelotas being the centre of this business in Rio Grande, and killing over half-a-million cows yearly.

At times the canoe heeled over alarmingly as some bend in the river caused our sail to fill rather suddenly. The current was running very strong down-stream, and I begged the boatman to keep close to the bank, as I was no swimmer. He said the river was not very deep as he was steering, and added that he could not swim a stroke himself. Just then came a puff of wind, snapping the sail out of his grasp, and as it flapped for a

moment I remained watching events with a conviction that in two minutes some of us would be holding on to the bottom of the canoe. He tacked—she shook and gave a slight plunge forward, and away we went merrily and without further mishap till reaching a wooden mole at a muddy landing-place where we leaped on shore. The moral of this tedious journey is, avoid canoes in general, but never risk your life in one with a sail.

There was no coach to take us up to the town, and as we landed we saw a group of mulatto peons at a pulperia door laughing at us; they were half-drunk and bore the marks of their calling in the saladeros, so we thought it wiser not to address them, but to ask the owner of the grog-shop to take care of our saddles while we proceeded on foot up town. It was over a mile and in places we had to wade through the pools in the road, all the time keeping in view the turrets of the church. At last we came to a large plaza on the top of the hill, and soon found our way to the Hotel Europa, which is kept by a fat Portuguese with half-a-dozen lazy waiters. A few doors distant was a clothes-shop where we bought flannel underclothing, and, in fact, a com-

plete outfit; but on taking the paper-money out of my pocket to pay for these articles, I found it was almost reduced to pulp from the wetting we had got. The first thing we did in the hotel was to get a bottle of cashass, and, before putting on dry clothes, take a regular bath of this spirit, rubbing it well into the joints to prevent rheumatism or other ill effects. It is indeed a sovereign specific in such cases, as we also experienced on this occasion, for in half an hour we were entirely cured of the awful drenching, and took no cold.

Pelotas is a town of about 12,000 inhabitants, with some regular streets, but for the most straggling and only half-built, although in almost every block you come on one or more costly houses representing an outlay of several thousand pounds sterling. The place has an air of opulence, active trade, and growing importance, which is fully justified by the knowledge that it is the chief centre of the produce or export trade in this part of Brazil. It is the newest town in the province of Rio Grande, having been founded in the present century. The inhabitants, mostly Brazilian, are thriving, hospitable, and industrious, with a good deal of the Yankee spirit of

going a-head, besides being remarkably wide-awake in business matters.

Before we were an hour in the hotel we had three or four invitations, and, accepting the first, went to dine with the principal apothecary, a young Brazilian who studied in England and has his diploma of pharmacy from a London college hung over his fireplace. He speaks English perfectly, although now three years here, and tells us there is no Englishman in the town except Mr. Stewart, an artist, who is travelling all over the empire, pencil in hand, making short stays in each town. After dinner Mr. Stewart came in; a quiet gentlemanly youth, with the dreamy look of a poet or painter until he brightened up in conversation: he told us he had been over half Brazil on foot, with his knapsack and crayons, and had sketches enough to fill a large album; everywhere he met with the greatest hospitality and kindness, the planters being loth to let him go. This reminds me of a German friend of mine in Monte Video, who told me he was two years travelling in the interior of Brazil without spending a dollar, the planters being only too glad to find a European to talk to about the exterior world, and in this way he went from one plantation or 'fazenda'

to another, being supplied with horses and attendants wherever he went: he also told me of a friend of his who was eleven years travelling in the same manner, and added that such a life has many charms not only from the novelty and freedom it supposes, but from the magnificent scenery of the country and the kindness you experience from perfect strangers wherever you go. It is a kind of lotus-eating life peculiarly captivating for a young man unfettered by family ties; being, moreover, harmless and free from the temptations of drink and low company; above all, it is the life for an artist.

In the evening we went to take tea with Mr. Cordeiro, the United States Consul, a native of Pelotas, but educated and naturalised in the Great Republic. He told us that the flourishing appearance of the town and its inhabitants was fully borne out by fact, mentioning a score of people each worth from 100,000*l.* upwards. The house nearly in front of his own belonged to one of these saladero nabobs, who had expended over 40,000*l.* on it, the front being of white marble. Foreigners who come to Pelotas usually do well, and the town is so healthy and picturesque that it is surprising there are no English settlers. The

Italians, who flood the River Plate countries, are here not to be met with: I saw one, who was playing a hurdy-gurdy. There are some well-furnished shops, belonging generally to Portuguese or natives. The streets are paved and clean, and as soon as the gas and water-supply, already begun, are completed, the city will have a very respectable appearance. In one of the outskirts is an enormous hospital building, not yet finished, and apparently too large for the place. The great want hitherto felt has been pure water, the only supply being from the San Gonzalo river, a little above the saladeros, which still infected the water more or less. The aqueduct now in construction is some 12 miles long, being drawn from the hills, which form an amphitheatre on the west side; and Mr. Cordeiro advised us to drive thither next morning, as it commanded the best scenery in the neighbourhood. We accordingly made arrangements with a coachman who was to call for us an hour before day, so as to profit of the cool hours of morning.

The outskirts of Pelotas have some elegant residences commanding views of the San Gonzalo valley. Our road lay in the direction of the cemetery, and this is the one by which the trade

with the Banda Oriental Republic is carried on, sending thither imported goods in return for horned cattle. Here I may observe that the saladero trade in these parts of Brazil is said to be brisker whenever a civil war is going on in the Oriental Republic, the armies on both sides devoting their energies to sweeping off the cattle, which they drive across the frontier and sell to the saladeristas of Pelotas or their agents at Yaguaron. We met numerous bullock-carts with hides and other produce. Passing the handsome villa of Saint Amanda, we saw the sun rising, its first beams tipping with gold the outlines of the Cerros before us. The road is of tosca, and a league from town we cross a rivulet called La Fragata, where there are tea-gardens, a favourite resort of the citizens on holidays.

About ten miles from town the road branches off in two directions, one towards Yaguaron, the other towards the Cerros, and at this point is a capital wayside inn kept by a French Basque (from Basses Pyrénées) and his wife, who have everything scrupulously clean, their son and daughter being the civilest of waiters, and the *cuisine* reflecting much credit on madame the old lady. At breakfast we met a German engineer,

engaged in surveying and marking the route for the new aqueduct. Shortly after leaving the inn we found the sun beginning to be hot, and my compassion was excited by seeing some poor negroes carrying small baskets on their head and trudging the way to town. I learned that this was a penance given them by their masters for some misdemeanour, instead of flogging them; and as niggers don't mind the sun, the only hard part was the having to walk ten miles each way, to bring back say a pound of sugar or a newspaper. These slaves very often escape across the frontier to Banda Oriental, and return again in two years, after which period no master can claim them.

Cachoeira, or 'the waterfall,' is the name of a picturesque and secluded spot in the Cerros, famous for picnics, and close to the springs from which the new water-supply is being taken. Here we halted for a rest. There is an old mill in ruins, about which snakes are numerous, and the orange-trees have their bark everywhere cut with initials of sentimental idlers: parrots abound here. The stream which forms the waterfall is the S^{ta} Barbara; the water is pure and limpid. This locality forms a portion of what is known as the Mendoza chacra or farm. The concessionaire

of the water-supply is Sigñor Duran, who estimates the outlay at 50,000*l.* sterling, the aqueduct being simply pipes laid down from this point to the town of Pelotas, the distance being variously stated at 12 to 14 miles. The same gentleman is concessionaire for the proposed railway from Rio Grande to Pelotas (35 miles), about which he intends shortly going to England.

Near the waterfall we came upon half-a-dozen men putting up sheds for the workmen who will be engaged in the aqueduct. The foreman told us they were much annoyed with snakes: he expects the water will reach Pelotas before twelve months.

Our coachman now took us by a road which goes along a high ridge of the Cerros, with a pleasant and extensive view on either side. Farm-houses, surrounded with orange-trees and herds of cattle grazing in the valleys, succeed each other for some miles, until we descend into a little wood through which flows the Arroyo de Micaela, with rocks rising up on either side among the foliage; and here we give our horses a rest. From the top of the next slope we see Pelotas, and far away to the left Monte Bonito, where the Irish colony was located, one or two families still re-

maining. Crossing another arroyo called the 'Sauce,' we strike upon the road by which we went out this morning. A small market-cart, driven by an old woman with a cloak over her head, passes us, coming from town; the coachman pointing to it, says, 'That woman is a countrywoman of yours.' It was Mrs. Carpenter, one of the survivors of the colony, who was left fifteen years ago a widow with several small children in this strange land, and must have perished of want but for her assiduous industry, trust in Providence, and the kind assistance of many native ladies. She is still poor, but has raised up a respectable family. Yonder she goes in her ass-cart with the proceeds of the butter she has sold in town; she little heeds the tropical heat of the day, but is thinking of her family and humble cottage at Monte Bonito. For twenty years she has led this life, with many a wish, perhaps, to see again the wild hills of Glengariff, where she was born; but that is impossible. Those of the Monte Bonito colonists who went down to Buenos Ayres and tried sheep-farming have been for the most part very fortunate, and are now wealthy estancieros.

Passing the cemetery we alighted. Some of the

monuments were of Carrara marble with bas-reliefs and statuary, the cost of which must have ranged as high as 1,000*l.* sterling.

In the afternoon we went to see the church of Pelotas (there is only one); it was undergoing repairs and a re-gilding of the ceiling: it is a good-sized, well proportioned edifice. The stranger will find little of interest, in the absence of public buildings, unless he go to see a *saladero* at work, which to my mind is one of the most sickening sights imaginable. The cattle are killed, cut up, and the flesh and hides hung up to dry almost as quickly as I can write it; but the peons are smeared with blood, the ground is a red sea, the smell is also what you must expect in such gigantic shambles, the flies are in myriads; however, when one is accustomed they tell me it is an interesting and pleasant occupation, and all experience shows that *saladeros* are healthy places to live in.

Before leaving Pelotas, I may observe that Mr. Cordeiro's father has a concession for laying tramways through the town, which are much wanted. From this town the traveller may proceed by steamer either upwards to Yaguaron or downwards to Rio Grande.

XV.

YAGUARON AND LAKE MINI.

THE voyage by steamer from Pelotas to Yaguaron, 148 miles, is devoid of interest, except when you enter on Lake Mirim; the steamers are small and uncomfortable, and the water is often so low that a delay of some days occurs in getting on and off the shoals. Yaguaron is a neat, well-built town of 3,000 inhabitants, situated on a hill-slope near the mouth of the river of the same name. The public buildings consist of a church, school, barrack and custom-house, and if you ascend the hill on which the new cemetery is placed, you will obtain a fine view of the Banda Oriental country beyond the river. On the opposite bank is the village of Artigas, belonging to the Oriental Republic, a ferry-boat crossing to and from Yaguaron every half-hour. During the Oribe wars, 1842 to 1851, these two towns were very flourish-

ing and a great business was done over the frontier, especially in killing cattle and shipping the hides, the Blancos and Colorados (alternately) making it a practice in their wars to confiscate the cows and horses of their adversaries. Yaguaron declined during the Paraguayan war, a large number of the male inhabitants either being drafted or having gone away. Artigas is said to exist chiefly by smuggling; but the dealers suffer so much from the contending factions, that it is by no means a thriving place, and once or twice a year the floods of the Yaguaron river threaten the lower part of the town with destruction.

There are few Europeans in these remote places. An Irishman named Flanagan, who has changed his name to Fernandez, is a master bricklayer at Artigas, and an industrious American, who has lived here thirty years, has a neat residence in the suburbs; his wife is a native and he has a fine family of sons and daughters. At Yaguaron there is an English carpenter named Fulcher, who came here with his wife and daughter in 1868 from Port Natal: there is also an Irishwoman, married to a Frenchman who keeps an hotel. The principal trader is Senhor Paseyro, a native of Old Spain, who has a saladero, tannery, and other establishments,

on both banks of the river, his chief house of business being along the Yaguaron custom-house, but his residence is in Artigas : he is very kind and attentive to strangers, and understands some English.

From Yaguaron the traveller may proceed inland on horseback to Bargé, Alegrete, &c., passing through a very diversified country and meeting with a welcome at whatever estancias he may pass *en route* : it is essential to have a good guide. If he wish to see something of Banda Oriental, he can take the weekly diligence from Artigas to Melo, a stretch of sixty miles of the wildest scenery, by Conventos, Corral de Piedra and other localities associated with terrible records of blood. Scarcely a dozen habitations are met on the way, and more timber than cattle, but little of either. It is not uncommon for the coaches to break down, and the conductor generally has a reserve of crow-bars, &c., to splice an axle-tree or the like. The natives along the route have so bad a reputation that people dislike travelling singly on horseback. Before reaching Villa Melo, otherwise called Cerro Largo, there is a fine stone bridge built ten years ago by an enterprising Frenchman, who was murdered soon after by a native who objected to pay the toll. Melo is an interesting town, built by

the Spaniards in the last century as a kind of head-quarters for this frontier. It has now about 4,000 inhabitants, several good shops, 4 closed banks, an excellent hotel, a prison generally full of bandits from the adjacent woods, a fine state-school, and some pretty gardens in the outskirts; an American named J. B. Lockett has a farm on a hill near the town. This place is 300 miles from Monte Video, through a wild and desolate country which is traversed by diligencia in three days, if the rivers be not swollen. The telegraph wires from Monte Video to Yaguaron will pass by here.

But the pleasantest trip from Yaguaron is to the Rincon de Ramirez on the banks of Lake Mini. The Indians used to call Lake Patos the Lagoa Guazir or big-lake, and Mirim (which is smaller) El Mini or the little; but the Portuguese adhere to the name of Mirim. It is 120 miles long and 16 wide, is fed by thirty-three rivers, its waters being for the most part very shallow: there are three great banks or shoals, Juncal, Zapata, and Sarandy. By the treaty of 1853 the lake is declared Brazilian territory; at present it is virtually closed to commerce on the side of the Oriental Republic, although now and then a boat laden with tiles or lumber, from Yaguaron or Pelotas, may be seen

ascending the Sarandi or Taquary, which are navigable for miles.

Rincon de Ramirez is a kind of peninsula, with a coast-line of 20 miles on Lake Mini and having the river Taquary for its inland boundary: its area is 500,000 acres, and it takes its name from old Ramirez, a native of Andalusia and shopkeeper of M.Video, who bought this immense property for the sum of 5,000 silver dollars, and came to settle in this wilderness A.D. 1798. Until recently the mud rancho was standing in which he lived for many years, during which strange and varying fortunes visited this part of the country. The wars of Artigas devastated the Banda Oriental to such a degree that the Rincon de Ramirez was left bare of cattle except such *alzada* or wild animals as hid in the woods. Nevertheless so rapid was the subsequent multiplication of stock that in 1845 the Rincon counted 150,000 cows and 50,000 horses. The wars of Oribe then ensued, and at their close in 1851 the total stock did not amount to 20,000 head. At present there are 60,000 cows, 160,000 sheep, and 6,000 horses; the land value of the Rincon is about 200,000*l.* sterling. Two-thirds of the area have been broken up and sold to the joint-stock farming companies of Merinos, Mini, and

Cebollati, of which the shareholders are M. Videan capitalists and English residents. Sor. Ramirez, son of the original owner, still holds about 24 square leagues or 150,000 acres; his estancia house, La Feja, is on the banks of the Taquary; it is well-built and commodious, in the Brazilian style, and if you chance to find the proprietor at home, or any of his sons, you may count on a hospitable reception. A short mile distant is Sagrera's wayside inn and general camp-store, where the people of the Rincon procure clothing, groceries, &c., for which the old man makes a yearly trip to M. Video: during the wars of 1851 he was a captain, but now he leads a retired life here, with his sisters, one of whom has pleasant recollections of a visit to Cork and the banks of the Lee many years ago. Sagrera's daughter is wife of Sor. Breschi, manager of the Mini estancia, and speaks English perfectly, having been educated by Miss Edye at M. Video. From Sagrera's it is a picturesque ride to follow the course of the Taquary to the farm of Harismendy, an industrious Basque, who is on shares with Sor. Ramirez: his house overlooks the pass of the Taquary where the coach-road crosses towards Artigas and Yaguaron, eight leagues distant. Cattle for the saladeros of Pelotas are

also driven across here: the river is about 60 yards wide, with steep banks covered with luxuriant timber, the stately palm giving its name to the neighbouring estancia of El Palmar.

The Rincon suffered not only from wars but from two successive plagues, first of tigers, secondly of wild dogs. About fifty years ago tigers were so numerous that Ramirez offered 3 dollars a head, besides allowing the hunter to keep the skin, which had a marketable value of six to seven dollars. In one year a fellow nicknamed Yuca-Tigre killed 105, and Juan Silva, between 1825 and 1830, received payment on 200 heads, or nearly half the entire number killed in that period. The wild-dogs were many years later, and Ramirez paid 2 reals (10 pence) a tail, till 20,000 were killed and the plague ceased: he states that in two years, from 1849 to 1851, he paid for 5,000 tails. These wild dogs used to cause much havoc among the calves, and on a few occasions were known to pursue a single rider just like a pack of wolves; if they overtook a man on foot he was a certain victim.

The estancia Palmar, about a league from Harismendy's, has a fine two-story house with a mirador or watch-tower, and stands on the spot where old Ramirez had his rancho in the days of

contrabandists, Farapos, civil wars, &c., when he seldom slept in his rancho at night, but hid himself in the neighbouring thickets of the Taquary. A peach plantation surrounds the house, which is now the abode of a widowed sister of Sor. Ramirez : there is no idea of comfort within, but a cold, almost dismal, look, unless you ascend to the azotea, from which you have a beautiful panorama, the hills of Yaguaron being plainly visible beyond the Taquary. Pushing on towards the lake you pass the house of Louis Correa Pintado, whose daughters make excellent bread and keep a tidy home. After crossing some ugly streams you come in sight of Catumbera, the residence of a kind, hospitable Brazilian named Grimecindo Mattos, who is surrounded by troops of children and grandchildren. The house is built on what is known as a terre-moto or Indian burying-place (in the time of the Charruas), and here was found a box of bones, which, however, may have been the remains of some Spanish soldiers, who had numerous look-outs against smugglers. The traveller could spend some days very pleasantly with Sor. Mattos, and find plenty of game, from bandurria (a kind of water-fowl) to tigers and ostriches. He must beware of tying his horse under a tree called

Arueda, which has the effect of causing the body of man or horse to swell if they rest under it, although the native women have herbs for curing the same. It is not so easy to cure the bite of a *Vivora de Cruz*, a small snake or viper which is often met with and takes its name from a cross on its head. There is a bleak range of country with tufts of pampa grass ten feet high, from Catumbera to Charqueada on the bank of Lake Mini. Here are the ruins of a *saladero* built by Ramirez, where one or two Indians still remain: these men are splendid swimmers. The last European that lived here was an Englishman named E. B. Goss, from Liverpool, who was book-keeper, in 1862, when the *saladero* was working. The banks of the lake are a succession of low sand-hills, so white and fantastically shaped that at a distance they sometimes resemble houses, walls, flocks of sheep, &c. There is no sign of *estancias* or cattle to be seen for miles: the water is of a light green and so shallow that you may walk out 500 yards before you find it up to your knees. Yon promontory is known as *Rabo Fiero*, famous for tigers; and that island, called *Isla de Hambre*, derives its name from the fact that a band of smugglers who took refuge there died of hunger. Smuggling was not looked

on as very dishonourable at that time, and it is said some of the first families in the River Plate have records of daring adventures by their ancestors in running the gauntlet of the Spanish guards.

If you are in quest of tigers you will be very likely to find some at the mouth of the Sarandi, where there are woods and cave jungles: they generally live by cattle-stealing, and will carry off a fat calf at night to their lair, but if they have once tasted human flesh they will eat nothing else afterwards if they can help it, and are known as 'tigre cebado,' so terrible to the natives that they then turn out in full force and never rest till they have killed him. A tiger that is not 'cebado' will hardly attack a man, unless in self-defence. On the banks of the Sarandi is a comfortable farmhouse belonging to José Francisco Larrosa, who has a well-educated family and fine establishment; his pigs and Rambouillet sheep are famous in this part of the country, and his estancia, which he has on halves from Ramirez, comprises 11 leagues or 70,000 acres of good land: he grows sugar-cane to fatten the sheep. His next neighbour, ten miles distant, is an Irishman named John Roberts, from Cork, who has the management of several thousand sheep belonging to Los Merinos joint-stock

Company. The Sarandi at Larrosa's is 30 yards wide, and hard to cross after rain. Between here and the lake are some enormous ant-hills, three or four feet high. Arroyo Malo has plenty of water-fowl. Arroyo Lapota is infested with tigers, as you will learn if you halt at Major Muslera's house ; his family also suffer from ghosts, owing to the usual cause, the house having been built on a terre-moto of the Charruas. El Mini is another of the joint-stock farming companies in which Messrs. Ramirez, Jackson, Fernandez, O'Neill, &c. have embarked, and here they have built a fine house on top of a hill which commands an extensive view. The estancia has an area of nearly 100,000 acres (14 leagues), comprising numerous rivers, fringed with timber, debouching into Lake Mini. The company was formed in 1868, with a capital of 55,000*l*. Mr. Breschi, the manager, and his wife, are very hospitable.

The estancia of Atalaya, where the present Mr. Ramirez resided for thirty years before building La Teja, is on a commanding hill at the entrance to the Rincon, and constructed as a fortress, to prevent freebooters carrying away cattle. The word Atalaya signifies a watch-tower. On one side is the river Taquary, on the other the Arroyo

Tapota, each about two miles distant, with a long fringe of timber which abounds in game. The whole territory of the Rincon is spread out at your feet. The house is a solid quadrangle of stone, with an inscription in dog Latin over the entrance to the effect that it was built by Gulielmus Fowler, A.D. 1839, and the exterior has only one window, which is strongly barred and formerly served as a shop, for Mr. Ramirez used to keep a general store to supply the wants of the neighbours, and as passers-by in those times were often unpleasant visitants, there was no shop-door, but the barred windows always allowed room for a bottle or a pair of boots to be passed through. The flat roof rendered the fortress complete, and the inmates could stand a siege of any odds or duration. But when you enter the court-yard you find Mr. Fowler's inscription was premature, for the house has not been finished, and the range of apartments on one side has never been roofed, while the doors and windows are wanting in another. Two sides of the quadrangle are inhabited by the manager, his family, and some Irish peons from South Africa. Ostriches are to be counted by the dozen hereabouts, but you must not shoot or 'bolear' them without special permission from the owner of the ground ;

they are valuable not only for the feathers but also for the eggs, which make excellent omelets and often form a portion of the peons' food. Half an hour's ride from the Atalaya is a hill which has been dug up in all directions by disappointed treasure-seekers, an old native woman of reputed wealth having lived here, and no one ever knew what became of her money, if she had any. The ruins of her house are still standing.

From the Atalaya to Yaguaron is a ride of four hours, the distance to Artigas being ten leagues, and then across by the ferry. There are several streams and thickets on the way which were formerly infested by 'matreros,' and one place which now serves as a wayside inn and is kept by a German has the unenviable notoriety of two families who resided there having been murdered successively. The lawless condition of the Oriental Republic is indicated by the iron bars on all the windows, which you never see when you cross the frontier into Brazil. Even at present it would not be well for a single traveller to ride about the Rincon de Ramirez unless he had a trusty 'vaqueano' or guide, and a good revolver: the thickets or banks of rivers are often dangerous, and only three years ago there was in the prison of Cerro Largo a fellow

named Fernandez who confessed to have murdered over twenty persons ; he had not the least remorse for it, and was so fond of display that the fringe of his poncho was hung with silver two-real pieces. It is more than probable he is again at large, not 100 miles from these parts. The townsfolk of Cerro Largo, when the order came to remit him to M. Video, knowing that assassins invariably got free again in a few months, proposed to bribe the escort to shoot him on the way and allege that he had tried to escape ; but a revolution broke out soon after, and the order for his removal was countermanded. It often happens in these revolutions that a 'guapo,' one who has murdered several people, is released from prison and promoted.

If time and companions offer, the traveller might make a pleasant journey from Yaguaron to the gold-washings of Cunapiru near Sant-Ana do Livramento, which are partly in Oriental, partly in Brazilian, territory. General Goyo Suarez, Mr. Rogers, and others have establishments there.

XVI.

*GERMAN COLONIES IN SANTA CATHARINA
AND OTHER PROVINCES.*

BESIDES the colonies in Rio Grande there are others no less flourishing in Santa Catharina, San Paulo, Parana, Espirito Santo, Minas Geraes, and Rio Janeyro.

The Blumenau colony, in Santa Catharina, stands among the foremost for the numbers and wealth of its community, and takes its name from the founder, Dr. Hermann Blumenau, who afterwards transferred it to the State. The Paris Exhibition awarded it one of the special prizes set apart for institutions of most benefit to humanity; nor can anything be devised more beneficial for the surplus population of Europe than colonies such as this. Since its transfer to the Imperial Government this colony is known as Itajahy. Its first foundation dates August 4th, 1860; it has an

area of 140,000 acres, of which about 4,000 are under crops. The population is 6,947, of whom two-thirds are Catholics, one-third Protestants, with chapels, schools, and cemeteries for each denomination. The annual returns show three times as many births as deaths. Besides such articles for their own consumption as sugar, rice, maize, wheat, and farinha, the colonists raise a large quantity of tobacco, their export returns showing 900*l.* worth of tobacco in rolls, and 4,800*l.* of sawn timber. Their imports amount to 8,500*l.* The colony counts no fewer than 73 saw-mills, distilleries, &c., and 6 schools. The farming stock is small, viz.—306 horses, 987 cows, 26 goats, 1,431 pigs, 5,300 hens, and 205 bee-hives. The colonists have made 46 bridges, 48 miles of high roads, and 50 miles of bridle-path through the woods. Dr. Blumenau acts as agent at Hamburg for the Brazilian Government, and selects the most suitable emigrants, shipping them for even a lower rate of passage than they would have to pay to New York, the Imperial Treasury paying the difference. In 1868 he sent out 9 vessels with 1,097 adults and 489 children for this colony, charging the Government 26 thalers (say 4*l.*) per head for adults, and 20 for children; but in the following year he reduced

it to 23 for adults and 17 for children. Thus the total cost of the emigrants to the Brazilian treasury, when landed in the country, is not much over 3*l.* per head, big and little. Two-thirds are Prussians, and the rest chiefly from Saxony, Hanover, &c., except 3 per cent. Austrians and Swedes.

Doña Francisca was founded by the State in 1847. The Hamburg Colonisation Company sends out 400 settlers yearly, at the same time constructing a road 160 miles in length, and purchasing from Government at a reasonable price 100,000 acres along the route of the same. The colonists are chiefly natives of Prussia, and nothing can be more flourishing than their condition: they have their own municipal council, and their exports annually rise to a high value. This colony is now more generally called San Francisco. The population numbers 5,237, including the village of Joinville, which counts 1,172 souls. They are nearly all Protestants, there being only 734 Catholics. There are pastors of both persuasions, and 12 schools, attended by 561 children. The Minister of Agriculture reports as usual that the colonists are industrious, and crime of any kind is unknown. They have 35 sugar-factories, and 77 mills and

distilleries, of which three are driven by steam-power. Their exports consist of timber, cigars, arrow-root, butter, hides tanned, rice, sugar, &c. to the value of 21,000*l.*, their imports amounting to 18,000*l.* They have 2,465 cows and horses, besides swine and poultry in great numbers, and 413 bee-hives. There are 110 miles of roads in the colony, and the State spends about 1,200*l.* a year in making new ones. The great highroad to the Ignassia and Negro valleys in the province of Parana, of which 20 miles are made, has already cost 16,000*l.*

An English colony called Principe Don Pedro proved a failure. The ship 'Florence Shipman' brought out in 1868 some hundreds of Irish and English settlers from Wednesbury, who had little or no knowledge of farming. On their arrival at Rio Janeyro they were met by the Emperor in person, who conducted them to the nearest church to assist at a Mass of Thanksgiving, and then handed them over to his Ministers to be provided for. The lands unfortunately were ill-chosen, or at least the place where the colonists' huts were put up, for an inundation occurring some weeks after, it washed away the huts, drowned two of the settlers, and so discouraged the rest that the

colony was broken up and the Brazilian Government very generously provided the poor people with passage back to England.

The province of San Paulo counted 40 colonies so far back as 1859, all of which were established by Brazilian planters, except Nova Germania founded by Karl Kruger. Some of them had only from 50 to 100 colonists, and the largest were:—

Ibica,	founded by Senator Vergueiro .	757
San Geronimo,	„ Senator Gueiroz .	567
San Lorenzo,	„ Luis de Songa Barros .	444
San Joaquin,	„ Dr. Lacerda .	185
Boa Vista,	„ Benedicto Camargo .	173
Cauritinha,	„ Dr. Jordan .	125
Angelico,	„ Senator Vergueiro .	133
Independencia,	„ Monteiro and Son .	121
Saranjal,	„ Luciano Nogueira .	146
Sete Quedas	„ Joaquin Amaral .	116
Morro Azul,	„ Joaquin Camargo .	115
Cresciumal	„ Senator Gueiroz .	100

Some of these afterwards burst up, the colonists alleging with much truth that they had been grossly deceived, and that their condition was little better than that of the slaves. As the Minister of Agriculture says in his report to the Legislature, it is culpable to bring out Europeans to work in Brazil unless on their own ground, and the sweat of their toil should never be turned to the advantage of speculators or traffickers in labour. He adds

that the conduct of the San Paulo planters not only disgusted the Imperial Government, but damaged so much the name of Brazil abroad that emigration was greatly checked.

The only State colony now existing in San Paulo is Cananeo, which counts 623 settlers, mostly Swiss, who are indebted to Government more than 2,000*l.* for advances. Their annual produce, in maize, beans, rice, coffee, sugar, &c., is valued at 3,700*l.*, each settler having a farm-lot of 100 brazos square, say 13 acres English. In 1868 some Irishmen were sent here, but they did not like the idea of making roads in the colony, or cutting timber in D. Alfonso Bulhaw's saw-mill at Guaraha for wages much lower than some of their friends were earning on the San Paulo Railway. They made their way afoot to Santos, where the British Consul at once found them employment, except one Samuel Keats, a musical-instrument maker, who got back to Rio Janeyro and there procured an engagement at his trade. Some Englishmen and Germans were working at the Guaraha saw-mill when the Government commissioner, Dr. Continho, arrived there, but the poor people's wages were so much in arrear that disorders were apprehended.

The San Paulo Government has just concluded a contract for the introduction of several thousand Germans within five years, and as the climate and soil are favourable, it is likely this Province will soon compete with Rio Grande and Santa Catharina in the way of colonisation. An English enterprise with a capital of 250,000*l.* has been recently started, the nature of which is thus set forth in the prospectus :

‘The Company has purchased the “Angelica” Estate, situated in the Province of San Paulo, containing about 26,000 acres, of which a large portion is coffee land of the first quality. The buildings on the estate comprise a stone dwelling house, houses for colonists, substantial and large stores, and coffee and saw-mills driven by water power. The estate is under the management of Mr. Karl Koch, a German gentleman, who has had over fifteen years’ experience in the management of coffee estates in Brazil.

‘The existing coffee plantations on the estate comprise about 780 acres, having thereon 200,000 bearing trees (which yielded, in 1870, 27,239 alqueires = 5,600 cwt. of coffee), and 100,000 young trees. They are at this time chiefly cultivated by colonist families, who will form the nucleus for

the extension of the colony under the Government Emigration Contract. The Company contemplates the employment of 1,200 families in the cultivation of about 8,000 acres to be planted with coffee. The yield from the estate will be annually increased as the existing young trees, and those to be planted, come into bearing, and may, when the whole of the plantations are in full bearing, be estimated to reach at least 90,000 cwt. of coffee.

The price to be paid for the estate and the Government contract is 126,000*l.* Of this amount the vendors (the New London and Brazilian Bank) take 50,000*l.* in fully paid-up shares of the Company, and guarantee upon the amount paid up on the share capital of the Company an average dividend of not less than 7 per cent. per annum during the first three years from the date of allotment.

‘ For the purpose of encouraging European emigration to Brazil, in view of the abolition of slave labour throughout the Empire, the Brazilian Government has granted to this Company important subsidies, estimated to produce 128,000*l.*, in addition to an annual payment of 48,000 milreis during five years, which will at the exchange of 24*d.* amount to 24,000*l.* The Company will thus be enabled to offer to emigrants more than ordinary inducements and advantages, and it has reason to

believe, on the authority of gentlemen of great experience in emigration matters, both here and in Hamburg, that a considerable number of emigrants will gladly avail themselves of the same.

‘The “Angelica” Estate is eminently fitted for the reception of emigrants; it is watered by two rivers, has extensive woods, with timber suitable for all purposes, and is distant only 60 miles from Campinas, to which town the railway will be opened in the spring, and 10 miles from the thriving town of Rio Claro, which has a large German community.

‘The Province of San Paulo contains an area of about 100,000 square miles, and is the most celebrated in Brazil for the good quality of its coffee and the large average yield per acre. Its climate is one of the most healthy in the world, and the largest portion of the Province being at an elevation of 2,500 feet above the sea, the heat is not excessive. As regards the progress of the Province and the fertility of its soil, no better evidence can be given than the figures contained in the latest published official returns, which show the value of the exports from the port of Santos to have risen from 131,443*l.* in the year 1848, to 1,974,919*l.* in the year 1871.

‘As regards the communication between the Es-

tate and the Port of Santos, the San Paulo Railway (the most successful railway in Brazil) runs in a direct line as far as Jundiahy—a distance of 87 miles; and the extension of this line to Campinas—another 17 miles—will be almost immediately opened for traffic. For the remaining distance of 50 miles to the town of Rio Claro, a provincial company has already applied for a concession.'

The Imperial Government has concluded a contract with an English firm to send out 100,000 English agricultural settlers in a period of ten years, and these will probably be located in colonial groups over the three Provinces of San Paulo, Santa Catharina, and Rio Grande. The Brazilian Consul at Antwerp has, moreover, instructions to give free passages to all farming emigrants properly recommended, and send them out by Messrs. Ryde's steamers of the Belgian and Brazilian Mail line.

The Province of Paraná has two state colonies, besides that of Superaguy, founded by Senor Gentil, with 496 settlers.

Assunguy, in the district of Coritiba, consists chiefly of French farmers from Oran, in Algiers, whose crops were destroyed by locusts in 1868. Having sent an envoy, M. Huet, to look out for suitable lands in Brazil, this gentleman went

over the Provinces of San Paulo and Paranà, at last fixing on the department of Coritiba. The only lands that could be given gratis were covered with forest; and as M. Huet told the President that his countrymen were more accustomed to ploughing than felling timber, and had not money to buy cleared land, the Imperial Government came to their aid and advanced to Messrs. Huet, Imbert, and Schaeffer the sum of 431*l.*, with which they bought a fine fazenda near Coritiba: the 'Polymnie' soon arrived from Marseilles with the first batch of ninety colonists, who were afterwards joined by others from that port and a small number of Germans.

Theresa was founded many years ago by the Imperial Government with 250 colonists, near Ponta Grossa at the confluence of the Ivahy and Paranà rivers. Its extreme remoteness has prevented its growth, and it is unadvisable to send Europeans so far into the interior; but the principal object was to establish a centre of population in so important a geographical locality, which was also on the direct route to the distant inland province of Matto Grosso. As soon as roads with the seaboard cities and provinces be established, this place must command an important future.

Besides the Germans there are 17 French, and the total population is 435: the land is mountainous, but they cultivate successfully sugar, tobacco, and cereals. They have a number of mills, distilleries, and kilns for making tiles. The colony is under the direction of Mr. Gustave Rumbelsperger, whose expenses of administration amount to 460*l.* per annum. The situation of this colony is marked on the map as 24·34 S. lat. and 53·45 W. long.

The Province of Espirito Santo has three state-colonies. Santa Isabel was founded some twenty years ago by the Imperial Government, and has now some thousands of flourishing settlers, who have been emancipated from all state-control and formed into a municipal community, after the manner of San Leopoldo and Itajahy.

Santa Leopoldina is of nearly the same date as the former, and has 2,000 inhabitants; but its progress has been retarded by the want of roads and the unfavourable nature of the ground. Messrs. Knorr & Co. of Hamburg annually send out fifty or a hundred settlers, at expense of Government, for this colony.

Rio Novo was founded several years ago by Major Dias da Silva, and subsequently purchased

by the Imperial Government. As the colony suffered greatly for want of proper roads, the Government caused the Rio Novo to be cleared of obstacles and rendered navigable, since when it has progressed favourably. It is not exclusively European, but includes 328 natives, chiefly coloured people: the entire population is 734, forming 193 families, and cultivating 1,200 acres, under coffee, rice, beans, &c. The total area ceded to the colony is about 12,000 acres. Their annual crop averages 100 tons of coffee and 6,000 bushels of cereals. The colonists have petitioned Government for 500*l.* to put a bridge over the Rio Novo on the road to Itapemerim. A chapel is being built, and better schools are much needed, there being 200 children who can neither read nor write: of the adults 140 can read. The colonists are chiefly Catholics, there being only 59 Protestants.

The Province of Minas Geraes has two state-colonies. Pedro Segundo was founded some twenty years ago by the Union and Industria Company, which opened up the trade of this province by a magnificent highway of macadam, 91 miles long, to Petropolis, whence the Mauà Railway affords easy transit to Rio Janeyro. The

colony is in the picturesque district of Juiz da Fora, and counts over 1,200 Germans, of whom two-thirds are Catholics. There is a resident German priest, and the Evangelical pastor of Petropolis attends to the Protestants, who number 379. The schools are attended by 141 children. The colonists have 3,000 acres under tillage, and derive great advantage from the good roads: they still owe the Union Company 6,700*l.* for advances or land sold to new settlers, of whom about fifty arrive yearly. By a contract with the Imperial Government the Union Company continue to manage the colony, besides a Modern Agricultural School, which is well worth visiting. The traveller who may happen to be at Rio Janeyro should make it a point to visit this colony, which is surrounded by magnificent scenery: he can proceed by the Pedro Segundo Railway to Entre Rios and Juiz da Fora, returning *viâ* Petropolis, the Mauà Railway and steamboat to Rio Janeyro. Numerous German settlers are also found about Petropolis; some of them are famous for the quaint and artistic walking-sticks which they carve out of the coffee-tree. One in particular, who lives on a hill overlooking the Emperor's palace, has beautiful *chefs-d'œuvre*, including cabinets, chimney-ornaments, &c. Pe-

ropolis enjoys a delightful climate even in the depth of summer, being at an elevation of 3,000 feet in the Sierra da Estrella, and is the residence of the Corps Diplomatique. Nothing can be more wonderful than the zigzag road, with stone battlements, which is cut as it were in galleries up the steep side of the mountain, connecting Petropolis with the Mauà Railway.

Mucury, in the district of Minas Novas, founded some twenty years ago by a Joint Stock Company, is now managed by a Government director, Dr. Carvalho Borges, and receives yearly 200 Saxons or other North Germans through Mr. Robert Schloback of Hamburg. The colony is situate on the confines of Minas Geraes and Bahia, comprising two groups, one at Ribeiras das Lages, the other at Philadelphia.

There are sundry other colonial settlements, some founded by Provincial Governments, some by private parties, and in many of which most or all of the colonists are natives. They may be briefly classified thus:—

Province of Rio Janeyro.

	Colonists.
Jacob Van Erven's . . . counts .	2,354
Wallao dos Veados . . . „ .	540
Independencia, of W. da Gama . „ .	318
Sta. Rosa, of Count Beaupendy . „ .	142
Sta. Justa, of Carneiro Bellens' . „ .	123

Maranhao.

	Colonists.
Arapathy, founded by Government . . .	368
Sta. Theresa, of M. Bittencourt . . .	140
Pirucana, Joint-stock Company . . .	112

Bahia.

Commandatuba, founded by Government . . .	290
Engenho Novo, of Sor. Pereyra . . .	100

The Imperial Government has marked out 700,000,000 square brazos, or 835,000 acres, for new settlers: in farm-lots of 40 acres it would suffice for 21,000 families.

WORKS UPON BRAZIL

APPENDIX

WORKS UPON BRAZIL

- Ulrich Schmidel's voyage, Frankfort, 1567.
Travels in Brazil, Lery, Rochelle, 1578.
Reconquest of Bahia, Vargas, Madrid, 1623.
Nat.history of Brazil, G. Piso, Leyden, 1648
Barlaeus hist. Brazil sub. Maur. Nassau, Amsterdam, 1647.
Dutch in Brazil, Moreau, Amsterdam, 1652

WORKS UPON BRAZIL

- Nova Lusitania**, Brito Freyre, Lisbon, 1675
Dutch war in Brazil, Lusitano, Lisbon, 1679
Explorations in Brazil, John Mawe, London, 1812.
Voyage pittoresque en Brazil, Koster, 1816
Coast of Brazil (Hewitt's surveys), Whittle, London, 1817.
History of Brazil, Southey, London, 1819, 3 vols.
Travels in Brazil, Prince Max of Neuwied, Frankfurt, 1820.
Travels in Brazil, Alexander Caldcleugh, London, 1824.
Travels in Brazil, G F Mathison, London, 1825.
Englishwoman in Brazil, Mrs Graham, London, 1823.
Slavery in Brazil, Rev. Dr Walsh, London, 1829.
Descent of the Amazon, Lieut. Mawe, London, 1829.
Descent of the Amazon, Lieut. Smyth, London, 1835.
Correo de Brazil, 1808—1820, London
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Travels in Brazil, Ewbank.
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Interior of Brazil, Gardner, London, 1846.
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Legends of Brazil, Warnhagen, Madrid, 1855

WORKS UPON BRAZIL

- Valley of the Amazon, H W Bates, London
1852
- Burmeister, Dr., Reise nach Brasilien, Berlin
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- Brazil and Brazilian, Kidder and Fletcher,
Philadelphia, 1857
- Deux années au Bresil, Biard, Paris.
- Valley of the Amazon, Wallace, London.
- Heywood, Resources of Brazil, London 1864.
- Pereyra l'empire du Bresil, Paris 1865.
- Aye Lallemant, Dr., Reise durch Brasilien(1858)
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- Empire of Brazil, Scully, Rio Janeyro, 1868
- Journey in Brazil, Professor Agassiz, Boston, 1868
- Ethnology and nat. hist. of Brazil, Martius
Leipzig, 1867
- Highlands of Brazils, Capt Burton, London,
1869
- Travels of Paul Marcoy, Paris, 1874
- Sketches in Brazil, Hinchcliffe, London 1876
- Brazil and La Plata, Hadfield, London 1877
- Travels in Matto Grosso, Mrs M G Mulhall,
London 1877

STATISTICS

STATISTICS

The trade of Brazil in 1876 amounted to £35,575,000 sterling; viz. imports £17,215,000, and exports £18,360,000; shewing an increase of 3 per cent in imports, and a decline of 12 per cent in exports as compared with 1875. The returns for 1876 were

	Imports	Exports
Rio Janeyro.....	£10,136,000	£10,055,000
Bahia.....	2,124,000	1,504,000
Pernambuco.....	1,962,000	1,177,000
Rio Grande.....	895,000	1,113,000
Pará.....	720,000	1,254,000
San Paulo.....	501,000	1,724,000
Maranham.....	350,000	285,000
13 other provinces	527,000	1,248,000
	£17,215,000	£18,360,000

The revenue and public debt of the principal countries in S. America are as follows:

BRAZIL: revenue 11 millions stg., debt 68 millions, trade 35 millions.

ARGENT. REPUBLIC; revenue 3 millions, debt 14 millions, trade 18 millions sterling.

PERU; revenue 6 millions stg., debt 44 millions, trade 13 millions sterling.

CHILE; revenue 3 millions, debt 9 millions, trade 15 millions sterling.

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7. Lord Anson's and Vernon's expeditions.
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9. English Jesuits in Paraguay and Patagonia.
10. British designs on S. America.
11. Occupation of Buenos Ayres by Beresford.
12. Capture of Montevideo by Auchmuty.
13. Whitelock's defeat at Buenos Ayres.
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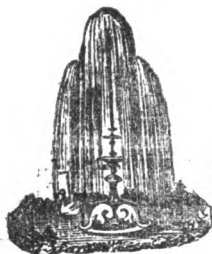
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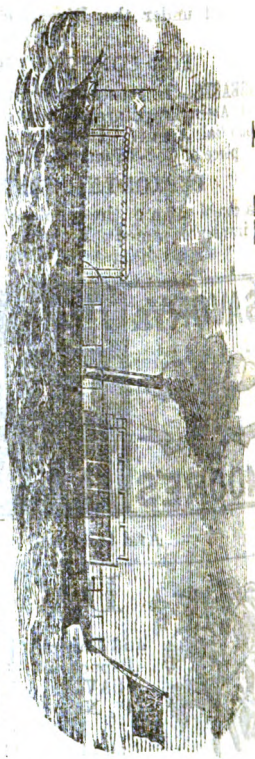


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