

SETTLEMENT IN NORTHERN AMAZONIA: THE CASE OF RORAIMA

by John Hemming

The newest state and northernmost territory of Brazil owes its political identity and rate of economic development to geographical factors. Roraima lies at the northern extremity of the Amazon basin, at the biogeographical boundary between hylean rainforests and natural savannas of the ancient geological formation of the Guiana Shield. The state has a kitelike shape, and an area of 230,000 square kilometres, and it embraces the entire valley of the Rio Branco, a large northern tributary of the Negro-Amazon.

Roraima came to be included in Brazil thanks to the Treaty of Madrid of 1750, which decreed that the watershed between the Amazon and Orinoco basins should be the boundary between the Portuguese and Spanish colonial empires, from the upper Rio Negro eastwards to the Guianas. Thus, the open plains of the upper Rio Branco are now Brazilian, even though they had been penetrated by Dutch slaver traders from the Essequibo (now Guyana) and by Spaniards from Venezuela who made the first European settlements in the area in the 1770s. The watershed has remained the undisputed frontier between Brazil and Venezuela to the present day, despite the fact that the region was isolated by hundreds of kilometres of tropical forest. For almost two centuries the only communication between Roraima and the rest of Brazil was by boat on the Rio Branco, lower Rio Negro and Amazon.

Apart from its location near the northern limit of the Amazon basin, Roraima's destiny has been shaped by the extensive grasslands that stretch from the Uraricoera headwater of the Branco eastwards to the Rupununi and Essequibo in what is now Guyana. The first Europeans to see these plains immediately appreciated their potential for cattle. In 1787 Colonel Manoel da Gama Lobo d'Almada wrote that "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 with creeks which render them fertile, and with innumerable lakes from which is drawn a quantity of mountain salt." This energetic administrator took the first bulls and cows upriver to stock these savannas.

Roraima's cattle herd grew slowly throughout the nineteenth century. The region escaped the Amazon rubber boom, since there are few *Hevea brasiliensis* rubber trees growing there. It supplied only a few dozen live cattle to Manaus each year, because the difficult round trip took three or four months. Roraima's animals received almost no attention, being guarded by a few Makuxi Indian cowhands and generally left to roam wild across the unfenced plains. Despite this lack of husbandry, the herd had grown to some 60,000 head by the turn of this century. It increased dramatically during the ensuing three decades, partly because more private *fazendeiros* created ranches for themselves. By 1930 there were reckoned to be 300,000 animals in the upper Rio Branco. The herd was then decimated by disease. Rabies, possibly transmitted by vampire bats, and foot-and-mouth disease reduced Roraima's cattle to some 120,000 by 1940.

In 1943, Roraima's geographical location had another dramatic effect on its political destiny. The *Estado Novo* government of President Getúlio Vargas

saw land colonisation as a means of alleviating social unrest. It also wanted to secure Brazil's frontiers by planting colonists along them. Thus, in September 1943 the Federal Government claimed national security as justification for carving five federal territories out of their respective states. One of these was the Federal Territory of Rio Branco, separated from the State of Amazonas. Its name was changed to Roraima in 1962 and it achieved statehood in 1988.

At the time of its creation as a Federal Territory, Rio Branco had a population of only some 13,000 people, most of whom were Indians. The Territory's capital Boa Vista was an insignificant village of some 1200 citizens, although it was the only social centre for the cattle ranchers. The region's new status brought an influx of civil servants and their dependents, and they in turn demanded a more varied diet than the meat, rice and *feijao* beans of the cattlemen. Further impetus to population growth was given by a campaign to create agricultural colonies to grow vegetables other than the ubiquitous cattle ranching. The first such colonies had a shaky start. Although families who came to colonise them from other parts of Brazil were given 25-hectare plots and some government assistance, most failed because of poor land, lack of farm machinery and difficult communications. Later colonies in the 1960s and 1970s fared better and brought several thousand in-migrants to the Territory. Their degree of success depended largely on ease of access to Boa Vista, the only market for their produce.

Throughout these years, the dominant geographical influence on Roraima was its isolation from the rest of Brazil. At the height of the rubber boom, in the late 1890s, the State of Amazonas offered a large premium to anyone who could cut a *picada* for 815 kilometres from Manaus to Boa Vista. This long trail was

cut, at considerable effort: but it was never used. Plans for a rail link were equally fruitless. It was not until 1977 that a road finally joined Roraima to Amazonas. The road had taken seven years to cut through the forests, a task involving hundreds of men - including some Indians from Roraima, and military engineers - and costing 32 deaths.

These three geographically inspired factors - the creation of the Federal Territory, the planned influx of agricultural colonists, and above all the opening of the road link - have combined to give Roraima one of the fastest growing populations of any part of northern Brazil. At its creation, the Territory had a very sparse population, with a density of only 0.08 inhabitants per square kilometre compared to 6.14 for Brazil as a whole at that time. By the time of the 1980 census, this figure had risen to 0.34 compared to 14.07 for all Brazil. Thus, Roraima was still very empty. In absolute terms, its population increased sixfold in the past 40 years, from 18,100 in 1950 to some 120,000 in 1990 - a faster rate of growth than almost any other part of Brazil. This demographic increase has been caused by inward migration, particularly from the adjacent state of Amazonas and from Maranhao and Ceará, initially by air and since 1977 by bus along the dusty and muddy new BR-174 highway. Much of the growth has also been organic, since Roraima has had a youthful population and a high birth rate. In the 1970 census, for instance, 34% of the population was aged under ten and 60% under twenty.

Roraima has been a cattle frontier for the past two centuries, and with better husbandry and import of more suitable strains of animal, the herd is now again greater than its 1930 total of 300,000 head. But the region's savanna grasslands are not its only natural resource. For a time in the late 1970s and

early 1980s, exports of timber exceeded cattle and meat in value. Most of the timber leaving Roraima was a softwood called Caferana, which grows near the town of Caracarái, south of Boa Vista. This wood was in demand by the Venezuelan construction industry, where it made good concrete formwork. However, with the depression in the Venezuelan economy, this environmentally destructive export has diminished. There is a danger that the lull in forestry is only temporary and that it might again come to dominate Roraima's fragile economy. This danger is particularly acute if the state's many environmental, forest and Indian reserves are not adequately protected and respected.

Roraima's other natural resource is its minerals. Ever since the 1920s, small groups of prospectors have made their way up the remote rivers to pan for gold and diamonds. There have been periodic gold rushes, with waves of *garimpeiros* pouring into the region or deserting the ranches to try their luck on the rivers. Until recently, prospecting has been relatively unimportant to Roraima. The prospectors themselves tend to be migratory adventurers who come without families and move on, often to the adjacent countries Venezuela and Guyana. Since the prospectors deal in diamonds and gold dust, both of which are easily concealed and smuggled, little of their output reached the local economy in the form of taxes.

All this changed in 1988, when there was a major gold strike on the upper Mucajaí river, within the territory of the Yanomami Indians. An estimated 40,000 fortune-seekers have invaded Roraima. Their activities have brought little benefit to the state, apart from profits to its air taxis and the rougher entertainments of Boa Vista; but they have caused much damage.

Roraima had a higher proportion of Indians in its population than any other state of Brazil, at least before the inrush of gold prospectors. The majority of the region's natives speak either Aruak or Carib, but in the forested Parima hills of the Amazon-Orinoco watershed lives the large Yanomami nation who speak the isolated Xirianá language. The tribes divide roughly into plains Indians, who occupied the open savannas and who have been absorbed into frontier society since the 18th century, and forest tribes who have come into regular contact only in the past few decades.

The first Europeans to reach the upper Rio Branco in the early eighteenth century came to capture Indians, for slave labour on plantations on the lower Amazon or in Dutch Guiana, or to restock mission villages on the Rio Negro decimated by epidemics. When permanent colonial settlements were made after 1775, there were attempts to settle Indians in villages along the main rivers. However, by 1798, such experiments had all failed: some Indians fled from the villages where they were forced to labour for European directors, others died of imported diseases, and other groups were exiled to distant parts of Amazonia as punishment for their 'rebellion' against colonial rule. Thus, the majority of the tribes listed by explorers in the 1780s are now extinct.

By the first decade of this century, the once-numerous Aruak-speaking Wapixana were reduced to less than a thousand, scattered on remnants of their former homelands and often integrated into cattle *fazendas*. The Carib-speaking Taurepang, who live on the plains of northern Roraima, were halved in numbers to an estimated 1,000-1,500. Tribes such as the Saporá, Pauxiana, Paravilhana, Wayumara and many others were reduced to a pitiful remnant or entirely extinguished. Only the Carib-speaking Makuxi had adapted quite well to colonial

society and held their numbers at some 3,000. Then, in about 1910, malaria first appeared in Roraima and a Belgian Benedictine missionary reported in 1912 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." By 1943, when Roraima became a Federal Territory, the Makuxi were reckoned at little more than 1,200 in Brazil.

Since that time, there has been a healthy increase in numbers of Roraima's plains Indians. By the 1950s, Darcy Ribeiro and other experts estimated a total population of at most 5,000 for these tribes (1,500-2,000 Makuxi, 1,000-1,500 Taurepang, 1,000-1,500 Wapixana). Twenty years later, both Edson Diniz and Ernesto Migliazza calculated that the Makuxi alone had grown to 3,000. But in 1986, the experienced anthropologists Emanuele Amodio and Vicente Pira said that there were over 18,000 members of these tribes (12,000 Makuxi, 550 Taurepang (Pemon), 5,000 Wapixana and 500 Ingarikó). The Indian service FUNAI also claims that there are several thousand Makuxi and Wapixana living outside reserve lands, notably around the edges of Boa Vista city.

There are various possible explanations for this tripling of the population of plains Indians in less than twenty years. One may simply be that the modern counts are more accurate than earlier guesses. More importantly, Catholic and Protestant missionaries have been active among these acculturated Indians, breaking down tribal customs and encouraging them to emulate settlers in having large families. Both missionaries and government agencies now provide health and particularly natal care. They also give some legal and political protection to the remaining tribal lands. Indian society and survival are intimately linked to

land: but until recently the Makuxi and Wapixana have been powerless to resist the aggressions of cattle ranchers, who invaded tribal lands with impunity and took native children into their households as *filhos de criação* - nominally foster children but in reality unpaid domestic servants and cowhands. Indians have been gunned down in land disputes. Such abuses still continue, but the Indians now have defenders. The resulting sense of greater security has led to higher birthrates and longer life-expectancy.

In the forested hills along Roraima's frontiers live forest Indians who have only recently come into full contact with frontier society. To the east are Wai-Wai, in the extreme north Ingarikó, and to the south-east Waimiri-Atroari, each with its own reserves and particular problems. But by far the largest forest tribe or nation are the Yanomami, who live in hundreds of small *malocas* on either side of the Amazon-Orinoco watershed. There are thought to be 17,000 Yanomami, roughly half in Venezuela and the other 8,500 in the Brazilian states of Roraima and Amazonas. The first call for protection of Yanomami territory came in 1968, and in 1979 Cláudia Andujar and others set up the CCPY to lobby for a defined and demarcated Yanomami Park. In March 1982 7,700,000 hectares were "interdicted" for the Brazilian half of this nation - a generous allocation that embraced all Yanomami groups. But Cláudia Andujar warned that the campaign was not won until the Yanomami Park became law. She was right: the Yanomami homelands do not yet enjoy full legal protection, and there have recently been calls for an "archipelago" of Indian territories isolated in the midst of a "national forest" that would be vulnerable to mineral, logging or even agricultural exploitation.

A second threat to the survival of the hitherto-isolated Yanomami has come from the Calha Norte (Northern Headwaters) programme. Launched secretly in 1985, the Calha Norte is a military exercise to occupy a 150-km swathe of territory all along Brazil's 6,500 kms of international frontiers north of the Amazon. These boundaries date from the Treaty of Madrid of 1750 and have never been disputed since that time, apart from an arbitration to fix the border on the savannas between Roraima and British Guiana (now Guyana) in 1903. Since Brazil's northern border follows the watershed, it is in remote forested hills that are often scarcely explored and are inhabited almost exclusively by Indians. Thus, the Calha Norte has meant that military garrisons have moved into the only outposts along the frontier - which are invariably missionary or FUNAI (Indian Service) villages. Although well intentioned, the soldiers and airmen are not qualified for the delicate task of Indian protection or acculturation, and their presence undermines tribal customs.

None of the explanations advanced for the Calha Norte programme carries any conviction. There is no military, economic or demographic threat to this difficult region. Nor can it plausibly be argued that smugglers, drug-traffickers or political subversives are likely to try to enter Brazil up some of the toughest rivers and forests on earth, rather than by conventional transport.

The third and most urgent threat to the Yanomami is from gold prospectors. As noted above, there was a major gold rush in 1988 when significant quantities of gold were found on rivers within interdicted Yanomami lands. The garimpeiros have cut many illegal airstrips and the once sleepy airport of Boa Vista is now one of the busiest in South America, with hundreds of uncontrolled flights to and from the garimpos. Prospectors have been trying to

invade Yanomami territory since the mid-1970s. Two local congressional deputies championed the miners, who resent the fact that some 40% of Roraima has been set aside (although not always fully legally protected) as Indian, forest or ecological reserves. One deputy declared: "I intend to diminish the immense area of Roraima that is blocked for any economic activity." For their part, the Indians' tribal leaders begged a sympathetic deputy for help in evicting prospectors: "The garimpeiros have been invading Yanomami lands, extracting our gold, bringing diseases, coveting and taking our women, and pillaging our plantations."

The miners' operations employ high-pressure hoses and pumps that destroy river beds, and the mercury used in refining gold has caused serious poisoning of the river waters and fish. The prospectors have introduced violent strains of malaria and other diseases that wreak havoc among tribal Indians with no inherited immunity. Their planes and machines frighten forest game, and they undermine social values of hitherto isolated Indians. The government of President Collor de Mello has sought to dislodge these garimpeiros by dynamiting their clandestine airstrips; but it is almost impossible to destroy dirt strips permanently, and equally difficult to deter poor and determined treasure seekers.

The new State of Roraima thus stands at a development crossroads. To date, its geographical isolation, its location at the biogeographical boundary between the Amazonian and Guianan eco-systems, and its natural savannas have ensured steady but measured economic and demographic growth. Most of the state's magnificent forests and their native societies are intact; and the plains Indians, who bore the brunt of frontier expansion, have increased in numbers in

recent decades. There is, however, acute risk that Roraima could become a second Rondônia, with uncontrolled in-migration and consequent deforestation and environmental degradation. As elsewhere in Amazonia, the timber trade may pose a more serious threat to Roraima's rainforests than does clearing for cattle pasture or agriculture. Both President Collor and his Secretary of the Environment, José Lutzenberger, have personally told the author of their determination to stop deforestation for land clearance, since it is so wasteful and doomed to failure. But unrestrained settlement, logging and mining activities are more difficult to control. They could devastate Roraima, transforming this beautiful region into an ecological wasteland.

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