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UNIVERSITY OF LONDON
INSTITUTE OF LATIN AMERICAN STUDIES
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*Roraima:
Brazil's Northernmost
Frontier*

John Hemming

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A Centre for Contemporary Brazilian Studies was established within the Institute in 1989 to promote, coordinate and disseminate research on Brazil.

ISBN 0 901145 68 8

ISSN 0957-7947

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Brazil's northernmost frontier
by John Hemming**

This study forms part of the Maracá Rainforest Project, organised by the Royal Geographical Society of London, and led by the author, at the invitation of the Brazilian environment secretariat SEMA (now part of IBAMA), in co-operation with the Amazon research institute INPA, Manaus. The research was done with help from a personal grant from The British Academy.

Introduction

In 1988 Roraima achieved statehood in the Federative Republic of Brazil. Its territory embraces the entire basin of the Rio Branco, a mighty northern tributary of the Negro and one of the larger rivers of the Amazon system. The new state has an area of over 230,000 square kilometres (88,800 square miles), which is the size of England, Scotland and Wales. It stretches from just south of the equator to over 5° north, and is thus the northernmost part of Brazil. The southern region beside the lower Branco river is densely forested, as are most of the Parima and Pacaraima hills that form some 960 kilometres of frontier with Venezuela to the north and northwest. But the north-eastern region towards Mount Roraima and the frontier with Guyana is a natural open plain. A largely treeless savanna stretches from the upper Branco east towards the Essequibo in Guyana. This plain, on the southern edge of the precambrian Guiana Shield, is cattle country. As such it has shaped the history of settlement in this isolated part of Brazil.

I. From earliest European settlement to Federal Territory, 1773–1943

The earliest settlements

The first colonial settlement in what is now the state of Roraima occurred in 1773. Spanish soldiers established two tiny fortified hamlets on the Uraricaá and Uraricoera rivers in the north-west of the region. It is surprising that these first settlements should have been planted by Spaniards striking south across the Pacaraima hills from Venezuela. The area around the basin of the Rio Branco had been penetrated since the start of the eighteenth century by expeditions in search of Indian slaves, but these had all been either Portuguese paddling north from the Rio Negro, or Dutch pushing south-westwards from the upper Essequibo.

Portuguese visits to these remote northern headwaters of the Amazon river system were rewarded in the Treaty of Madrid of 1750. That important treaty fixed the boundaries between the Spanish and Portuguese empires in South America and gave Brazil most of the vast territory it occupies today. The negotiators of the treaty sensibly sought to follow geographical features wherever possible. For the northern frontier eastwards from the upper Rio Negro, they followed the watershed between the Amazon basin to the south and the Orinoco to the north. This line was so sensible and unambiguous that Brazil's northern border with its Spanish neighbours has never since been in dispute, making this one of the oldest peaceful boundaries in the world. The Treaty of Madrid was annulled in 1761; but the watershed was re-established as the northern limit of Brazil by the Treaty of San Ildefonso of 1777. The entire valley of the Rio Branco was awarded to Portuguese Brazil.

Although the Spanish incursions occurred when no treaty was in force, the Portuguese still regarded the Pacaraima hills (the Amazon-Orinoco watershed) as the natural frontier. They were therefore highly alarmed, and reacted swiftly and decisively. The authorities on the Rio Negro sent a strong force of troops and native Indian auxiliaries up the Branco at the end of 1776. Under its German commander Captain Felipe Sturm, this force rapidly overcame and captured all the Spanish contingents and sent them downriver in irons. Sturm immediately started building a stone fort, later called Fort São Joaquim, in a strategic location where the Tacutu and Uraricoera rivers join to form the Rio Branco. For the next 120 years, Fort São Joaquim was to be the symbol of Portuguese and Brazilian rule of this northernmost region. For many years, the fort's garrison of less than thirty men with their dependents formed the bulk of Roraima's non-Indian population.

Captain Sturm tried to settle the local Aruak and Carib-speaking Indian tribes in villages on the banks of the Tacutu, Uraricoera and Branco, not far from his new fort. By 1781 over a thousand Indians were living in six villages. But in that year the short-lived colonial experiment went wrong. The Indians

had agreed to settle under the impression that they would receive a continuous supply of the knives, axes, clothing and other manufactured goods that they greatly coveted, and that had been used to lure them into the villages. But the supply of free goods soon ended and the colonial directors started to demand labour from the men and women under their control. Indians refused to work, the fort's commander arrested their chiefs, and the inhabitants of all but one of the six villages 'rebelled', killing some Portuguese soldiers and burning their huts.

The Portuguese authorities decided on a lenient response and in 1784 a royal pardon was issued to the 'rebels'. During the ensuing years 1,051 Indians were persuaded to enter a new set of villages, which were now located farther down the Rio Branco so that they could be more easily controlled from the south. This second attempt to colonise Roraima's Indians was, however, no more successful than the first. The villages were struck by disease and their manioc plantations were blighted. The Indians resented fresh attempts to force them to labour for the colonial administration and in 1790 there was a second rebellion. This time the authorities reacted harshly. The people from five villages were rounded up and banished to new locations on the Amazon, Madeira and Solimões rivers thousand of kilometres from their homelands.

In 1798 there was a third and final rebellion. The few remaining Indians in the Rio Branco villages tried to organise a resistance but were slaughtered by a military contingent on a sandbank of the Rio Branco that became known as the Praia do Sangue (Beach of Blood).¹ This was the end of native settlements, apart from a brief attempt in 1839–46 when a missionary, Friar José dos Santos Inocentes, tried to settle Makuxi and Wapixana in a mission called Porto Alegre on the Tacutu and then on the Uraricoera.

Cattle ranching

When the first Portuguese slavers and explorers saw the great natural savannas that stretch from the upper Branco to the Essequibo, they immediately appreciated their potential as pasture for cattle. In 1787 Colonel Manoel da Gama Lobo d'Almada, a future governor of the Captaincy of Rio Negro, praised the region: 'Those fertile plains are covered in excellent pastures for cattle, studded with clumps of bush that would afford shade for the animals during the fiercest heat, irrigated by creeks which render them fertile, and with innumerable lakes from which is drawn a quantity of mountain salt.'² The energetic Gama Lobo d'Almada put his vision into reality. In the 1790s he shipped a few cows and bulls up the Branco to the savannas at its headwaters.

In 1793 a commander of Fort São Joaquim, Nicolau de Sá Sarmiento, founded a ranch for himself on the triangle of land between the Tacutu and Uraricoera rivers opposite the fort. A rich settler from the Rio Negro, José

Antônio Évora, started another ranch called São José on land to the east of the fort at that time. And the land to the west of the Branco became known as the Fazenda do Rei (King's Ranch) or Fazenda de São Bento. By 1798 it was reported that the three ranches had between them a total of 900 head of cattle. When Sá Sarmiento and Évora died, the government of the province of Pará in what was now the independent Empire of Brazil (1822–89) seized their cattle and land on the grounds that they were in debt to the state. The three ranches became known as the *fazendas nacionais*. They lay on the three sides of the Y formed by the junction of the Tacutu and Uraricoera to form the Branco. Each stretched away from the rivers, across the limitless plains to the north, east and west respectively.³ The cattle on Roraima's national fazendas multiplied despite almost total lack of attention to its breeding. The ranches were entrusted to a succession of administrators, some of whom were convicts exiled from other parts of Brazil. By 1838 Robert Schomburgk, the German explorer employed by the Royal Geographical Society of London, said that the ranches contained 3,000 head of penned cattle and 500 horses, with perhaps a few thousand additional cattle roaming wild.⁴

From 1835 to 1839 Brazilian Amazonia was torn apart by a bloody rebellion called the Cabanagem. The oppressed blacks, Indians and mestizos rebelled, captured most towns in the region including the capital Belém and Manaus, and killed many whites. The Brazilian government sent troops to restore order and the Cabanagem was brutally repressed. The revolt had little impact on the upper Rio Branco where there was only a handful of non-Indian settlers. But it did cause devastation among the herds of cattle. Many animals were slaughtered by corrupt administrators or shipped off down-river by military commanders during and after the rebellion.

By 1843 Colonel João Henrique de Mattos, sent by the government to report on the state of the region, said that Rio Branco contained almost no people and the national fazendas were reduced to five or six hundred cattle and 150 horses.⁵ During that decade, the cattle from the national ranch of São José behind Fort São Joaquim was transferred to São Marcos ranch across the Tacutu, so that the national fazendas were effectively reduced to two. Also, in about 1840, an administrator of the national fazendas called Ignacio Lopes de Magalhães created a ranch for himself near the large rapids on the Rio Branco above Caracará. He later moved his 600 animals up-river and founded a ranch called Boa Vista on the site of one of the short-lived eighteenth century Indian villages. Magalhães's Boa Vista ranch evolved into a village and town, and is now the state capital Boa Vista.

The two surviving national ranches, São Bento and São Marcos, developed slowly but steadily. In 1857 the President of the province of Amazonas (created in 1850) reported that the two national fazendas had 2,455 cattle and 280 horses; by 1861 this had increased to 3,568 cattle and 511 horses; in 1864 to 5,941 cattle and 668 horses; and by 1869 to 8,720 cattle and 788 horses. At this time, the four largest private ranches in the region contained a further 5,800 head, giving Rio Branco a total herd of almost 15,000 cattle.⁶

From the middle of the nineteenth century, rubber came to dominate the economy of Amazonia. A series of inventions had perfected rubber as a wonderfully versatile product – impermeable, durable and elastic – and the *Hevea brasiliensis* tree, whose sap produced the finest rubber, grew only in the Amazon basin. World demand for rubber expanded voraciously, particularly after the invention of the pneumatic tyre and of bicycles and eventually motor cars. Rubber output from Amazonia increased to keep pace with demand. There was immigration of *seringueiros* (rubber tappers) from other parts of Brasil; and Manaus at the mouth of the Rio Negro developed into a boom town deep in the midst of the rainforests.

The *Hevea* tree is almost unknown on the Rio Branco, so that Roraima escaped the full impact of the rubber boom. However, the newly rich rubber barons of Manaus wanted meat; and Roraima was the closest part of the Province of Amazonas capable of providing the necessary pasture for cattle. Successive presidents of Amazonas worried, in their published annual reports, about the lack of fresh meat in the Manaus market. Roughly a third of the live cattle reaching the city came from Roraima, but the quantity was very small. A table of cattle shipments published in 1869 showed an average of fifty animals a year from the northern region. During the seventeen years covered by this survey, a maximum of 105 head arrived in 1862 and a minimum of twenty in 1857. The cattle came down-river in *batalhões*, big boats each carrying from ten to twenty animals and taking three months over the round trip.⁷

In 1872 General José de Miranda da Silva Reis visited the upper Rio Branco – the first President of Amazonas to do so. He was impressed by the magnificent plains and by the fine cattle on the national fazendas and on the private ranches – although many animals were being killed by jaguars because of lack of manpower to protect them. A few years earlier, one of his predecessors as provincial president had recommended selling the national fazendas because they were costing the state more than they earned. But General Silva Reis hoped to make them viable by organising steam navigation to move the cattle above and below the rapids at Caracará.

The general's hopes were not realised. His successors became increasingly exasperated by the cost of maintaining the national fazendas of Rio Branco and by the paltry quantity of cattle that they exported to Manaus. The ranches were impossibly large, occupying long sections of the main rivers and stretching away from them across the savannas towards distant unexplored frontiers. There was no incentive for the ranch managers to develop the national herds. It was therefore decided to privatise the national fazendas.

On 25 October 1878 the provincial president Barão de Maracajú leased the two national ranches for nine years to Leopoldo Pereira Tavares and to Comendador Antônio José Gomes Pereira Bastos. The lease was on condition that they establish a monthly steamer service to bring cattle down the

Rio Branco to Manaus.⁸ A report by the Ministério da Fazenda (Treasury) earlier that year had given 5,114 cattle and 667 horses on the state-owned ranches. Despite this, the lease document declared that the two tenants had taken only three thousand head of cattle and four hundred horses. 'An inside job!', commented the Italian traveller Count Ermanno Stradelli.⁹ In November 1883 Pereira Bastos leased both fazendas on condition that he supply 200 animals a month to Manaus.¹⁰ He made the most of his tenancy of these huge estates: 'When his contract expired, he claimed to be owner of a great herd; but he returned to the state only 3,478 head of cattle and 630 horses.'¹¹

Sharp practice against the government continued. On 20 September 1888 another fortunate tenant called Sebastião Diniz signed a contract with the Amazonas treasury. As Joaquim Gondim commented, Diniz 'was an intelligent and astute man who managed to extract from the contract he made with the government the business advantages he intended'. He privately bought the herd that Pereira Bastos had built up during his ten years as tenant, thus evading the clause in his contract obliging him to hand over the government's cattle. He kept the government's herd at São Marcos; but he kept the much larger herd he had bought on Fazenda São Bento to the west of the Rio Branco, and he managed to get his lease on São Bento extended. There were the usual official delays over all this, which Sebastião Diniz used 'as a fine opportunity to proceed with branding cattle belonging to the State as his own property'.¹² The last commander of Fort São Joaquim, Ensign Arthur Americo Cantalice, appeared in 1900 with a squad of soldiers to try to prevent this branding taking place.

Travellers in Rio Branco gave far higher estimates of its cattle herd. In 1863 Gustavo Wallis said that the national fazendas alone contained ten thousand head, and Jacques Ourique wrote that by 1883 they contained sixteen thousand. Independent fazendeiros were also emerging alongside the national ranches. A president of Amazonas said in 1869 that there were four private ranches and two national fazendas. By 1885 Coudreau wrote that 'today there are thirty-two private ranches in the upper Rio Branco',¹³ and Stradelli said that those 32 ranchers had some eighty small fazendas along the Branco, Tacutu, Uraricoera and its northern tributary the Amajari. None of these farms had more than two thousand head, and their status was vague. Their owners wanted the government to confirm their title deeds by right of prior occupation. Stradelli's travelling companion Major Jacques Ourique wrote that by 1892 Rio Branco's cattle herd had increased to 60,000 and by 1906 it was 93,835 cattle and 3,161 horses. This growth occurred 'without the slightest care, for breeding was left to the laws of nature, to the voracity of jaguars (which used to be very abundant in those parts) and to all manner of other accidents that no-one tried to avoid'.¹⁴

The rapid growth in the size of the cattle herd was largely the result of private ranchers taking over state lands. Gondim wrote that 'the fever of usurpation spread, following Sebastião Diniz's example. Other intruders invaded

and occupied the lands of the national fazendas of São Bento and the long-abandoned São José.¹⁵ By 1906, Ourique said that São Bento was divided into 'many prosperous private ranches on which are raised, with lively results, thousands of head of cattle, horses and sheep'.¹⁶ And in the years before 1921, according to Gondim, 'some of these intruders alleged that the lands were *devolutas* [unoccupied] and demanded and obtained from various governors ... the issue of definitive title deeds – as if the national patrimony were not a sacred right! Those two national properties thus disappeared from public ownership.'¹⁷ Theodor Koch-Grünberg noted that ranchers who illegally occupied the vast state-owned properties also branded any wild cattle they found with their own marks.¹⁸

The one surviving national fazenda, São Marcos, occupied the 'V' between the Uraricoera and Tacutu rivers, bounded to the west by the Parimé and east by the Surumú, and it extended northwards towards the Pacaraima hills. This ranch was transferred between government ministries and eventually in 1916 passed to the new Indian Protection Service (SPI) to administer on behalf of the Ministry of Agriculture. Before that, its lands and cattle had been plundered by the tenant Sebastião Diniz. The SPI's administrator of São Marcos complained bitterly that when his lease expired, Diniz withdrew 'with a herd of 20,000 head and title as owner of an usurped ranch called Flechal – which was nothing more than a good part of the national fazenda São Marcos. He left for the nation a miserable herd of little more than 3,000 cattle, all old cows and useless for breeding.'¹⁹ Diniz himself argued that he had returned the 3,000 government-owned cattle of which he had taken custody in his original contract of 1888.

When Sebastião Diniz died, his mother Dona Anna Diniz inherited his Flechal Victoria fazenda. There was a legal action, but Anna Diniz won not only the usurped ranch but also damages from the State. Koch-Grünberg visited in 1911, just after Anna Diniz's legal victory. He said that the Brazilian government had caved in because it feared revolution if it tried to control the proud fazendeiros of the isolated Rio Branco. The national fazenda São Marcos was vast – 8,000 square kilometres – and contained 18–20,000 head of cattle. But only 5,000 of these definitely belonged to the government; the rest were branded with the mark of the late Sebastião Diniz.²⁰ After Anna Diniz's death, the large and aggressive Manaus rubber-trading company J. G. Araújo e Companhia Ltda. acquired her property (in 1918). Litigation over the national fazendas and their cattle continued into the higher courts; but the State never recovered the ranches of São Bento or São José or large parts of São Marcos.

By the 1920s, J. G. Araújo was the largest cattle rancher in the area, with 45,000 head on a series of ranches, particularly in the bend of the right bank of the Uraricoera-Branco river north of Boa Vista. Across the river and up the Parimé were the lands of Colonel Bento Brazil with 13,000 head. Boa Vista's leading businessman at that time was Homero Cruz, who administered the J. G. Araújo herds as well as 3,000 head of João Crisostomo Diniz

and 2,000 of Alice Marques, as well as his own 5,000 cattle on the Surumú. The Magalhães family, descended from Boa Vista's first rancher, had 5,000 head on two ranches north of the town.²¹

The herds of Roraima grew steadily during the first decades of the twentieth century. A cattle census by the Ministry of Agriculture in 1912 gave 200,000 cattle and 6,800 horses. Another census estimate in 1920 gave a lower figure of 177,500; but authorities such as Osmundo Camargo and Avelino Ignácio de Oliveira both gave 250,000 cattle and perhaps 80,000 horses for that same year. Araújo Cavalcanti said that by 1925 the herd had increased to over 300,000 head. It was generally agreed that the early 1930s were the golden age of Roraima cattle with well over 300,000 head – although, regrettably, there was no attempt at a census. All these figures, even those of the official censuses, were estimates or guesses (See Appendix I).

Then disaster struck. In a decade, the cattle herd was halved, so that in 1940 Araújo Cavalcanti reported only 120,247 cattle and 12,073 horses. Local cattle men gave as reasons for this terrible decline: disease, especially rabies; impoverishment of the pastures; primitive breeding methods; and an exodus of labour to go prospecting for gold and diamonds.

Rabies had stricken Roraima's cattle as long ago as 1918. A Dr Nunes Pereira was with the rancher Hollanda Bessa of the middle Uraricoera when his cattle 'were decimated by a serious form of *mal-triste*'.²² Rabies returned in 1931 in a far more virulent attack. According to Peter Rivière, the disease was invariably fatal and 'reached epidemic proportions, with some ranchers losing as much as half their stock'.²³ Dr Silvio Torres identified two varieties of cattle rabies. The most common form was paralysis that affected an animal's digestion and appetite, so that its grazing became irregular; after which its hind quarters became paralysed and it had to be destroyed. In a rarer 'furious' form, cattle became uncontrollably aggressive.²⁴

Throughout these years, the plains of Roraima were burned two or three times a year, at random intervals. This practice was borrowed from the Indians, who used burning as a method of hunting before the introduction of cattle. It was thought that this burning reduced pests such as ticks or rattlesnakes, and it checked weeds and rampant growth of grasses. Farmers still burn the plains, to this day, liking clear open plains from which all bushes have been removed by fire. They call such land *lavrado* or 'worked over'. But some experts claim that 'this practice progressively degrades the plains' natural condition. The grass becomes increasingly coarsened and more widely spaced; native leguminosae disappear; and the caimbés [*Curatella americana*, a typical low campo tree] become more gnarled.²⁵ The soils of Roraima are naturally weak in calcium salts, phosphorus and organic matter and these deficiencies are heightened by annual burning, as is erosion.

There was no attempt to improve the quality of the cattle by selective

breeding. The herds simply roamed free. By the 1920s only a few ranches had fenced *secções* or *retiros* where cows could be placed after they gave birth. The plains were then regarded as common land. Cattle grazed at will, often sheltering in the shade of palm trees by day and grazing at night, when it was cooler.

Population

The region's first census, in 1883, showed 384 non-Indian settlers, a figure that included nine Venezuelans and six Portuguese. There were no slaves. When Coudreau went up the Rio Branco in 1884 he wrote that it was difficult to imagine how empty the lower river was. Along five hundred kilometres of river banks he saw only six hamlets of Carib-speaking Paushiana – perhaps 250 Indians in all. The Italian Count Ermanno Stradelli in 1887 described the lower river as a desert in which there were only four tiny hamlets. And on the plains above the rapids there were only two or three hundred *civilizados* or non-Indians.²⁶

The situation changed gradually during the next quarter century, although we have only glimpses of Roraima's population. In 1902 the government of Amazonas (a state since the proclamation of the Republic in 1889) commissioned a census of every person living along the Tacutu river, as part of the Brazilian evidence for the boundary arbitration of the frontier with British Guiana that was about to be judged by the King of Italy. This census named 507 people, of whom 320 were Makuxi Indians, 53 were Wapixana or related Aturiaú, 116 were Brazilian settlers, and 8 English.²⁷ During the twenty years from 1886 to 1906 the number of ranches in the entire region grew from 80 to 142; but most of these belonged to settlers who were not resident. Very few non-Indians lived on the land. By 1913 the French engineer Maurice Mollard reckoned that a thousand whites and three thousand Indians lived in the open country of the upper river.

At the height of the rubber boom, at the beginning of this century, there was a brief revival of activity on the lower Rio Branco. This was noted by some Belgian Benedictine monks who went up the river in 1909 and by Theodor Koch-Grünberg and Maurice Mollard shortly after. The latter said that the lower river contained some fifty rubber-gathering posts, including five that could be considered as villages.²⁸ But the rubber boom collapsed, destroyed by competition from plantation-grown rubber of south-east Asia. By 1917 Luciano Pereira noted that the lower river was very thinly inhabited, and its few dwellings were wretched straw huts open to the elements. Four years later, Gondim said that he felt like an exile going up the empty river, whose 'banks are in a state of abandon'.²⁹ The only activity on the hundreds of kilometres of forested river was extraction of balata rubber and Brazil-nuts and some tobacco growing.

Boa Vista

Although Fort São Joaquim was the symbol of Brazilian rule from 1776 to the early twentieth century, the tiny town of Boa Vista gradually emerged as the main settlement of the Rio Branco. Law 92 of the Province of Amazonas, 9 November 1858, established a *freguesia* (parish council) called Our Lady of Carmo 'in a place called Boa Vista above the rapids of the Rio Branco'.³⁰ This was a move by the provincial authorities in Manaus to tighten their control over the remote and very thinly populated area. The new *freguesia* embraced all territory north of the Bem-querer rapids.

The town of Boa Vista grew slowly. When Stradelli was there in 1888, in the last year of the Brazilian Empire, he noted that 'a few years ago, Boa Vista was little more than the *sítio* [small farm] of the late Major Mardel. In 1881 it had only two houses, but there are now twenty-seven among which one, belonging to [the Italian] Sr. Baroni, is of stone. It will soon have a church, also of stone, whose construction is already well advanced and – a rare event – is being done at the cost of private citizens without help from the province.'³¹

Boa Vista's legal status also improved. During the provisional government of Brazil's new Republic, the State of Amazonas passed Decree 49, 9 July 1890, raising the *Freguesia* of N. S. do Carmo to be the Vila of Boa Vista do Rio Branco. Two years later, the vast hinterland became the *Comarca* do Rio Branco with Boa Vista as its capital; and in 1896 the southern boundary of this *comarca* was moved farther down the river from Caracarái to Anauá.

Boa Vista was the only social centre for the cattle barons, but it was a sorry little place. Joaquim Gondim was disappointed when he reached the town in 1920. From a distance its magnificent location, facing the Rio Branco and the outcrops of the Serra Grande, looked promising 'but, from closer, this beauty disappears like a mirage when you see the wide streets with little houses distant from one another and the ground so potholed that in places it is difficult for the inhabitants to move about at night'.³² Boa Vista had only 621 people in 113 houses, some of which were built of masonry with tiled or corrugated-iron roofs, but most were of adobe or mud-and-lathe. Gondim reported that the town had 'fourteen groceries, one bar, one chemist, two blacksmiths, one carpenter-undertaker, one barber, and an important establishment: Mr João Secundio Lopes's 'Wheel of Fortune' which simultaneously sells fabrics, odds-and-ends and trimmings and makes soap using special machinery to prepare his products. His is the only establishment possessing a water pump and an electrical installation.' By 1924, according to the geologist Avelino Ignacio de Oliveira, Boa Vista's population had grown to 1,200 people, who were 'hospitable and cheerful'.³³

This impression was in sharp contrast to that of the English novelist Evelyn Waugh, who was there a few years later. Waugh hated Boa Vista. Its few streets petered out in every direction into straggling footpaths. Its few shops

were seedy, its houses tumbledown. 'Most of the inhabitants seemed to have no occupation of any kind, being caught up in the vicious circle of semi-starvation which makes people too apathetic to exert themselves for more. Perhaps they picked up a few casual wages during the flood season when boats ran from Manaus fairly frequently and the ranchers came in for stores and needed labour for shipping their cattle. All the time I was there I scarcely saw anyone except the school teacher earn anything – or spend anything.... The thousand-odd inhabitants spent the day lying indoors in their hammocks and the evenings squatting on their doorsteps gossiping. ... Everyone looked ill and discontented. There was not a fat man or woman anywhere. The women, in fact, led an even drearier life than the men. They had no household possessions to care for, no cooking to do, they left their children to sprawl about the streets naked or in rags. They were pretty – very small and thin, small boned and with delicate features... [The men] are naturally homicidal by inclination, and every man, however poor, carries arms; only the universal apathy keeps them from frequent bloodshed. There were no shootings while I was there; in fact there had not been one for several months, but I lived all the time in an atmosphere that was novel to me, where murder was always in the air.'³⁴

Transport

The most serious constraint on the growth of Roraima's cattle industry was difficulty of transport. The region had no roads, only trails, and ranchers relied on moving their animals by river. The only route for cattle exports to Manaus and Amazonas was down the Rio Branco. Coudreau said that in 1885 forty boats a year went down the great river, each carrying between fifteen and thirty-five animals – an annual total of about a thousand head. The German traveller Grupe y Thode described these as 'large heavy boats which have great difficulty passing the rapids of the Rio Branco, and then go on to Manaus in an even longer and harder journey'.³⁵

The round trip to Manaus took three months and was very tough. Sails could be used only when there was a following wind, which tended to be on the descent of the Branco and ascent of the Negro. Otherwise, motive power came from the crew of six men, four of whom were Indians. They worked with paddles, oars, poles, ropes, pulleys and capstans to heave the *batalhão* up against the current. It would return with a cargo of coffee, sugar, paraffin, tools, guns, cloth and the many manufactured items unobtainable on the upper river – unless people traded with British Guiana, as Stradelli said they did. Once the boat reached the rapids on the return journey, its cargo had to be unloaded and carried round overland while the boat itself was hauled over the rocks and raging current with hawsers of piaçaba fibre. Conditions improved after the first decade of the twentieth century, when steam replaced human power.

Ever since the first Portuguese occupation of the upper Rio Branco, the

authorities were acutely aware of its isolation. They knew that the plains of the Branco-Rupununi were twice as far from Manaus and the Amazon as they were from Georgetown and the Atlantic Ocean. The first call for a land trail between Manaus and the upper Rio Branco came in 1847 from Colonel João Henrique de Mattos, who was sent to inspect the northernmost territory after the bloody Cabanagem rebellion. Mattos and later governors or presidents of Amazonas sought in vain to get this long and difficult trail cut. There were also successive abortive attempts to cut a road for cattle to bypass the formidable Bem-querer rapids on the Rio Branco.

In 1865 President Adolpho de Barros Cavalcante de Lacerda appointed a respected engineer, Captain João Martins da Silva Coutinho, to investigate the possibility of a road from Manaus to Boa Vista. Silva Coutinho presented a very pessimistic report. The President concluded that it would be folly to ignore the open navigation of the river route in order to attempt a land road, which would be 'excessively costly to build, at present with no prospect of being greatly used, and also impossible to maintain in good condition'.³⁶

The Amazon rubber boom, which turned Manaus into a glittering metropolis and powerfully increased demand for meat from Rio Branco, added to pressure for a road around the Bem-querer rapids near Caracará and for a trail from Manaus to Boa Vista.

A succession of state laws during the late nineteenth century offered increasingly rich rewards to anyone who could complete these trails. Various engineers and explorers tried and failed. Finally, in 1893, Sebastião Diniz – the tenant or lessee of the national fazendas – accepted the government's tempting offer and started work on the trail. Diniz's men pushed north from Cariri, ten kilometres north of Manaus, across the Tarumã, Cueiras, Urubau, Uatumã, Jauaperi, Anauá, Barauna and Branco rivers. When they reached the Urubu river, the team struck north-eastwards to remain on higher ground: they were following maps drawn by the botanist and Indianist João Barbosa Rodrigues, who had made contact with the fiercely independent Waimiri-Atroari Indians (then known as Crichana or Jauapery) in this region. The *picada* was cleared of vegetation and of trees smaller than 50 cms diameter. It ran for 815 kilometres to Boa Vista, crossing nine rivers and 734 streams, and it took fifteen months to cut. Sebastião Diniz was duly paid for its successful completion on 10 March 1895. But, as predicted in the report of 1865, there was no traffic along this very long trail that had been built with such effort. Later governors of Amazonas 'allowed the forest to obliterate the vestiges of Sebastião Diniz's *picada*'.³⁷

There were similar edicts and plans and attempts to build the road portage around the Bem-querer rapids. Law 163, of 7 May 1897, put the building of this road to open tender. A contract was awarded to Raimundo Agostinho Neto, and Edict 71 of 22 January 1898 set out the road's specifications and terms of payment. Different rates were fixed for felling every 100 metres of virgin forest, for felling *capoeira* secondary forest, for removing stumps from

virgin forest, for felling *capoeira* secondary forest, for removing stumps from virgin forest, for levelling or building embankments, for building bridges or pontoons to a height of two metres, and for building bridges up to ten metres. The road was finally completed, and inaugurated on 20 December 1900. It ran for 133 kilometres from Boa Vista to Caracaraí, of which eighty kilometres were in forest, six in *capoeira*, and forty-seven across open savanna.

This was the heroic age of railroad construction. The dream of an overland link between Manaus and Rio Branco now turned into an idea for a railway. Such a line would not only tap Rio Branco's cattle; it might even be extended north to give rubber from Manaus an outlet on the Atlantic at Georgetown. Stradelli mentioned the idea of this railway in 1888 and it was echoed by legislators and visionaries during the ensuing decades. In 1922 a group of prominent citizens sent an eloquent plea to Brazil's newly elected president Epitacio Pessoa: 'We in Boa Vista ... virtually exiled from our mother country, almost without direct contact with national life ... in the rich and fertile lands of this distant piece of Brazil lost beyond the Equator ... defenceless against the ambitions of foreign envy, without a telegraph, without a regular postal service, and without efficient means of communication, beg the President for a railway linking this municipality to Manaus or to any other populous point in Brazil.'³⁸ They argued that, although difficult to build, much of the railway would cross open plains, and its benefits would be tremendous.

The energetic American explorer Dr Alexander Hamilton Rice was in Roraima in 1927. He judged it to be 'the best region of all the State of Amazonas... but "a paradise where people live poorly"'.³⁹ Hamilton Rice wanted to build the Manaus-Boa Vista railway. He offered to pay off the state's debt if he could have a sixty-year concession to exploit such a line and the land alongside it. But the governor of Amazonas refused – luckily for Hamilton Rice, who would have ruined himself. Instead, Governor Ephigenio de Sales in 1927 decided to reopen Diniz's old *picada* with a view to building a road along it. A consortium led by the engineer Luiz Ogden Collins cut a 868-km path, using forty-five men working for twenty-one months.⁴⁰ But no progress was made with the road. In an official report in 1965, Newton de Oliveira Ribeiro commented that Roraima still contained only 180 kms of federal road from Boa Vista to Caracaraí. In 1969 the geographer Antonio Ferreira de Souza was complaining that, in fifteen years, the federal roads department had completed only 45 kms of the long-awaited road north from Manaus.⁴¹

There had also been pressure from the British end for a railway between Georgetown, Boa Vista and Manaus. Joaquim Gondim thought that it was about to be built in 1921. When Sir Walter Egerton was governor of British Guiana, he stressed the benefits and potential profit from such a railway, which would be an outlet for the produce of Amazonia. The scheme failed to gain approval in the legislative council. The idea for this 1200-km railway was revived in an editorial in *The Daily Argosy*, Georgetown, 15 February 1943,

and when Colonel Joaquim de Magalhães Cardoso Barata visited British Guiana in 1944 on behalf of the Brazilian government, he found the proposal being given serious attention.⁴²

Indians

Apart from a brief effort by the missionary Frei José dos Santos Inocentes in the 1840s, no-one bothered with the welfare of the Indians of Roraima throughout the nineteenth and early twentieth centuries. This left them exposed to abuse and exploitation; but it also meant that there were no attempts to change their religion or culture. To some extent, tribes were able to decide for themselves whether to integrate and co-exist with the whites or whether to retreat farther from them.

The Aruak-speaking Wapixana adapted most easily to European influence. Theodor Koch-Grünberg explained that, 'friendly and submissive by nature, the Wapixana had always been exposed to this influence, mainly because they live very close to the main rivers Branco and Uraricoera. As a result of their prolonged relations with the white and mestizo population ... they lost much of their own character and some are considerably morally corrupted. They work as cowhands and boatmen. Many speak Portuguese.'⁴³ Stradelli found that, their numbers decimated, the Wapixana had retreated away from the rivers. 'Hard-working and docile, they voluntarily lend themselves to work for the whites.'⁴⁴ Those north of Boa Vista were in permanent contact with the town, and were famous for making the best manioc flour.

The Wapixana had been driven into three distinct regions by the advance of the Carib-speaking Makuxi: on either side of the lower Uraricoera, Amajari and Parimé rivers and in the Taiano hills south of the lower Uraricoera; a few isolated amid Makuxi on the Surumú-Cotingo in north-east Roraima; and the largest concentration in the Serra da Lua, south-east of Boa Vista, and eastwards into the upper Rupununi in Guyana. It was their misfortune that the Wapixana lived on some of the best cattle lands near Boa Vista. Ranchers regarded Indian land as 'unoccupied' and theirs for the taking, and they easily enlisted Wapixana men and women to work in their fields and houses for virtually no pay.

Henri Coudreau contrasted the fate of the docile Wapixana with that of the more independent Makuxi. 'It is curious to note that tribes who become acculturated fastest also disappear quickest. Such are the Wapixana, who became civilised faster than the Makuxi. Many of them speak Portuguese. The Makuxi are far more rebellious against civilised discipline. They are reluctant to teach their language to the whites. They are insolent and insubordinate. Conclusion: the Wapixana were the most important tribe of the Rio Branco a century ago but they now number scarcely a thousand. The Makuxi on the other hand are far more numerous today than a century ago. They form the most important tribe in the region: you can count three or four

thousand of them.⁴⁵ The Makuxi excelled as cowboys and the labour on the São Marcos national fazenda came exclusively from this tribe. Both Makuxi and Wapixana provided crews for cattle boats down the Rio Branco; but it was best not to mix the two tribes since there was still lingering animosity between them.

Nineteenth-century travellers described both Wapixana and Makuxi as handsome, hospitable and good-natured. Many of these Indians continued to live in tribal villages far from colonial society. These attractive tribes often suffered at the hands of white settlers. Slavery of Brazilian Indians had been forbidden by law since 1755; but it often continued under other pretexts and guises. Nineteenth-century accounts of life in Amazonia by both Brazilian and foreign authors are full of descriptions of persecution of Indians, who tended to be glibble, subservient and uncomplaining.

When Schomburgk was on the Tacutu in 1838 he was appalled to meet the canoes of 'a press-gang, a most villainous looking body, lately sent by the Brazilian authorities to press Indians for the navy'. This gang, from the Rio Negro, was led by 'a man who is already famed for the successful descent upon unsuspecting Indians, "not for the conquest of souls", but for selling them as slaves to his allies'. Down at Fort São Joaquim, Schomburgk later met some victims of this press gang. They told him 'that they had been surprised at night, had been fired at, two huts set on fire, and those who had not been able to make their escape had been led away with their hands tied to their back'.⁴⁶ Schomburgk protested to the fort's commander Pedro Ayres, who admitted that 'inferior officers wished to use the pressing of Indians for the navy as an excuse to procure young and old, in order to sell those who were not fit for that purpose to their allies'.⁴⁷

Coudreau wrote that in the 1870s a Cearense fazendeiro called Fernando often led his men in attacks on the Wapixana and related Aturiaú, in the area east of Boa Vista, violating women and destroying plantation clearings. The Wapixana fled eastwards. Although the Aturiaú eventually killed Fernando, his deprivations had shattered these tribes, and their lands were usurped for cattle ranching.

In the following decade an equally violent settler called Hollanda Bessa established himself on the middle Uraricoera river, north-west of Boa Vista. Koch-Grünberg described Bessa as a murderer who, with his accomplices, had killed some white settlers, three Purokotó and one Maku Indian. When Bessa arrived, 'there were many Indians of different tribes here and on Maracá island. Bessa chased them from their homes and plantations because [he claimed that] the land belonged to him. He burned their huts during the rainy season. The poor people fled from him into the forest; but they fell ill from fevers with no protection against the wet and many, especially children, died. As a result, only piteous remnants of those tribes are to be found around Maracá [in 1911]. Bessa was charged, but released on the testimony of good friends he had in the ruling party. The Indians are too indolent to kill

him.⁴⁸ Years later, a Makuxi from Maracá island went to complain to General Cândido Rondon about beatings and ill-treatment he was suffering from the local fazendeiro. Rondon summoned the rancher, who promised to treat his Indians better, 'although he spoke of the prerogatives afforded him by law'.⁴⁹

Koch-Grünberg also told about a respected citizen of Boa Vista called Campos who once lured thirty-six Makuxi and Wapixana to Manaus with enticing promises. He then packed them onto a steamer that they thought would take them back to the Rio Branco. Instead they were sold for six years of contract labour tapping rubber on the Purus. Twenty died of malaria and only a few embittered Indians ever returned to their homes.

Such cruel fazendeiros were the exception. Most Rio Branco ranchers simply exploited Indians. They evolved a 'godfather' system that has continued to the present. A rancher acts as a kindly, paternalistic boss who protects his Indians and advances them goods on credit. He is godfather to their children and takes them into his own household, theoretically for education but in practice as unpaid domestic servants. Peter Rivière found that as late as 1967 there was extreme discrimination against these *filhos de criação* in some foster families: they were made to do all manual chores and to live and eat apart from the family's own children. Edson Diniz called the system disguised slavery; but the Indians tolerated it.

When fostered Indian boys grew to manhood, they became cowhands receiving no pay beyond a few animals and some land to farm. Iris Myers noted that 'this training has such deeply modifying effects on the Indian psyche that many of the individuals so brought up are more akin to the simple Brazilian ranchers of the region than to their own folk, speaking Portuguese much better than their own tongue and preferring the civilised way of life to that of the "maloca"'.⁵⁰ She further noted that this acculturation was a two-way process and that Indian skills and labour made it possible for the colonists to establish themselves on these plains.

A more serious threat to Roraima's Indians came from imported diseases against which they had no inherited immunity. Most of the tribes listed by eighteenth-century authors or by Schomburgk in 1838 had been extinguished by the early twentieth century, either by forced exile in the 1780s or more often by disease. Invasions of their lands by ranches and forced labour caused social disruption, and this doubtless reduced the tribes' already low birth-rate.

In Schomburgk's day, the Saporá had a large village north of Maracá island on the Uraricoera, but Koch-Grünberg in 1910 could find only a few remnants of this tribe, dispersed among other Carib tribes. The Waimara (or Wayumara) were few and sickly when Schomburgk saw them on the upper Uraricoera; and Koch-Grünberg found them reduced to two brothers, who showed him the ruins of their former villages. The Yekuana (known to the

Makuxi as Maiongong and to Venezuelans as Maquiritare) were great navigators who moved between the upper Orinoco and the Uraricoera. They were also sadly diminished as a result of measles, malaria and work in rubber tapping in Venezuela. The Taurepang (known to the whites as Arecuna, and in Venezuela and Guyana as Pemon) were a Carib-speaking tribe closely related to the Makuxi, who lived on the Surumú and the slopes of Roraima, and westwards to the tip of Maracá island. Koch-Grünberg said that the Taurepang had once been almost as numerous as the Makuxi, but were reduced to 1,000 or 1,500 in his day, from the inevitable smallpox and other diseases.

The Makuxi were an exception to this pattern of demographic decline. Robert Schomburgk in 1839 estimated that there were three thousand Makuxi, of whom roughly half lived in Brazil and half in British Guiana. This tribe's numbers were similar in the first decade of the twentieth century, according to Koch-Grünberg and the Reverend James Williams.

Then the Makuxi were also devastated by disease. There was a particularly bad attack of measles in 1910 that killed thousands of Indians. This was followed in 1911–12 by an unusually severe drought. Koch-Grünberg wrote that many plains Indians died of starvation, since they had none of the plentiful game of forest Indians and depended on plantations. A Belgian Benedictine called Dom Adalbert said that 'it did not rain for eight months, and all the plants were annihilated. The savannas looked as though they had been burned and a large part of the cattle died.'⁵¹

Worse was to follow. By November 1912, this missionary reported that 'a great epidemic of fever has been raging in this region. The Indians died en masse. The population of the area that comes under our mission has been decimated, if not annihilated.'⁵² The symptoms of this epidemic were inflammation of the spleen and liver, anaemia and a form of dropsy. The situation had evidently not improved by 1919, when it was reported in a company prospectus that 'bilious fevers' had first struck Rio Branco in 1909, before which malaria had been unknown there. The disease arrived from the north, and recurred annually. It struck both whites and Indians, and thousands died from it. The prospectus warned that if the authorities did not act quickly, Rio Branco would be a desert.

Devastation from these diseases and drought reduced the Makuxi to 1,700 people, in both Brazil and British Guiana, by 1943. In the following year, Iris Myers calculated that there was a total of 1,800 Makuxi and wrote about the concern at their diminution. She blamed malaria, but also noted that 'the infantile mortality rate is high. The writer estimates it as exceeding 50% in the Canuku villages.'⁵³ An alarming number of young adults died from malaria, and 'respiratory diseases, chiefly bronco-pneumonia, also take a large toll'.⁵⁴ In the early 1940s she also saw a serious outbreak of alatum smallpox. The pilot Art Williams told her that he had flown into remote villages, particularly in the lower Rio Branco, and found the entire population dead.

Tribes other than the Makuxi were even fewer in numbers. The French engineer Maurice Mollard reckoned there were 3,000 Indians of all tribes in the region in 1913, and the Belgian Benedictine Dom Adalbert guessed 4–5,000 Indians in all Rio Branco in that same year. In the forests of the extreme north of Roraima lived a few hundred Ingarikó (known as Akawaio or Patomona in Guyana). These were feared as formidable warriors by the Taurepang and Makuxi, and lived beyond contact with the white frontier until recent decades. The large Yanomami tribe (formerly called Waiká) and the related Xiriana also lived well beyond the colonial frontier, in the densely forested Parima hills between the upper Orinoco and the Uraricoera, Mucajaí and Catrimani rivers.

The boundary between Brazil and British Guiana (Guyana) was settled by international arbitration in 1903. It does not lie on the watershed between the Branco-Amazon and the north-flowing Essequibo-Rupununi. That watershed is ill-defined, lying in seasonal lakes and open grasslands. The King of Italy, as arbitrator, therefore chose the Maú and upper Tacutu rivers as the frontier, since they form a more obvious north-south line of demarcation.

This artificial international boundary meant little to the Carib and Aruak-speaking tribes who had moved across the savannas since before the advent of white colonists. Missionaries on either side of the frontier developed a rivalry to lure Indians, particularly the Makuxi, across it. This rivalry was particularly strong in 1838–42 when the English Protestant Reverend Thomas Youd and the Brazilian Catholic Father José dos Santos Inocentes clashed in their attempts to convert the Makuxi of Pirara village, which lay close to Lake Amucu on the watershed. That ‘Pirara incident’ led to armed occupations of Pirara by Brazilian and British troops, diplomatic protests, and the eventual neutralisation of the disputed territory until the arbitration of 1903. Missionary activity died down, with the death of Youd and the removal of Father José from the upper Rio Branco.

Later in the nineteenth century, English missionaries, particularly Protestants of the Society for the Propagation of the Gospel, tried to convert the Makuxi and Wapixana of southern British Guiana. Using the lures of trade goods and dedicated teaching, they were quite successful although large parts of both tribes preferred to live beyond any contact with either the British or the Brazilians in the hills of northern and eastern Roraima.

Stradelli mention a furore in the 1880s when English missionaries were thought to have established a church and school among the Wapixana on the Surumú, well within Brazil. The British sent Everard im Thurn to investigate. He found that the Indians themselves had set up a mission and school in imitation of the Anglican Potaro mission inside British Guiana. They used pamphlets in Carib issued by the Society for the Propagation of Christian Knowledge. In 1912 an English Dominican, Father Thomas, had a short-

lived mission on the upper Surumú, but it failed when disease forced his Indians to flee to the forests. 'Father Thomas, deserted, sick and famished, finally made his way with one companion to the station and the effort to Christianize the Indians was abandoned.'⁵⁵ The missionary transferred his effort to the lower Uraricoera, where the American William Curtis Farabee met him in 1914.

Thirteen years later, General Cândido Rondon was appalled to find a British Jesuit, presumably Father Cary-Elwes, spending months in Brazil among the Wapixana, building chapels and persuading them to migrate across the border to his Saint Ignatius mission. Rondon also heard that a protestant pastor was doing likewise on the slopes of Mount Roraima. These were the Seventh-Day Adventists Alfred and Betty Cott who arrived there in 1927 and for a few years occupied former Benedictine chapels inside Venezuela near the frontier.

In 1910 the Brazilian government created the Indian Protection Service (SPI) to protect its native tribal peoples. The last surviving national fazenda, São Marcos, was awarded to the SPI to administer. For a time, using Makuxi cowhands and improved ranching techniques, São Marcos's administrators increased its herd. Joaquim Gondim in 1921 was impressed to find its cattle of good quality and numbering 8,000 – well up from the miserable 3,500 left by Sebastião Diniz. The Makuxi were well housed and their children received primary schooling.

The Indian Protection Service sought to do more than merely manage its ranch, at this time. It opened more schools for Indians, a sanatorium on the Cotingo two days' ride from São Marcos, and an outpost called Limão on the upper Surumú for some Makuxi and Taurepang. When General Rondon, the great head of the SPI, visited the area and climbed Mount Roraima in 1927, he was able to visit these establishments. But, curiously, SPI activity declined after Rondon's visit. It neglected its brief to protect Indians; and by 1944 Dr. Araújo Lima wrote that even the national fazenda São Marcos was 'in utter decay which is accentuated daily by its abandonment, without the introduction of any advanced techniques of cattle or horse breeding'.⁵⁶

When General Rondon was on the upper Tacutu in 1927, Chief Manuel Barreto of the Makuxi complained to him that persecution by the local sheriff was forcing his people to seek greater freedom in British Guiana. Rondon commented: 'What a difference between the English of Guiana and the Brazilians on the frontier. The former seek to attract all the Indians of the region to their territory, the latter persecute their compatriots, forcing them into exile...It is interesting to note that these Indians have a reputation of being thieves in Brazil and cross into Guiana where they are well received by the English who consider them good men.'⁵⁷ Another Brazilian general, Lima Figueiredo, found the situation unchanged fifteen years later. He was impressed by the clever propaganda of British missionaries to attract

Makuxi and Wapixana: 'There has been formidable emigration and, unless there is government action, it will be total. The affectionate manner of the Guiana priests contrasts with the crude brutality of the Amazonian fazendeiros and authorities. Civilisados seeking riches invade the lands of the Indians, from which they support their families; they trample on them and humiliate their families.'⁵⁸ General Figueiredo found the Makuxi, Taurepang and Wapixana to be strong, docile, intelligent and totally civilised.

Curiously, the British thought that the Brazilians were more successful than them in acculturating Indians. Iris Myers wrote in 1944: 'It is noticeable up to the present that the influence of Brazilian culture contact has been much more profound and far-reaching than that of the Anglo-Saxon culture-complex, and this has been due to a fundamental difference in attitude of the two peoples to the subject race. Influenced by the early Jesuit policy of uniting Indians in village groups ('aldeamentos') for civilising and catechising purposes, the Portuguese in their colonisation of the Amazon basin consistently pursued the same method.'⁵⁹

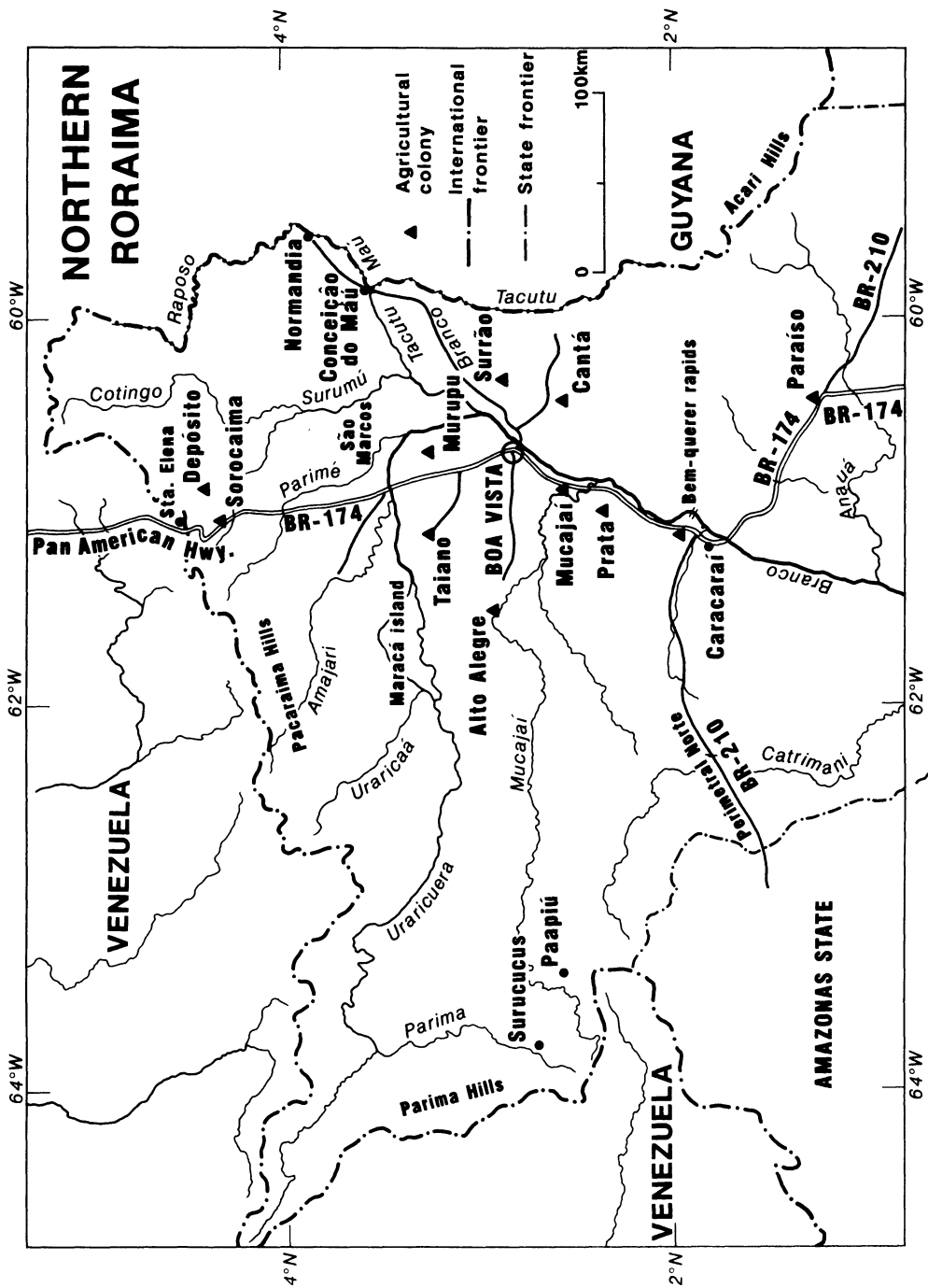
In recent years Brazil has proved more attractive to the Indians than the independent republic of Guyana. This is partly due to Roraima's prosperity, which contrasts with the falling standard of living in Guyana. There was the disruption of the short-lived attempt at rebellion or secession in the Rupununi in 1969. The Indians dislike blacks and hence the government in Georgetown.

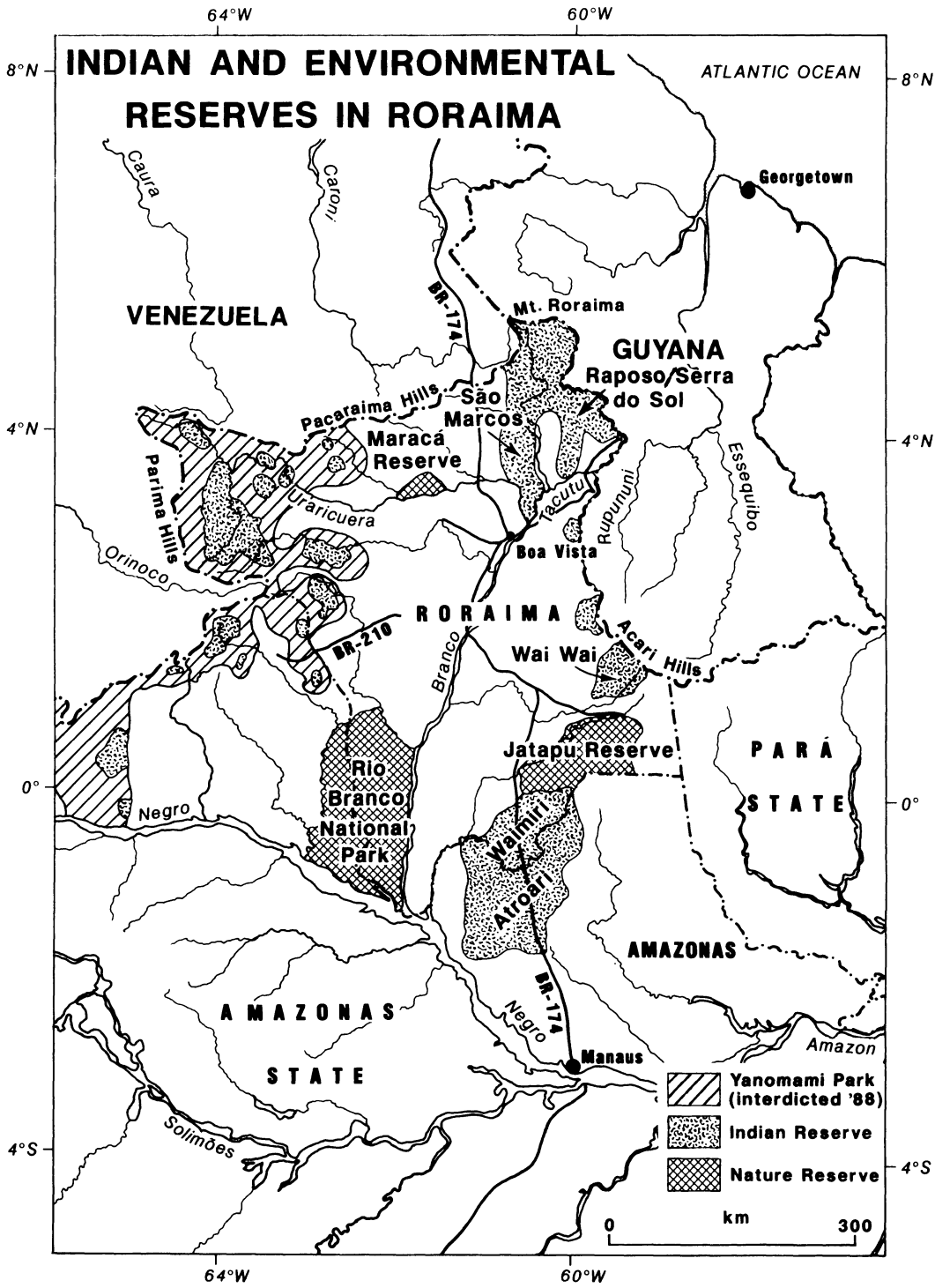
Government activity

During the first four decades of the 20th century, very little was done for the upper Rio Branco. The state of Amazonas exercised minimal control of its northernmost region: a few local cattle barons were allowed almost total political freedom on that isolated cattle frontier. The first Bishop of Rio Branco was a Belgian Benedictine, who travelled up-river to Boa Vista in 1909. He and his fellow missionaries soon fell foul of one of the most powerful cattle ranchers (because of his introduction of a masonic lodge); but the authorities in Manaus tended to side with the rich rancher against the outraged foreign clerics.

In subsequent years, we hear of occasional visits to the area by government geologists or veterinary doctors and agronomists sent to try to improve cattle-ranching techniques. In 1927 as we have seen, the great champion of the Indians, General Cândido Rondon made a brief inspection of Rio Branco's northern frontier; and during the decade of the 1930s there were more thorough surveys of the borders with Venezuela and British Guiana, led by Brás Dias de Aguiar. The Federal Indian Protection Service had a burst of activity in the 1920s and then lapsed into inaction. With the collapse of the rubber boom, the state of Amazonas suffered an economic decline.

The result was less demand for Rio Branco's beef in Manaus, and an acute shortage of funds for any public works. The only attempt to stimulate Rio Branco's economy was a private venture by a German Bishop called Eggerath. But his grandiose scheme to invest in the region's infrastructure collapsed ignominiously when one of his relatives absconded with monastic funds for the new company.





II. Federal Territory to Statehood, 1943–1988

Creation of the Federal Territory

As early as 1933 a commission of the Sociedade de Geografia do Rio de Janeiro had suggested the creation of ten federal territories in frontier regions of Brazil. A decade later, the idea was implemented. President Getúlio Vargas's *Estado Novo* saw frontier land colonisation as a safety valve for rural unrest. Social confrontation could be forestalled without offending the major farmers, by settling landless poor on unclaimed frontier land. In 1943 the Federal Government claimed national security as its justification for carving five Federal Territories out of their respective states. It argued that it alone had the resources to stimulate colonisation of these remote areas, and it assumed the legal right to create these Territories because they lay on national frontiers.⁶⁰

So, on 13 September 1943, Federal Decree-Law 5812 created the Federal Territory of Rio Branco out of the northern part of the state of Amazonas. The new Territory included the entire basin of the Rio Branco, with extensions to adjacent tributaries of the Rio Negro to the west and east of its mouth. It has an area of 230,104 square kilometres, and has 958 kms of international frontier with Venezuela and 964 kms with Guyana. The Territory's name was changed to Roraima after nineteen years, by Law 4182 of 13 December 1962. It was felt that there were too many Rio Brancos in Brazil. A group of local politicians therefore lobbied for change. The local newspaper canvassed its readers on the name they preferred, and they chose that of the 2875-metre table mountain Roraima at the northern extremity of the Territory.

Population

Between 1940 and 1985 the population of the Territory grew ninefold, from 12,200 to 104,000 (see Appendix II). However, in 1950 it had only 0.08 inhabitants per square kilometre (compared to 6.14 for Brazil as a whole). By 1980 this had risen to 0.34 (compared to 14.07 for Brazil) – still the lowest density of population of any state or territory. Despite this sparseness, Roraima's population has grown proportionally far faster than that of the country as a whole: in the decade of the 1940s at an average geometric rate of annual growth of 5.5% (compared to 2.4% for Brazil as a whole); in the 1950s at 4.7% (3.0%); in the 1960s at 3.8% (2.9%); and in the 1970s at 6.8% (2.5%).

This rapid growth has come partly from a high birth rate. Roraima has had a youthful population. In 1960 a remarkable 38% of its population was aged under ten – a higher proportion than in any other part of northern Brazil. In 1970, 34.5% was under ten and 60.8% under twenty.⁶¹

There has also been steady immigration from other parts of Brazil. In the Territory's first census, in 1950 shortly after its separation from the state of Amazonas, a remarkable 76.4% of the population of 18,100 said that they had come from elsewhere in Brazil. In later censuses the ratio of non-natives fell but was still very high and well above that of any other part of the country except Acre. In 1960 it was 20.6%, in 1970 20.4%, and in 1980 rose again to 30.3%. The rise in immigrants in the 1980 census was obviously a result of the opening of the BR-174 road link to Manaus. Most migrants came from the neighbouring state of Amazonas; many others from the north-eastern states of Maranhão and Ceará. Immigration from outside Brazil has always been negligible.⁶²

This inward movement shows up to some extent in statistics of passenger traffic. In 1976, when access to Roraima was possible only by air or river, there were 23,000 passenger arrivals by air. By 1978, after the opening of the road link, air traffic had fallen to some 16,000; but it rose steadily, to over 34,000 in 1983 and over 50,000 in 1984. Meanwhile, of course, much traffic switched to the far cheaper buses on the new Manaus-Boa Vista highway.⁶³

Buses cover the 775 kms from Manaus in under thirty hours if all goes well, and the 195 kms to Santa Elena de Guairén on the Venezuelan frontier in seven hours. These times will improve dramatically with the paving of more stretches of the road. Bus passenger traffic from Manaus rose from 14,000 in 1980 to 17,600 in 1984; and international traffic along the dusty 'Panamerican' highways to Venezuela and Guyana rose from 4,000 to 5,100 during the same period.

Government action and other external events have sometimes spurred inward migration. There have been military movements, with the arrival of road-building army engineers of the 6th BEC (Batalhão de Engenharia de Construção) in 1969, of a mechanised cavalry unit a few years later, and in 1987 soldiers occupied frontier Indian posts in the controversial Calha Norte exercise. There were planned migrations of settler families into agricultural colonies. And there have been periodic rushes by prospectors when word spread of discoveries of gold or diamonds. The largest by far of these was in 1988, when tens of thousands of fortune-seekers poured into Roraima.

Boa Vista

Rio Branco's new political status in 1943 brought an influx of civil servants to run the Territory and administer various development programmes. The town of Boa Vista was elevated to the rank of city and capital of the new Federal Territory.

The first governor sent from Rio de Janeiro, the energetic Captain Ene (or Enio) Garcez dos Reis, took the bold and imaginative step in 1945 of employing the town-planning consultants Darcy A. Derenusson to design a plan for

Boa Vista worthy of a capital city. Derenusson created a large civic centre as the city's hub. This eventually contained the governor's palace, cathedral, post office, hotel, main bank, telecommunications building and 'Palace of Culture' with a library and auditorium, all arranged around a broad, leafy oval square. The old riverside town became a shopping centre, with the civic centre at its landward edge. The new city radiates from the central hub in a spider's web of wide avenues, spreading across the flat savanna towards the airport and highways to Caracará and Venezuela. Although the new plan 'turns its back' on the Rio Branco, it has been a success. Boa Vista is one of Brazil's most agreeable small cities, an uncrowded place of mostly single-storey houses amid plenty of greenery. It has room to expand, although the built-up area is now approaching the airport.

The construction of Boa Vista on Derenusson's plan was inevitably a slow process. By 1948 the Territory's government was still housed temporarily in the bishopric while its future offices were being built. In that year there were still only 22 passenger vehicles and 58 goods vehicles licensed in all Rio Branco, compared to over 500 horse-drawn carts and carriages. In 1952 Valério de Magalhães complained that the partly built new city had a desolate look, 'for, strictly speaking, there are no less than three cities harming one another: the old city from the days of the município; the new part being built according to the plan; and another part that is being erected as an emergency measure, disorganised houses devoid of alignment or aesthetics, from which a veritable tower of Babel results'.⁶⁴ Ten years later V.S. Naipaul wrote that only arbitrary stretches of streets were built amid the red dust of Bon Vista's futuristic town plan. The population still consisted mainly of civil servants administering one another and smugglers who supplied their needs.

The population of Boa Vista increased roughly in line with that of Roraima as a whole: from 5,132 in 1950 to some 45,000 in 1985.⁶⁵ After the initial influx of civil servants and construction workers to build Boa Vista in the decades since 1945, much of the city's growth was organic. It had a young population and a slight preponderance of women to men. Planners were relieved to find that Boa Vista did not prove too powerful a magnet drawing people in from rural areas, although the Indian service FUNAI reckons that in the late 1980s there were as many as fifteen thousand Makuxi and Wapixana Indians living in and near the city.

Boa Vista's infrastructure kept pace with its growth. Its airstrip was changed to an airport in 1958 and this was lengthened to take jets in 1972. The city acquired a football stadium, a waterworks producing some of the purest water of any South American city, a cathedral consecrated in 1972, the 1,200-metre steel-and-concrete 'Makuxi Bridge' over the Rio Branco opened in 1975, and a new bus service (badly needed by pedestrians in a city of broad streets and consistently high temperature). In the late 1980s there were plans for hydroelectric power from the controversial Paredão dam on the Mucajaí river.

Indians

Roraima's Indian population divides into forest-dwelling tribes that have had little contact, and savanna tribes that are now highly acculturated and almost assimilated into frontier society. The latter are the Makuxi, Wapixana and related Carib- and Aruak-speaking groups. The population of these semi-acculturated Indians has increased dramatically during recent decades, keeping pace with the growth of Roraima's total population.

In 1913 the native population of Rio Branco (Roraima) was estimated at between three and five thousand. That estimate was presumably only for savanna tribes, since there was then almost no contact with Yanomami or other forest tribes. In 1944 Myers reckoned that there were little more than a thousand Makuxi in Brazil. In the 1950s Darcy Ribeiro and Dale Kietzman guessed that there were 1,500–2,000 Makuxi in Brazil, plus 1,000 or 1,500 related Taurepang and the same number of Wapixana in Brazil. Thus, they reckoned 6,000 savanna Indians at most. By the 1970s, Edson Diniz and Ernesto Migliazza each calculated that Roraima's Makuxi had doubled, to 3,000. But in the 35 years to 1986 the Indian population had possibly tripled. Emanuele Amodio and Vicente Pira, anthropologists with an intimate knowledge of the region's plains Indians, now estimate that the new state contains 12,000 Makuxi, 550 Taurepang (Pemon), 5,000 Wapixana and 500 Ingarikó: a total of over 18,000 for these tribes. The Indian service FUNAI claimed that 40% of Roraima's population is Indian – a higher proportion than in any other part of Brazil.

An authoritative and detailed census of Indian lands published in 1987 by the ecumenical research centre CEDI confirmed the population explosion. It listed a total of 15,395 people of these four tribes living in reserves⁶⁶ – and it is known that many Indians now live outside tribal lands, particularly around Boa Vista.

There are various explanations for this increase. One may simply be that the modern counts are more accurate than earlier guesses. More importantly, Catholic and Protestant missionaries have been very active among these acculturated tribes, breaking down tribal customs, encouraging them to emulate settlers by having large families, and providing health and particularly natal care. Indians from these tribes also use the hospitals in Boa Vista and the rural health programmes provided by the government. After two centuries of contact, the Makuxi and Wapixana have developed some immunity to imported diseases that devastate newly-contacted tribes. FUNAI has increased its presence in Roraima and, together with the missionaries, has given some protection to native lands that were being engulfed by cattle ranching. This has improved the feeling of security of protected groups: their stability has resulted in population growth, from a higher birth rate and lower mortality.

Indian culture and survival are closely linked to land. The plains Indians

saw their lands ruthlessly invaded and usurped by cattlemen and farmers. They themselves had little understanding of legal ownership of land, which they regard as common to all mankind, and were powerless to resist. During the past decade, their constitutional right to their land has finally been recognised, with the demarcation and protection of pockets of land around established villages or malocas. The 1987 census of Indian lands listed 24 malocas occupying almost 400,000 hectares containing Makuxi and Wapixana: 8 malocas with 1,244 Makuxi, 8 with 2,025 Wapixana, and 8 with 2,056 of both tribes mixed. In addition, there are several thousand members of both tribes among 9,186 Indians in the Ingarikó's vast (1,401,320 ha) Raposa/Serra do Sol reserve near Mount Roraima in the north-east of the state. The legal status of this large area is uncertain and it is under threat from ranchers and prospectors. There are also 904 Indians (Makuxi, Taurepang and Wapixana) in the old national fazenda of São Marcos, which still occupies 653,949 hectares despite the deprivations of Sebastião Diniz at the turn of the century. Pressure on Indian land is still intense. But the Indians now have vigorous legal defenders, and they themselves have become more aware of their rights.

In recent years Roraima's forest Indians have also been threatened. The Yanomami are the largest surviving tribe of forest Indians in South America. There are some 17,000 Yanomami, with roughly half in Venezuela and half in Brazil, living in hundreds of malocas scattered amid the densely forested hills of the watersheds between the upper Orinoco and the Negro and Branco basins.⁶⁷ Contact with the Yanomami was very rare until the mid-twentieth century.

The first call for the Brazilian territories of the Yanomami to be given the protection of reserve status was made by Alcida Ramos and Kenneth Taylor in 1968. FUNAI and the Catholic church joined their petition for a uniform park embracing all Yanomami lands, but in subsequent years FUNAI altered this to a request for seventeen isolated Indian areas – an archipelago of reserves surrounded by areas of colonisation or prospecting, which would be disastrous for the survival of this Indian nation. In 1979 Cláudia Andujar organised a Comissão pela Criação do Parque Indígena Ianomami (CCPY) that called for a park of 10 million hectares for the 8,500 Yanomami living in Brazil. An international campaign, led by Survival International in London and the American Anthropological Association, gave support.

Meanwhile, threats to the isolation and cultural survival of the Yanomami came from two fronts. In the south-east of their territory, the BR-210 Perimetral Norte road was cut westwards from Caracaráí. Where it crossed the Catrimani river it came into damaging contact with some Yanomami: over a hundred Indians died in epidemics of measles and flu brought by road workers and settlers. A more serious threat came from prospectors. A curious myth arose throughout Roraima that the Yanomami lands, and in particular the Surucucus hills where there was a concentration of Indian malocas, were full of gold and cassiterite – mineral wealth in such quantity that it could pay off all Brazil's foreign debt!

From 1976 onwards, *garimpeiros* periodically invaded Yanomami land, despite occasional orders forbidding such invasions. By 1984 there were prospecting *garimpos* involving several hundred miners on the upper Apiaú river and on a tributary of the Uraricaá. Five thousand prospectors from Southern Mato Grosso reached Roraima in 1985, intent on invading Yanomami land. In February that year, an advance party of 67 miners was flown into a clandestine airstrip near Surucucus; but they were promptly removed by armed police sent by the Territory's governor. During these years, the prospectors' cause was championed by two local deputies, Mozarildo Cavalcanti and João Batista Fagundes, who waged a determined campaign in the National Assembly in Brasília and the press in Roraima. Fagundes declared; 'I intend to diminish the immense area of Roraima that is blocked for any economic activity. For example, I find it entirely just to leave outside the reserve the Apiaú garimpo, where there are 3,000 prospectors [actually 250] and no Indian for a radius of 150 kilometers.'⁶⁵ On the opposite side, a meeting of Yanomami tribal leaders in 1984 wrote to the Indian deputy Mário Juruna: 'We, the Yanomami Indians, ask you to help us remove the prospectors from our Indian lands. The prospectors have for the past two years been invading Yanomami lands, extracting our gold, bringing diseases, coveting and taking our women, and pillaging our plantations.'⁶⁶ Another Yanomami assembly in March 1986 reinforced the demand for the Yanomami Park to be properly demarcated and protected.

In March 1982 the Minister of the Interior signed a decree 'interdicting' 7,700,000 hectares that would form a future reserve for the 8,400 Yanomami living in 192 malocas in Brazil. Of this vast area, some 5 million hectares were for the 7,100 Yanomami living in Roraima, and the remainder for those living north of the Rio Negro in Amazonas. Pro-Indian groups around the world were jubilant at this apparent victory. But Cláudia Andujar of the CCPY warned that this interdiction was only a first step: the Indians' champions could not relax until the Park was finally demarcated and invasions ceased. In late 1984 FUNAI redefined the Park, to bring within it a further 149 Yanomami malocas and three groups of related Yekuana.

In the following year 1985, the Brazilian armed forces launched the Calha Norte campaign to plant military garrisons all along Brazil's northern frontiers. Barracks were to be built and airstrips expanded at a series of strategic points, which were invariably Indian missions or FUNAI posts. The Calha Norte was never properly explained. It was said to be protection for this frontier; but there was no conceivable threat to this boundary, which had been peaceful for over two centuries. It was reported to be intended to prevent drug smuggling or the entry of subversives – as though the smugglers would try to enter Brazil across some of the toughest forests and rapid-infested rivers on earth. It was claimed that the presence of troops would bring the Indians into the mainstream of Brazilian society, a delicate process that was being done by missionaries and FUNAI officers. An explicit objective of the Calha Norte was 'to enlarge the work of FUNAI among the indigenous populations' because their farming methods were considered to be primitive

and because they were so thinly scattered along Brazil's 6,500-kilometer northern frontiers. The Yanomami territory and the part of Roraima near the Guyana border were singled out as priority areas of potential conflict.⁷⁰

Although Indian rights to their land survived well in the new Constitution of 1988, the Yanomami Park was never finally enacted into law or demarcated. Cláudia Andujar was right to be suspicious of the interdictment of 1982. In 1989, there has been a renewed attempt to dismember the Park into an archipelago of isolated reserves, with the intervening land, a 'National Forest', at risk from prospectors or tree-felling ranchers. During the two decades since the Yanomami Park was first mooted, official government policies have been contradictory and vacillating. Successive governors of Roraima have supported or opposed the prospectors, and the Indian agency FUNAI has frequently changed its definition of Yanomami lands.

A massive gold rush in 1988–89 brought tens of thousands of prospectors flooding into Roraima. One area of intense activity by these *garimpeiros* was around Paapiú, an abandoned airstrip built by the Air Force (FAB) as part of the Calha Norte project. Paapiú is near the upper Mucajaí, well within the interdicted Yanomami lands, some 40 kms south-east of Surucucus. A team that inspected the area in June 1989 found many prospectors' planes and helicopters at Paapiú, with no official presence of FUNAI, FAB or the federal police in the abandoned huts. The Indians were suffering from malnutrition because their traditional game was disturbed by the miners' air traffic and their rivers were poisoned by mercury used in panning for gold. It reported that 'the Yanomami are suffering violent aggression to their culture by being exposed to uncontrolled and promiscuous contact with the *garimpeiros*, without any presence of government authorities'.⁷¹ An earlier report by the Minister of Justice had begged the President to do something about the havoc wrought by the gold rush: Roraima was suffering 'air traffic violations, illegal mining activity, environmental degradation, abuse of constitutional rights . . . , absence of public authorities, violation of human rights and corruption'.⁷² Nothing was done, and by year's end many Yanomami died from an epidemic of virulent malaria brought by the prospectors. In 1990 the government sent armed police to evict the *garimpeiros* – but backed down in the face of their male protest.

On the eastern frontier of Roraima, the Carib-speaking Wai-Wai tribe continues to live in relative isolation. Some of its members have come into contact with the eastern branch of the BR-210. Some 170 Wai-Wai live in Brazil, in a reserve of 330,000 hectares. In the south-east of Roraima, 418 Waimiri, Atroari, Piriutiti and Karafawyana live in a 2,440,000-hectare reserve, much of which is in the state of Amazonas. The Waimiri-Atroari were pacified in the 1970s after centuries of stubborn resistance, as part of the campaign to build the Manaus-Boa Vista road (see below), and suffered the inevitable depopulation from disease after contact.

Cattle ranching

For neobrazilians, Roraima has always been seen as a cattle frontier. But the creation of the Federal Territory of Rio Branco in 1943 came just after the terrible decade of the 1930s when rabies and foot-and-mouth disease had halved the size of the region's cattle herd to some 120,000 head. Moacir Paixão e Silva reported in 1943 that Rio Branco's cattle ranching was 'simplistic and rudimentary. The plains are master of the cattle. The cowboys are onlookers who see little: they are interested only in how many animals die. Few ranchers have wire fences.'⁷³ A Bank of Brazil report a few years later said that 'the cattle there is of small stature and, because it is bred freely with no form of technical assistance, is subject to all sorts of disease which inexorably decimate it'.⁷⁴ The result was small animals with little meat, in which 'the skeleton weighs more than the muscles'.⁷⁵ One of the Federal Territory's first governors, Clóvis Nova da Costa, described its breeding methods as 'the most rudimentary known'.⁷⁶

Twenty-five years later, little had changed. A research team from the Fundação Delmiro Gouveia in Rio de Janeiro made a gloomy report on the cattle of Roraima. The animals were by then various cross-breeds of humped zebu, such as nelore, gir and guzerat, which had been imported because of their greater resistance to tropical heat and ticks. Despite this, 'it is sad and apathic cattle – even the breeding stock imported from other parts of the country which, ... abandoned to its fate, rapidly wastes away ... The cattle get no supplementary food, so necessary in a region of poor pastures.'⁷⁷ The result was animals with weak bone structure and little meat, which averaged only 220 kg when ready for slaughter at three years.

Disease continued to ravage these poor creatures. Thomas Kelsey reported, in the late 1960s, that rabies kept reappearing to decimate Roraima's cattle. There had also been 'countless frustrating attempts to eliminate *aftosa* (foot-and-mouth disease)'.⁷⁸ Foot-and-mouth killed only about 5 per cent of the region's cattle, but it caused widespread loss of weight, secondary infections and abortions among the surviving animals. The local fazendeiro was fatalistic about it. 'By and large he folds his arms, assumes a philosophical attitude, and allows his cattle to die one by one to the point where periodically many fazendeiros are completely wiped out.' Even though the government offered free veterinary service, the cost of buying and applying vaccination was thought to be too expensive. Thus 'these two diseases continue to be endemic, largely unchecked and unabated, inflicting tremendous losses'.⁷⁹

In 1960 Roraima had 873 fazendas occupying a total area of some 870,000 hectares and containing about 130,000 animals. Ten years later, in 1970, there had been dramatic increases. The number of ranches had more than doubled to over 1,900, occupying almost 1.6 million hectares and containing 238,000 animals. Much of this increase was in large ranches of between 1,000 and 10,000 hectares. This category more than doubled during the decade of

the 1960s, from 272 to 670, and their area increased from some 645,000 to 1,250,000 hectares.

In 1970 the largest cattle company was still J. G. de Araújo (now renamed Gado da Amazônia S. A.), which had entered the region over fifty years earlier. This company had some 28,500 animals on 24 ranches, but its management was very weak. The ultimate owner, José Gomes de Araújo, never once visited his vast landholdings in Roraima. As with most large ranches, day-to-day management was left entirely in the hands of overseers (*capatazes*) and there was minimal investment. 'His ranches are characterized by very low levels of efficiency and productivity per unit of area, but his holdings are so vast and his inputs so small that he receives a large and easy income regardless.'⁸⁰ At that time, IBGE's Statistical Yearbook recorded over 2,000 ranches in Roraima, with a total land area of over 2.1 million hectares. However, over 1.5 million hectares of this (71%) was owned by the 704 large ranches in the size range 1,000–10,000 hectares. Three fazendas were larger than 10,000 hectares.

There were further increases during the next fifteen years. In 1985 Roraima had over 6,400 farms (not all of which raised cattle) occupying some 2,160,000 hectares. Much of this increase was in smaller holdings: the number and area of large ranches remained comparable to the 1970 figures. The total cattle herd had now surpassed its 1930s total of over 300,000 head.

In recent years, the husbandry of Roraima's cattle has finally started to improve and modernise, thanks partly to government agencies such as ASTER and EMBRAPA. New breeds of cattle were brought up the new BR-174 Manaus-Boa Vista highway. All farms now have machinery for cutting forage. The animals are given salt and, for the zebu breeds, mineral salts and sulphur. There is also experimentation with new types of grass, such as the tall colônião or imported kikuyu. Fenced *capineiras* are created near stands of well-watered buriti palms: milking is done in these enclosures for a year, so that the manured ground yields food crops or particularly rich pasture.

Boa Vista has a modern abattoir with four slaughterings a week, each of at least 60 animals. Thus, in the course of a year, some 12,000 animals are slaughtered, usually when they have reached the optimum age of 4½-5 years. Despite improved breeding and husbandry, Roraima's cattle are still poor by Brazilian standards. They average 315 kg when slaughtered, which is not far above the Ministry of Agriculture's minimum weight of 255 kg, and their carcasses account for 45% of this total. A further 7,000 animals are exported to Manaus, many by river during the rainy season, taking 2½ days from Caracará.

The majority of Roraima's ranches continue to be near its capital Boa Vista, in the bend of the Uraricoera-Branco rivers. In recent years, however, there has been expansion of ranching along the BR-040 towards Guyana, on

the Surumú river and around the cattle town Normandia. There are also new ranches on the plains towards Venezuela and in the Serra da Lua (former Wapixana homelands) south-east of Boa Vista. Farther south, cattle has been introduced into land cleared of forest along the western branch of the BR-210 Perimetral Norte.

Agricultural colonies

Ever since the first European settlement of Roraima in the eighteenth century, there have been official desires to stimulate agriculture – as opposed to cattle ranching – in the region. It seemed absurd that such a fertile area should have to import basic foods and vegetables. But the fazendeiros were too conservative or too idle to grow crops: their interest was only in cattle.

The demand for locally grown food accelerated with the creation of the Territory of Rio Branco (later Roraima) in 1943. The newly arrived government officials and the growing population of Boa Vista wanted a diet more varied than meat, manioc and rice. The problem came to a head between November 1951 and March 1952, when the food shortage became so acute that the Governor had to appeal to the Brazilian Air Force for an airlift of rice, manioc, corn, beans and sugar. The official response was a series of planned agricultural colonies. These had a triple objective: to make the region self-sufficient in basic foods; to attract immigrants to a very thinly settled part of Brazil; and to open cleared forest, as opposed to savanna, for farming. After a shaky start, the policy has been a success, with all three objectives achieved.

The first two colonies had been founded in 1944, immediately after the creation of the Territory: Fernando Costa on the banks of the Mucajaí, later moved closer to Caracarái, 76 kms south of Boa Vista on the main road; and Brás Dias de Aguiar (also known as Cantá), only 30 kms from Boa Vista, but south-east on the far bank of the Rio Branco and initially with bad communications.

The first batch of settler families in these new colonies came from the north-eastern state of Maranhão. Each family got its passage, one month's adaptation in Boa Vista, some clothing and household utensils, a basic wage for ten months, some tools and seeds, and medicine when necessary. A 25-hectare plot was granted to each family.

Despite this official help, the first pioneers soon left, as did most of another group of immigrants in 1947–48. Between 1951 and 1953, 140 families came to Fernando Costa and by the end of the decade it had 650 people and its own food-processing equipment. In those early days, farming methods were very basic slash-and-burn: clearing forest and undergrowth with machete, hoe and fire, and moving on to clear more land when the soil was exhausted, since there was no fertiliser. By the late 1950s, Brás Dias de

Aguiar had grown more slowly because of the difficulty of moving its produce. It had only 58 families, growing mainly rice, but still opening fresh plots. Meanwhile a third *colônia*, Coronel Mota (named after Roraima's first schoolmaster) was started in 1955 in the Taiano hills 92 kms north-west of Boa Vista. The first settlers at Colônia Coronel Mota were also from the north-east of Brazil. In the following year eleven Japanese families came, with support from their government. These tried to grow pepper and vegetables; but they were not trained farmers, and soon moved away to southern Brazil.

Experience from these first three agricultural colonies showed that road access to Boa Vista was all-important, since the city was the only market for produce. Other problems stemmed from lack of technical assistance, shortage of rural credit, and difficulty of storing food in the equatorial climate. Little mechanical help was available: soil was prepared manually with hoes. Irrigation was good, with no shortage of water, and all the *colônias* pumped water from wells or streams. But there was no chemical fertiliser, only animal; and no preventive pest control, only spraying to kill parasites as they occurred. Settlers in the early colonies had such difficulty getting their surplus produce to market that they often resorted to subsistence farming to feed their families, with no income to buy other essentials.

A second generation of agricultural colonies learned from the trials of the colonies of the forties and fifties, with plenty of advice and assistance from government agencies such as ASTER, EMBRAPA, ACAR and INCRA. In the 1970s a new colony was started at Alto Alegre on the upper Mucajaí, 100 kms west of Boa Vista, with 92 families from Maranhão and advised by an advanced campus of the University of Rio Grande do Sul. Sorocaima is a later colony, formed spontaneously without official planning, on higher ground at 600 metres near the Venezuelan frontier. It is doing well, growing Colombian coffee. Prata was another planned colony, beyond Fernando Costa on the road to Caracarái, 85 kms south of Boa Vista. It was formed in the late 1970s with families from Amazonas and the north-east, and also some from Fernando Costa whose original soils were exhausted.

More recently, other agricultural colonies have been started, some spontaneously, others planned. The opening of new highways in southern Roraima has enabled the government to plant new colonies along the BR-210 (Perimetral Norte) and BR-174. One problem has been a tendency to clear forest along these new roads in order to make pasture for cattle rather than agricultural farming. Big ranchers employ gangs of itinerant labourers to fell rainforest and forbid them to plant any crops for fear that they might acquire settlers' rights if they did. These contract tree-fellers 'move on, leaving great areas of burned land behind them. The natural resources are thus being squandered by bad use of the soil.'⁸¹

Mineral prospecting

The monumental statue in the middle of the square that forms Boa Vista's civic centre is of a *garimpeiro* or prospector. This is a curious choice. Although prospectors have been pioneers on remote rivers of Roraima, they have made little lasting contribution to its population or economy. *Garimpeiros* are migratory adventurers who push up rivers whenever there is a rumour of gold or diamonds. They work in small teams of men without families.

At times in Roraima's recent history, gold and diamonds have attracted waves of immigrants from other parts of Brazil or have lured labourers away from ranches and farms. But as soon as a river's yield declines, the prospectors move on, often across frontiers into Venezuela or Guyana. Their prospecting produces a steady supply of diamonds or gold dust. But both commodities are of high value and easily smuggled, so that little return from prospecting enters Roraima's official taxable economy. The *garimpeiros'* primitive methods of pumping and panning destroy river beds and probably miss most of the potential mineral wealth.

As early as 1920, Joaquim Gondim spoke of a small number of prospectors seeking the Territory's mineral riches on remote rivers. There was a diamond and gold rush in 1940, a year of agricultural drought and the lowest ebb for Roraima's cattle herd. The 1940s were a peak period for prospecting, with discoveries of some 11,000 carats a year. But the mother lode of diamonds has never been discovered, so that each area of *garimpagem* is temporary. In the 1940s, prospectors followed Brás Dias de Aguiar's boundary commission into the upper Amajari and the area around Mount Tepequem. In 1960 *garimpeiros* started to invade the upper Cotingo in the extreme north of Roraima, but they were prevented from entering its upper forests by the warlike Ingarikó. The Suapí river, tributaries of the Quinô and Maú, and recently the Uraricaá and Ericó rivers are active areas for prospecting. Seven per cent of Roraima's population is reckoned to live from *garimpagem*, and its annual yield was thought to be over 80,000 carats of diamonds and 750 kilos of gold.⁸² A decline in prospecting activity was dramatically reversed in 1988, when gold was discovered on the upper Mucajaí – within the limits of the Yanomami Indian Park. This discovery brought a massive gold rush flooding in from all parts of Brazil.

The road link

The most important factor stimulating the accelerating growth of Roraima's population was the ending of the region's isolation from the rest of Brazil.

In 1970 work finally started in earnest on the 775-km Manaus to Boa Vista road – the land link that had been proposed and planned so often during the previous century. It eventually took seven years to build 624 kms of unpaved

highway from Manaus to Caracaráí, where the new road joined the existing BR-174 for 346 kms to Boa Vista and the Venezuelan frontier. There is also a 240-km spur of the BR-401 from Boa Vista to Guyana, so that the new highways form part of an international Panamerican system.

The 6th BEC battalion of military civil engineers built this remarkable pioneer highway. They used a workforce of 565 soldiers and 704 civilians (many of whom were Indians from Roraima); four soldiers and 28 civilians died during the construction. The road ran through a swathe of 70 metres of cleared forest, which involved felling 4,400 hectares – although by now most of the roadside has been cleared for a considerable additional distance by settlers. The road had to pass many swamps on causeways and hundreds of streams on wooden bridges. The large rivers Alalaú, Jauaperi and Branco are crossed on metal rafts, and seven airstrips were built during the construction.⁸³

A delicate problem arose because the most direct route for the road ran across the territory of the warlike Waimiri-Atroari tribe. This Indian nation had fought longer and harder than almost any other Brazilian tribe to preserve its independence and territory. It resisted missionaries and other invaders during the eighteenth century. During the 1860s and 1870s there were increasingly bloody clashes between Waimiri-Atroari and settlers in the villages of Airão and Moura on the Rio Negro. The Indians sacked riverside settlements, partly in search of metal, and they frightened river traffic including cattle boats from Rio Branco. They in turn were victims of ugly reprisal raids and treacherous massacres. In 1884 the Brazilian botanist João Barbosa Rodrigues made a gallant contact with and pacification of this tribe, which was then known as Crichana or Jauapery. But with the departure of Barbosa Rodrigues, relations with the Waimiri-Atroari relapsed into uneasy hostility.

In 1967 Father Antônio Calleri of the Consolata Order (which had in 1948 succeeded the Benedictines as the main Catholic missionary group in Roraima) made contact with the Waimiri-Atroari. But something went wrong, and in 1969 these Indians killed Father Calleri and some nuns who were trying to establish a mission in their midst. Gilberto Figueiredo Pinto, one of FUNAI's finest *sertanistas*, made friends with the Waimiri-Atroari; but he was also killed by them in 1974 when he sought to persuade them to allow the highway to cross their territory.⁸⁴ The BR-174 does now cross 120 kms of the Waimiri-Atroari reserve – and this is the only stretch of this road that is still flanked by virgin forest. The tribe is now pacific, reduced in numbers, and in process of acculturation, with three FUNAI posts on its land. A new threat is that part of its land will be flooded by water rising behind the new Balbina dam on the Uatumã river.

The BR-174 from Manaus to Boa Vista was formally opened in April 1977. It is still a rough road, with gradients of up to 8%, and during the rains it can become a quagmire of pink mud. But with twice-daily bus services (often

taking 30 hours or more for the run) and steady truck traffic, the highway has finally ended Roraima's sense of isolation. The territory's population almost doubled during the first decade after the road was opened.

Environmental concerns

During the decade starting in the mid-1970s, an impressive area of reserves was designated in Roraima. In addition to the vast Indian reserves (which are also wildlife sanctuaries), the environmental agency IBAMA administers the Mucajaí and Rio Anauá biological reserves, the Jatapu resources reserve north of the Waimiri-Atroari Indian territory, and the huge National Park of Rio Branco along the western bank of the lower river. The forestry department of IBAMA used to have an area called the Parima forest reserve in the northern part of the area interdicted for the Yanomami. IBAMA's ecological section, formerly called SEMA, has a 100,000-hectare ecological research reserve on Maracá island in the middle Uraricoera river, as well as a savanna research station near Caracará. Maracá was the scene of intensive study in the Maracá Rainforest Project of 1987–89. Brazilian scientists, mostly from the Amazon research institute INPA in Manaus, and their British colleagues found that this island of forests, wetlands and savanna was remarkably rich in wildlife. Several hundred new species of insects, microorganisms, plants and animals were discovered; and Maracá proved to be one of the richest places in the neotropics in the numbers of its peccary and the diversity of birds, bats, spiders and other insects.

With large areas of uninhabited and unexplored forests, Roraima is important in the conservation of the Amazon rainforest environment. On paper at least, almost half the state is protected as Indian or nature reserves. But the legal status of much of this immense area is uncertain and there are strong economic and political forces that want to open them to exploitation. It is also almost impossible to police these reserves against invaders.

Roraima's future

In 1988 the Territory of Roraima achieved statehood. It was felt that, with its population well over 100,000 and its economy in good shape, Roraima was ready to take its place among the states of Brazil. But it is not certain that Roraima's economy can keep pace with the steady and inevitable rise in population and the increased expectations of its people.

For a time in the late 1970s and early 1980s, the Territory's economy was saved by timber exports. These were boom years for the Venezuelan construction industry, which discovered that the best wood for scaffolding and concrete formwork was a smooth, white softwood called caferana. This tree grows in abundance near the Bem-querer rapids and Caracará. Modern sawmills were developed to meet this demand, and the timber moved north

along the new BR-174 link to Venezuela. Although caferana is a relatively cheap wood compared to tropical hardwoods, it was exported in large quantities. By 1980, timber exports had overtaken beef and cattle as Roraima's largest export. But this raw material is dependent on market forces. With the collapse in the price of oil in 1986 and the Venezuelan economic crisis, demand for Roraima timber has decreased.

In recent years Roraima's cattle herd has grown to be larger even than in the boom years of the early 1930s. The Brazilian office of statistics FIBGE has published different figures for the Territory's cattle, but in its higher estimates the herd surpassed 350,000 in 1980 and in 1983. There has been a drop since then, but FIBGE's *Censo Agropecuário* still gives over 300,000 head of cattle for 1985. Better methods of husbandry could sustain a further increase in cattle production, but it is doubtful whether Roraima's weak pastures can feed many more animals. Scientific tests have shown conclusively that felling forests is not the answer. Soils under tropical rainforests are too impoverished to be transformed into good grassland.

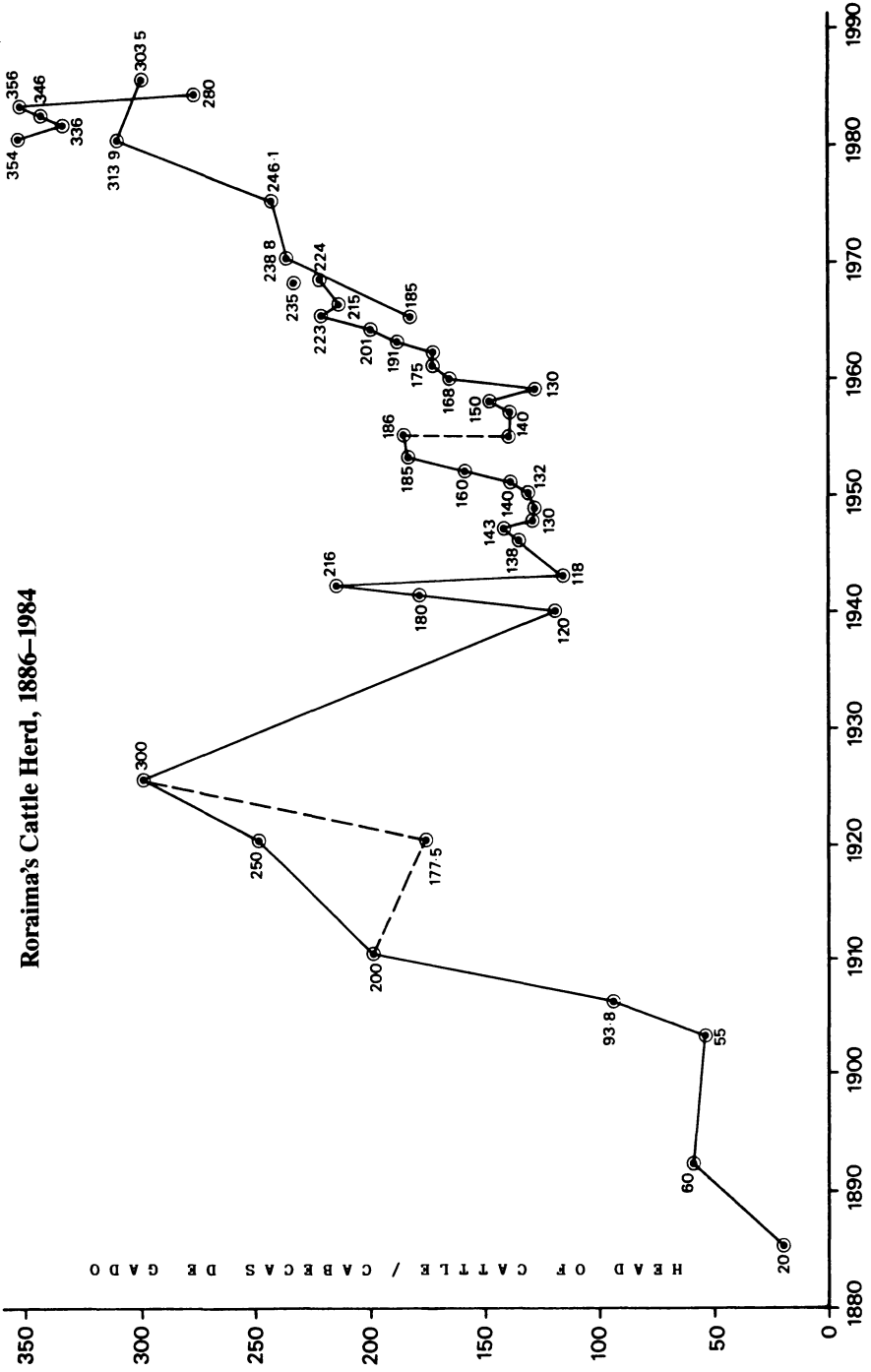
There is potential for improved agriculture. An impressive increase in rice grown on seasonally flooded várzea shows what can be done by good management and financing. But here again, there is a limit to what can be produced in this equatorial region.

The huge gold rush of 1988–89 brought thousands of *garimpeiros* flooding into the new state. They mined several tons of gold, but their strike is probably short-lived. The gold rush brought prosperity to some service industries, such as air taxis, that supplied the prospectors' needs. But the arrival of so many new people put a strain on the region's resources and little of the wealth they generated found its way into the state's economy. The prospectors also severely threatened the Yanomami Indians, whose territory is by no means secure, and the mercury they use has polluted some rivers.

The gradual paving of the Manaus-Boa Vista highway will improve access to this remote part of Brazil – although it will be many years before it can all be paved and the annual muddy blockages are ended. This paving of Roraima's lifeline will improve the flow of imports and exports, but it will also attract more settlers. There will certainly be more local industries to supply Roraima's needs, but these may create demand for more power than can be delivered by the new Paredão hydroelectric dam. So Roraima will grow. The worry is that this growth will be at the expense of the state's magnificent rainforest reserves and the lands that protect its many Indians. If the present flow of immigrants turns into a flood, Roraima's fragile economy could collapse and the settlers could turn this natural paradise into a wasteland.

APPENDIX I

Roraima's Cattle Herd, 1886-1984



Estimates of Roraima's Cattle Herd, 1886–1984

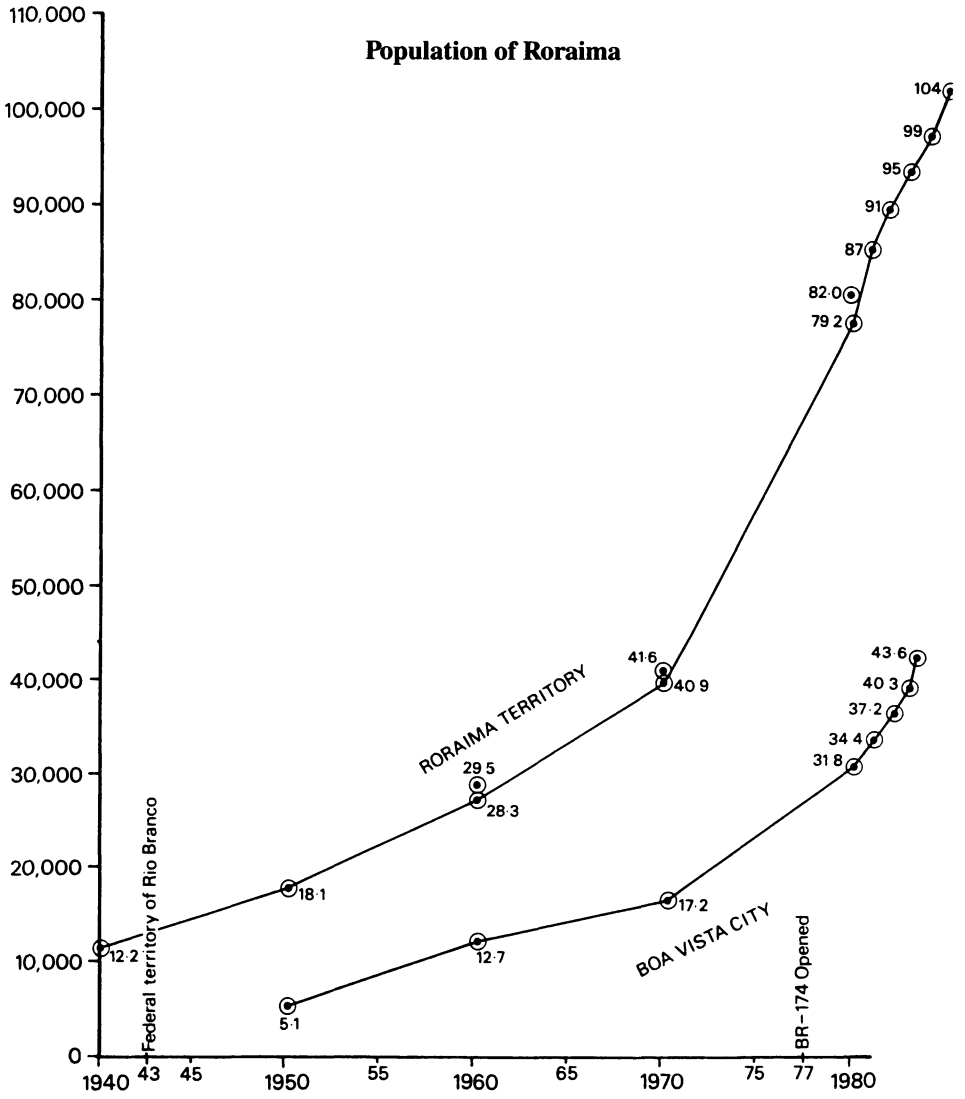
<i>Year</i>	<i>Herd</i>	<i>Sources of estimate</i>
1886	20,000	Henri Coudreau, <i>La France Equinoxiale</i> (Paris, 1886–7).
1892	60,000	Jacques Ourique, <i>O Valle do Rio Branco</i> (Manaus, 1906).
1903	55,000	Lopes Gonçalves, <i>O Amazonas. Esboço histórico, chorographico e estatístico até o anno de 1903</i> (New York, 1904)
1906	93,800	Ourique, <i>op. cit.</i>
1913	200,000	Ministério da Agricultura, <i>Sinopse de Censo Pecuário da República</i> (Rio de Janeiro, 1913).
1920	250,000	Osmundo Camargo, in Mário Guedes, <i>Os seringais</i> (Rio de Janeiro, 1920); Avelino Ignácio de Oliveira, <i>Bacia do Rio Branco (Estado do Amazonas)</i> ; Serviço Geológico e Mineralógico do Brasil, Boletim 37 (Rio de Janeiro, 1929).
	177,528	IBGE, <i>Recenseamento do Brasil</i> (1 de Setembro de 1920) vol. 3, pt. 1 (Rio de Janeiro, 1952).
1925	over 300,000	Valério Caldas de Magalhães, <i>Quadro estatístico do gado existente nas fazendas riobranquenses das espécies bovina e equina</i> (mimeo, Boa Vista, 1952); Araújo Cavalcante, <i>Recuperação e desenvolvimento do Vale do Rio Branco</i> (Rio de Janeiro, 1945).
1940	120,427	IBGE, <i>Censo Agrícola</i> (Rio de Janeiro, 1952)

<i>Year</i>	<i>Herd</i>	<i>Year</i>	<i>Herd</i>	<i>Year</i>	<i>Herd</i>
1941	180,000	1951	140,000	1961	175,000
1942	216,000	1952	160,000	1962	175,000
1943	118,000	1953	185,000	1963	191,000
1945	138,000	1955	186,000/ 140,000	1964	201,000
1947	143,100	1957	140,000	1965	223,000
1948	130,000	1958	150,000	1966	215,000
1949	130,000	1959	160,000	1968	223,900
1950	132,000/ 139,300	1960	167,300		

1941–68 estimates from annual Instituto Brasileiro de Geografia e Estatística, *Anuário Estatístico (Censo Agrícola)* (Rio de Janeiro) compiled by Ministério da Agricultura, Serviço de Estatística da Produção.

<i>Year</i>	<i>Herd</i>	<i>Source</i>
1970	238,000	FIBGE, <i>Sinopse preliminar do Censo</i>
1975	246,100	<i>Agropecuário, Censos econômicos – 1985,</i>
1980	313,900	vol. 4, no. 1, <i>Região Norte</i> (Rio de
1985	303,500	Janeiro, 1987).
1980	354,000	Serviço do Censo Agropecuário – PRONASA, in
1981	336,000	FIBGE, <i>Anuário Estatístico – Território</i>
1982	346,000	<i>Federal de Roraima – 1984</i> (Rio de
1983	356,000	Janeiro, 1985)
1984	280,000	

APPENDIX II



APPENDIX III

Abbreviations and Acronyms

ACAR-Roraima: Associação de Crédito e Assistência Rural do Território de Roraima

ASTER: Associação de Assistência Técnica e Extensão Rural.

BASA: Banco da Amazônia, S.A.

CEAG-AM: Centro de Assistência Gerencial à Pequena e Média Empresa do Estado do Amazonas

CODESAIMA: Companhia de Desenvolvimento de Roraima

CPATU: Centro de Pesquisa Agropecuária do Trópico Úmido

EMBRAPA: Empresa Brasileira de Pesquisas Agropecuárias

FIBGE: Fundação Instituto Brasileiro de Geografia e Estatística

FUNAI: Fundação Nacional do Índio

IBDF: Instituto Brasileiro de Desenvolvimento Florestal

INCRA: Instituto Nacional de Colonização e Reforma Agrária

INPA: Instituto Nacional de Pesquisas da Amazônia

PIN: Programa de Integração Nacional

POLOAMAZÔNIA: Programa de Pólos Agropecuários e Agrominerais da Amazônia

PROTERRA: Programa de Redistribuição de Terras e de Estímulo à Agroindústria do Norte e do Nordeste

SEAC: Secretaria de Economia, Agricultura e Colonização do Território de Roraima

SEMA: Secretaria Especial do Meio Ambiente

SEMTUR: Secretaria Municipal de Comunicação Social e Turismo, Boa Vista

SEPLAC: Secretaria de Planejamento e Coordenação – Governo de Roraima

SUDAM: Superintendência do Desenvolvimento da Amazônia

NOTES

1. A wealth of documents about the 18th-century European penetration of Roraima was published by the Brazilian and British governments to support their submissions to King Victor Emmanuel of Italy, who in 1903 arbitrated on the line of the frontier between Brazil and British Guiana (now Guyana) to the north-east of Roraima. The Brazilian documents were published by Joaquim Nabuco in many volumes called *Limites entre le Brésil et la Guyane Anglaise*. Of particular interest are the *Annexes du Premier Mémoire du Brésil* and the *Annexes du Second Mémoire du Brésil*. These contain interrogations by the Ouvidor Francisco Xavier Ribeiro de Sampaio heard in 1775 and known as the *Auto de justificação* to justify Portuguese claims to the Rio Branco. This same Ouvidor published *Relação geográfica-histórica do Rio Branco da América Portuguesa* (1778) and *Diário da viagem que em visita... do Rio Negro fez ... no anno de 1774 e 1775* (Lisbon, 1825). Nabuco's volumes also contain reports by various explorers who visited the upper Rio Branco in the 1780s: by Captain Ricardo Franco de Almeida Serra and Dr Antonio Pires da Silva Pontes (1781); Alexandre Rodrigues Ferreira, *Tratado histórico do Rio Branco* (1786); and Manoel da Gama Lobo d'Almada, *Descrição relativa ao Rio Branco e seu território* (1787). The British submissions to the 1903 arbitration were in four volumes, Foreign Office, *Question de la frontière entre La Guyane Britannique et le Brésil* (1903). There are data on early Dutch penetration of Roraima in C. A. Harris and J. A. J. de Villiers (eds.), *Storm van's Gravesande: The Rise of British Guiana*, 2 vols., Hakluyt Society, 2nd Series, vols. 26–27 (London, 1911). On Spanish incursions in 1773–75, documents are published in Cesáreo de Armellada, OFMCap., *Por la Venezuela indígena de ayer y de hoy* (Caracas, 1960). Modern studies of this early period include some references in the works of Artur César Ferreira Reis; the doctoral dissertation of David Sweet, 'A Rich Realm of Nature Destroyed: The Middle Amazon Valley, 1640–1750', (University of Wisconsin at Madison, 1974); Nádia Farrage, 'As muralhas dos sertões. Os povos indígenas no rio Branco e a colonização', Masters dissertation, Universidade Federal de Campinas, São Paulo, 1986; John Hemming, *Red Gold. The Conquest of the Brazilian Indians* (London, 1978), pp.440–2, 640–1, also *Amazon Frontier. The Defeat of the Brazilian Indians* (1987), pp. 30–6, 550–1, and 'How Brazil Acquired Roraima', *Hispanic American Historical Review* (in press).
2. Gama Lobo d'Almada, *Descrição relativa ao rio Branco e seu territorio* (1787), in Joaquim Nabuco, *Limites entre le Brésil et la Guyane Anglaise, Annexes du Premier Mémoire du Brésil*, vol. 1, p. 261. Francisco Xavier Ribeiro de Sampaio had previously pointed out Roraima's potential for cattle pasture: *Diario da viagem que em visita ... da Capitania de S. Jozé do Rio Negro...* (1775) (Lisbon, 1825), p. 99; *Relação geographica-historica do Rio Branco* (1778), *Revista do Instituto Histórico e Geográfico do Brasil* (RHGB), vol. 13 (1850), pp. 269–70. Alexandre Rodrigues Ferreira commented in his *Diario da viagem philosophica* (1786) that no cattle had yet reached the region.
3. On the introduction of cattle and the early decades of the national fazendas: André Fernandes de Sousa, *Noticias geographicas da Capitania do Rio Negro no grande Rio Amazonas* (c. 1820), *RHGB*, vol. 10, (1848), p. 453; Francisco José Rodrigues Barata, *Diario da viagem à colonia holondeza de Surinam* (1798), *RHGB*, vol. 8 (1846). Barata did not think that the ranches would prosper

because there was little shade and the animals had to go too far to drink. H. Coudreau, *Voyage au Rio Branco* (1885), p. 24.

4. Robert Schomburgk, 'Report of the Third Expedition into the Interior of British Guiana, in 1835-6', *Journal of the Royal Geographical Society*, London, vol. 10 (1840), p. 180. Moritz Richard Schomburgk, *Travels in British Guiana, 1840-44*, 2 vols. (Georgetown, 1923), vol. 1, pp. 313-5; vol. 2, p. 127.
5. João Henrique de Mattos, *Relatório do estado de decadência em que se achou o Alto Amazonas* (1845), ed. Arthur César Ferreira Reis, *Revista do Instituto Histórico e Geográfico Brasileiro*, vol. 325 (1979), p. 160; also pp. 149, 158-9, 163-4.
6. The numbers of cattle and horses in Roraima emerge from some of the annual reports by Presidents of the Province of Amazonas. *Falla* by President Angelo Thomaz do Amaral, Manaus, 1 Oct. 1857 (Rio de Janeiro, n.d.), p. 36; *Falla* by President Manoel Clementino Carneiro da Cunha, Manaus, 3 May 1861, in Herculano Ferreira Penna (ed.), *Relatórios dos Presidentes da Província do Amazonas*, 12 vols. (Rio de Janeiro, 1906-08), vol. 9, p. 43; (*Relatório* by President Manoel Clementino Carneiro da Cunha, 3 May 1862, showed an increase over his 1861 report to 3,848 cattle and 787 horses). President Dr Adolpho de Barros Cavalcanti de A. Lacerda, *Relatório*, 8 May 1865 (Recife, 1865), p. 26; President Lt.-Col. João Wilkens de Mattos, *Relatório*, 4 April 1869 (Manaus, 1869), pp. 56-7. Gustave Wallis gave a higher estimate of 10,000 head on the national fazendas, in his 'Carta dirigida a D. S. Ferreira Pena, sobre o Rio Branco', 23 May 1863 (*Boletim do Museu Paraense*, Belém, 1900-02), vol. 3, pp. 1-4, 88-94, also quoted by Maurice Mollard, *Le Haut Rio-Branco* (1913), p. 10.
On Ignácio Lopes de Magalhães, the first fazendeiro of Boa Vista (and about the romance between his beautiful young wife Dona Liberada and the Commander of Fort São Joaquim, Captain Antônio dos Barros Leal), see: Richard Schomburgk, *Travels in British Guiana, 1840-44*, vol. 1, pp. 311, 313, 315; vol. 2 p. 127; Robert Schomburgk, 'Report of the Third Expedition into the Interior of Guayana', *Journal of the Royal Geographical Society*, vol. 10 (1840), pp. 182, 188; João Henrique de Mattos, 'Relatório do estado de decadência...' (1979), p. 162; Dorval de Magalhães, *Roraima. Informações históricas* (Rio de Janeiro, 1986), pp. 12-13.
7. President João Wilkens de Mattos, *Relatório*, Manaus, 4 April 1869, p.56.
8. President Barão de Maracajú, *Falla*, Manaus, 29 March 1879, p. 47. As long before as 1865, his predecessor as provincial president Adolpho de Barros Cavalcanti de A. Lacerda had suggested selling the loss-making national fazendas: *Relatório*, 8 May 1865, p. 26.
9. Ermanno Stradelli, 'Rio Branco. Note di viaggio', *Bollettino della Società Geografica Italiana*, 3 ser., no 2, anno 23 (Rome, 1889), p. 255.
10. President José Lustosa da Cunha Paranaguá, *Relatório*, 25 March 1883 (Manaus, 1883), p. 23 and Appendix 1 containing the full text of the lease contract.
11. Joaquim Gondim, *Através do Amazonas* (Manaus, 1922), p. 29.
12. *Idem*.
13. Coudreau, *Voyage au Rio-Branco*, pp. 24-5 and *La France Equinoxiale* (Paris, 1886-7), vol. II, p. 407; Stradelli, 'Rio Branco', pp. 257, 263; President José Clarindo de Queiroz, *Relatório*, 31 March 1880 (Manaus, 1880), p. 43.
14. Jacques Ourique, *O Vale do Rio Branco* (Manaus, 1906), p. 20; Antônio Teixeira Guerra, *Estudo geográfico do Território do Rio Branco* (Rio de Janeiro, 1957), p.196.

15. Gondim, *Através do Amazonas*, p. 31.
16. Ourique, *O Valle do Rio Branco*, p. 13.
17. Gondim, *Através do Amazonas*, p. 31.
18. Theodor Koch-Grünberg, *Vom Roroima zum Orinoco* (5 vols., Berlin and Stuttgart, 1916–1928), vol. I, pp. 17–18, 23.
19. César Ituaçu da Silva, Administrator of the Fazendas Nacionais do Rio Branco, *Relatório apresentado à Insp. do S.P.I. no Amazonas e Acre*, ms. in Museu do Índio, quoted in Emanuele Amodio e Vicente Pira, 'História dos povos indígenas de Roraima – Makuxi – Ingaricó – Taurepang e Wapixana', *Boletim*, vol. 10 (Boa Vista, March 1985), p. 35. São Marcos fazenda was transferred from the Ministério da Fazenda to the Ministério da Agricultura in 1912. It was administered for a while by the short-lived Serviço de Defesa da Borracha and from 1916 by the Serviço de Proteção aos Índios and its successor FUNAI (Fundação Nacional do Índio). Inspector Bento Lemos of the SPI tried publishing edicts in the *Diario Oficial* of Amazonas ordering private ranchers to get their cattle off government land within ninety days. This had no more success than his suggestion that these lands be rented only to small farmers.
20. Koch-Grünberg, *Vom Roroima*, vol. I, p. 18.
21. Dorval de Magalhães, *Roraima. Informações históricas*, p. 27; Alexander Hamilton Rice, 'The Rio Branco, Uraricuera, and Parima', *The Geographical Journal*, London, vol. 71, no. 2 (Feb. 1928), p. 127. The annual reports of the Manaus inspectorate of the SPI at this time were full of indignation about the behaviour of J G Araújo & Cia. When General Rondon visited the region in 1927, the legal action was still continuing: Esther de Viveiros, *Rondon conta sua vida* (Rio de Janeiro, 1958), p. 515.
22. Dr Nunes Pereira, article in *Gazeta*, Manaus, November 1922, in Avelino de Oliveira, *Bacia do Rio Branco (Estado do Amazonas)*, Serviço Geológico e Mineralógico do Brasila, *Boletim*, no. 37 (Rio de Janeiro, 1979), p. 24. In an earlier report to Dr Euzebio de Oliveira, Avelino de Oliveira reckoned that Rio Branco had 200,000 cattle and 80,000 horses: 'Notas sobre a Expedição Hamilton Rice', Boa Vista, 24 Dec. 1924.
23. Rivière, *The Forgotten Frontier* (New York, 1972), p. 55. The rancher Severino de Hollanda Bessa told Avelino de Oliveira in 1924 that he had lost 90% of 400 cattle in one corral. Other ranchers on the Uraricoera suffered similarly. Avelino de Oliveira, 'Notas sobre a Expedição Hamilton Rice'.
24. Sílvio Torres, quoted in Guerra, *Estudo geográfico*, pp. 179–80.
25. FIBGE, *Atlas de Roraima* (Rio de Janeiro, 1981), p. 24; Jorg Zimmermann (ed.), *Território Federal de Roraima – Diagnóstico socio econômico preliminar* (mimeo, Boa Vista, 1973), p. 106; Antônio Alves de Assis et al., *Município de Boa Vista* (Boa Vista, 1987), p. 89; Newton de Oliveira Ribeiro (ed.), for Fundação Delmiro Gouveia, *Território Federal de Roraima*, 2 vols (mimeo, Rio de Janeiro, c. 1969), vol. 1, p. 30.
26. Coudreau, *La France Equinoxiale*, vol. II, p. 255; Stradelli, 'Rio Branco', p. 225.
27. Bento de Figueiredo Tenreiro Aranha (Director of the Rio Branco Indians), 'Liste nominale des habitants du Rio Tacutu', Manaus, 23 June 1902, in Joaquim Nabuco, *Limites entre le Brésil et la Guyane Anglaise. Annexes du Second*

- Mémoire du Brésil*, vol. 2, *Documents faisant suite au Tome Premier du Second Mémoire* (Rio de Janeiro, 1903), after p. 232.
28. Maurice Mollard, *Le Haut Rio-Branco*, p. 19; Dom Achaire Demuynck, 'Les débuts de la Colonie monastique au Rio Branco', *Bulletin des Oeuvres et Missions Bénédictines au Brésil et au Congo* (Abbey of Saint-André par Lophem, Belgium, Sept. 1912), pp. 229–30; Koch-Grünberg, *Vom Roroima*, vol. I, p. 14.
 29. Gondim, *Através do Amazonas*, p. 10; Luciano Pereira, *O Rio Branco. Observações de viagem* (Manaus, 1917), p. 10.
 30. Provincial Law 92, 9 Nov. 1858. The new parish was carved out of that of Moura on the Rio Negro; and Law 132, 29 June 1865, noted that the dividing line between the two *freguesias* was the Bem-querer rapids near Caracará. Mendonça de Souza, *A Manaus-Boa Vista* (Manaus, 1977), p. 177; FIBGE, *Atlas de Roraima*, p. 8.
 31. Stradelli, 'Rio Branco', p. 258.
 32. Gondim, *Através do Amazonas*, p. 13. But Theodor Koch-Grünberg had a better impression of Boa Vista in 1911. He described it as 'a row of bright friendly little houses on a high bluff of river bank', *Vom Roroima*, vol. 1, p. 15.
 33. Oliveira, *Bacia do Rio Branco*, p. 25.
 34. Evelyn Waugh, *Ninety-two days* (London, 1934), pp. 122–4.
 35. G. Grupe y Thode, 'Über den Rio Blanco', *Globus*, vol. 16 (Braunschweig, 1890), p. 253.
 36. Dr Adolpho de Barros Cavalcanti de A. Lacerda, *Relatório*, 8 May 1865, p. 26.
 37. Antônio Ferreira de Souza, *Noções da geografia e história de Roraima* (Manaus, 1969), p. 65; Mendonça de Souza, *A Manaus-Boa Vista*, pp. 245, 283.
 38. Citizens of Boa Vista to President-elect Epitácio Pessoa, 23 Feb. 1922, in *ibid.*, pp. 224, 226.
 39. Hamilton Rice, 'The Rio Branco', p. 122.
 40. Avelino de Oliveira, *Bacia do Rio Branco*, p. 28; Amodio and Pira, 'Historia dos povos indígenas', p. 44.
 41. Ferreira de Souza, *Noções da geografia*, pp. 65–6; Ribeiro (ed.), *Território Federal de Roraima*, p. 22; Mendonça de Souza, *A Manaus-Boa Vista*, p. 260.
 42. Joaquim de Magalhães Cardoso Barata, *Uma viagem às Guianas*, p. 18.
 43. Koch-Grünberg, *Vom Roroima*, vol. III, *Ethnographie*, p. 3.
 44. Stradelli, 'Rio Branco', p. 264.
 45. Coudreau, *La France Equinoxiale*, vol. II, pp. 400–1. The Schomburgk brothers reckoned that there had been 1,500 Wapixana in 1840: Richard Schomburgk, *Travels in British Guiana*, vol. I, p. 21. Koch-Grünberg agreed with Coudreau that there were only a thousand of this tribe by the end of the century. A few years later, William Farabee put their numbers at 1200, but he may have included those in British Guiana: 'The Arawaks of Northern Brazil and Southern British Guiana', *American Journal of Physical Anthropology*, vol. I (1918), pp. 427, 435.
 46. Schomburgk, 'Report of the Third Expedition...', *Journal of the Royal Geographical Society*, vol. 10 (1840), p. 189.

47. Robert Schomburgk to T. F. Buxton, Fort São Joaquim, 25 April 1838, in Foreign Office, *Question de la Frontière, Annexe*, vol. 2, p. 8.
48. Koch-Grünberg, *Vom Roroima*, vol. I, p. 148.
49. Viveiros, *Rondon conta sua vida*, p. 520.
50. Iris Myers, 'The Makushi of the Guiana-Brazilian frontier in 1944: a study of culture contact' (ms., 1988), p. 19.
51. Dom Adalbert OSB, 'Correspondance du Rio Branco' (5 Nov. 1912), in *Bulletin des Oeuvres et Missions Bénédictines au Brésil et au Congo*, no. 14, (Abbaye de Saint-André par Lophem, Belgium, Feb. 1913), p. 40.
52. *Ibid.* Also *Boletim da Sociedade 'Melhoramento do Rio Branco'*, vol. 1 (Rio de Janeiro, Jan. 1919), p. 13. This report of a short-lived company reckoned that there were 10–15,000 whites and 10–15,000 Indians living in Rio Branco; whereas Dom Adalbert in his letter of 1912 estimated only 4–5,000 Indians in the entire region.
53. Iris Myers, 'The Makushi of the Guiana-Brazilian frontier in 1944', p. 7.
54. *Idem.*
55. William Curtis Farabee, 'A Pioneer in Amazonia', *The Bulletin of The Geographical Society of Philadelphia*, vol. 15 (Jan.–Oct. 1917), p. 3.
56. Araújo Lima, 'A exploração amazônica', in IBGE, *Amazônia Brasileira* (Rio de Janeiro, 1944), p. 242; Amodio and Pira, 'Historia dos povos indígenas...', pp. 41–2; Gondim, *Através do Amazonas*, pp. 24–7.
57. Cândido Mariano da Silva Rondon, *Índios do Brasil*, SPI publication 89, 3 vols. (Rio de Janeiro, 1955), vol. 3, p. 9; Viveiros, *Rondon conta sua vida*, pp. 514, 517, 522; Stradelli, 'Rio Branco', p. 264.
58. General Lima Figueiredo, 'Fronteiras amazônicas', in IBGE, *Amazônia Brasileira* (1944), pp. 189–90.
59. Iris Myers, 'The Makushi of the Guiana-Brazilian frontier', p. 18.
60. Oliver Marshall, 'The extreme-west of Santa Catarina, Brazil: A case study in regional development', MA (Econ.) thesis, University of Manchester, 1988, pp. 61–68.
61. FIBGE, *Anuário Estatístico do Brasil 1985* (1986), pp. 118, 122; FIBGE, *Sinopse estatística Roraima 1975* (Rio de Janeiro, 1976), p. 18; Jorg Zimmermann (ed.), *Diagnóstico sócio econômico preliminar*, p. 44.
62. FIBGE, *Anuário 1985*, p. 547; FIBGE, *Atlas de Roraima*, p. 20.
63. On passenger movements: air traffic in Roraima, in SEPLAC, *Informações estatísticas*, 2 vols. (Boa Vista, 1980), vol. I, pp. 1–2, table 3.1.1; FIBGE, *Anuário 1985*, p. 108; bus traffic from the Boa Vista rodoviária in *idem*, p. 104 and in Antônio Alves de Assis et al., *Município de Boa Vista*, pp. 111–2.
64. Valério Caldas de Magalhães, *Relatório da Divisão de Produção, Terras e Colonização* (unpublished ms., Boa Vista, 1951), in Guerra, *Estudo geográfico do Território Federal do Rio Branco*, pp. 139–40; Anon, 'A nova missão da Consolata no Rio Branco', *Boletim*, no. 4 (Boa Vista, Dec. 1982), p. 16, trans. from *Missioni Consolata* (Turin, May 1949); IBGE, *Sinopse estatística do Município*

- de Boa Vista (Território do Rio Branco)* (Rio de Janeiro, 1951) p. 27; V.S. Naipaul, *The Middle Passage* (London, 1962).
65. Jurandyr Pires Ferreira (ed.), *Encyclopédia dos Municípios Brasileiros* (Rio de Janeiro, 1957), pp.14, 46, later figures from FIBGE, *Sinopse estatística Roraima 1975*, p. 18 and Governo de Roraima, SEPLAC, *Anuário estatístico de Roraima* (1984), p. 49. It is important to distinguish figures for the city of Boa Vista from those for the município, a local government unit covering a wide area. The frontiers of Boa Vista município have changed periodically: Decree-Law 176, 1 December 1938, shortened its name to Boa Vista but removed land to the municípios of Caracarái and Murupu; Federal Decree-Law 5812, 13 Sept. 1943, divided the new Territory of Rio Branco into the municípios of Boa Vista and Catrimani; Law 2495, 27 May 1955, changed the name of Catrimani município to Caracarái and altered the boundary between it and Boa Vista; recently, Bonfim, São Luiz, Alto Alegre and Normandia municípios have been created out of much of Boa Vista município, and Mucajaí and São João Baliza out of Caracarái.
 66. These data on Indian populations and reserve areas are from CEDI/Museu Nacional, *Terras indígenas no Brasil* (São Paulo, 1987). (CEDI is the Centro Ecumênico de Documentação e Informação.)
 Amodio and Pira, 'Povos indígenas do Nordeste de Roraima', *Boletim*, no. 11 (Feb. 1986), pp. 10, 25, 35, 45. These authors acknowledge that their figures for the Makuxi are far higher than those of previous experts. Darcy Ribeiro, 'Culturas e linguas indígenas do Brasil', *Educação e Ciências Sociais*, vol. 2 (Rio de Janeiro, Nov. 1957), gave 1,500 to 2,000 Makuxi, 1–1,500 Taurepang, and 1,000–1,500 Wapixana; Dale Kietman, 'Indians and culture areas of twentieth-century Brazil', in Janice H. Hopper (ed.), *Indians of Brazil in the Twentieth Century* (Washington, D.C., 1966), p. 11, gave 3–5,000 Makuxi in both Brazil and Guyana, 1,000 Taurepang, and 4,000 Wapixana mostly in Guyana; Edson Soares Diniz, *Os índios Makuxi de Roraima* (São Paulo, 1972), p. 49, gave 3,000 Makuxi; Ernesto Migliazza, *The Integration of the Indigenous Peoples of Roraima, Brazil* (Copenhagen, 1978), p. 8, gave 3,100 Makuxi. But Amodio and Pira stand by their higher figure, from personal knowledge of many Makuxi malocas.
 67. 7,100 is the population estimate for Yanomami living in Roraima (with a further 1,300 in Brazilian Amazonas, and many more in Venezuela) given by Alcida Ramos and Kenneth Taylor in *The Yanoama in Brazil, 1979* (Copenhagen, 1979), p. 137. The Indian Foundation FUNAI increased this estimate to 11,000: FIBGE, *Sinopse preliminar do censo demográfico*, tomo 1, no. 2 (Rio de Janeiro, 1981), p. 45.
 68. Deputado João Batista Fagundes, quoted in *Porantim*, December 1984; CEDI, *Aconteceu 1984*, p. 96. The need for a Yanomami Park was spelled out in Cláudia Andujar, Rubens Belluzo Brandão, and Francisco Pascalicchio, *Relatório Yanomami: Situação de contato e saúde. Recomendações para a criação e estruturação do Parque Yanomami* (São Paulo, 1982). *Estado de São Paulo* (newspaper), 20 Dec. 1982. The CCPY had previously explained the entire problem in the excellent book by Ramos and Taylor, *The Yanoama in Brazil, 1979*.
 69. Letter from a Meeting of Yanomami chiefs to Deputado Mário Juruna, late 1984, in CEDI, *Aconteceu Especial*, vol. 15, *Povos indígenas no Brasil/1984* (São Paulo, 1985), p. 88.
 70. The Projeto Calha Norte ('Northern Headwaters Project') was presented to

- President Sarney by the National Security Council (Conselho de Segurança Nacional) in June 1985, soon after the start of his presidency. It was kept secret until the end of the following year: national newspapers finally reported the secret plans for military occupation of a 160-km band of territory, from Tabatinga on the Solimões to the Atlantic Ocean, on 31 October 1986. The original *Exposição de Motivos* no. 018/85 by Brigadier General Rubens Bayma Denys, and the planning document *Desenvolvimento e Segurança na região do norte das calhas dos rios Solimões e Amazonas – Projeto Calha Norte*, 19 June 1985, have now been published. See: Elizabeth Allen, 'Brazil: Indians and the new Constitution', *Third World Quarterly*, vol. 11, no.4 (Oct. 1989), pp.148–65.
71. Ação pela Cidadania, *Roraima: o aviso da morte* (CCPY/CEDI/CIMI, São Paulo, 1989), p.14.
 72. Paulo Brossard de Souza Pinto, Minister of Justice, to President José Sarney, Brasília, 12 Jan. 1989, in *idem*, p.22.
 73. Moacir Paixão e Silva, *Sobre uma geografia social da Amazônia* (Manaus, 1943), p. 100.
 74. Banco do Brasil, *Resenha econômica e financeira*, in Guerra, *Estudo geográfico*, p. 178.
 75. Saldino de Gusmão, 'Riquezas e segredos da Amazônia' (Manaus, n.d.), p. 191.
 76. Clóvis Nova da Costa, *O vale do Rio Branco* (Rio de Janeiro, 1949), p. 32.
 77. Ribeiro (ed.), *Território Federal de Roraima*, vol. 1, p. 31.
 78. Thomas Fiske Kelsey, *The beef cattle industry in the Roraima savannas* (Gainesville, Florida, 1972), p. 144. Also, Peter Rivière, *The forgotten frontier*, p. 55.
 79. Kelsey, *The beef cattle industry*, p. 145.
 80. *Ibid*, pp. 145, 171, 271.
 81. FIBGE, *Atlas de Roraima* p.10. The new *colônias* on the BR-210 (Perimetral Norte) are: São Luiz at km 54, São João da Baliza at km 70, and Novo Caroebe at km 89; and on the BR-174 just south of its junction with the BR-210 is Paraíso. Closer to Boa Vista, and intended to cater for its needs, are: Colônia Confiança, beyond Brás Dias de Aguiar on the east bank of the Rio Branco, 120 kms south-east of Boa Vista; and Apiaú, 100 kms south west of Boa Vista, in forest being cleared beyond Mucajáí. Even closer to Boa Vista are horticultural colonies such as Montecristo, Taiano (near Coronel Mota), Tres Corações; Surumú and Pacaraima in the north. Spontaneous settlements have sprung up in pockets of former forest, often on fazendas: Murupu, Serra do Murupu, Serra da Moça, all near Boa Vista; Anzol and Passarão near the lower Uraricoera; Villa Brasil and Tepequem north of the Uraricoera; Serre Grande, Malacacheta, Rio Azul, Quintauau, Canoani beyond the Rio Branco across the new Makuxi bridge. Sources for agricultural colonies include: Guerra, *Estudo geográfico*, pp. 155–62; Ribeiro (ed.), *Território Federal de Roraima*, vol. 1, p. 27; Zimmermann et al., *Diagnóstico sócio econômico preliminar*, pp. 14, 41, 97–102; FIBGE, *Atlas de Roraima*, p. 22; SEMTUR, *Município de Boa Vista. Sinopse* (mimeo 1986), p. 10.
 82. References to *garimpeiro* prospectors in Roraima are: Gondim, *Através do Amazonas*, p. 27; Brás Dias de Aguiar, *Nas fronteiras da Venezuela e Guianas Britânica e Neerlandesa*, pp. 264, 267; Ribeiro (ed.), *Território Federal de Roraima*, vol. 1, pp. 33–4; Zimmermann (ed.), *Diagnóstico sócio-econômico*

- preliminar*, p.114; FIBGE, *Atlas de Roraima*, pp. 20, 28; Antônio Teixeira Guerra, *Estudo geográfico*, p. 134; Clóvis Nova da Costa, *O vale do Rio Branco*, p. 216; Amodio and Pira, 'Historia dos povos indígenas de Roraima', pp. 43, 47, and 'Povos indígenas do Nordeste de Roraima', pp 39–40; SEMTUR, *Município de Boa Vista*, p. 11; Dorval de Magalhães, *Roraima*, p. 34; Susanna Hecht and Alexander Cockburn, *The fate of the forest* (London, 1989), pp. 141–7; Ação pela Cidadania, *Roraima: o aviso da morte*, passim.
83. For data on the BR-174, see Mendonça de Souza, *A Manaus-Boa Vista*, pp. 266–7, 296–300.
84. On the resistance and pacification of the Waimiri-Atroari see: João Barbosa Rodrigues, *Rio Jauapery: Pacificação dos Crichanás* (Rio de Janeiro, 1882); Verenilde Santos Pereira, Egidio Schwade and others, *Resistência Waimiri/Atroari* (MAREWA, Itacoatiara, 1983); John Hemming, *Amazon Frontier*, pp. 344–9.

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