

## **Early Adventures in Brasil**

In August 1994 I traveled to Brasil (Brazil to Americans) to support the launch of the Brasillian commercial communications satellite, Brasilsat B F1, the 1<sup>st</sup> of the second series of satellites purchased and operated by the domestic phone company Embratel. Two satellites of the Brasilsat A series had been launched in the mid 80's, and this was my fourth visit to Brasil. In this time period rockets transporting the satellite into low earth orbit, about 250 miles up, would lift off from Cape Kennedy, Florida or from Kourou, French Guinea. The satellite control center for Brasilsat is at Guaratiba, about 40 miles south along the beach from Rio de Janeiro. Shortly after liftoff, control of the satellite and its ascent rockets was taken over by the Guaratiba Center using a world wide network of antenna stations to 'fly' it up to its eventual operational orbit, the geostationary orbit 22,000 miles high. The satellite was designed and manufactured by Hughes Aircraft, where I worked in Southern California, but in this early time period when satellites were new they were a source of great national pride and most customers insisted that they be controlled from the earliest practical moment from their soil. Having been the principal designer of the flight control and mission sequence for many commercial satellites, they liked to have me around for the launch and early mission checkout. This led to lots of exotic travel.

During the two weeks of satellite launch and checkout I tried to get one of my colleagues or acquaintances to go and explore more of Brasil when the work was finished. Unsuccessful in this, I struck out alone to see some major sights. First I went for a couple nights to Foz do Iguacu, by some measure among the 4 largest water falls in the world (Niagara, Victoria, Angel being the others). These falls, situated at the intersection of 3 countries, Paraguay, Argentina and Brasil are spectacular in several ways, width, varied drops, quantity of flow and the jungle beauty through which they flow. At my hotel near the Brasil side there were many exotic tropical birds. A brief trip to the Argentina side provided a different perspective of the falls and introduced me to the mate habit, where I got my souvenir mate gourd and bombilla, the metal straw with strainer at the bottom. A few miles north afforded a tour of a huge dam and hydroelectric plant, the Itaipu Dam, at the time claimed to be the largest in South America and supplying well over half of all the power consumed in Brasil. I seem to remember taking a bus to Asuncion, Paraguay 5 or 6 hours away to catch a plane going north to Manaus and the Brazilian Amazon.

I recall a beautiful flight north to Manaus past an area where the land is all swamps, the pantanal, in late afternoon with the western sun glistening on the many areas of water, and perhaps touching down at Bello Horizonte briefly. After exploring Manaus for a day I caught the boat up river to my Amazon jungle hotel to spend a few days. Finding and getting on the river boat at Manaus was interesting. There were many more boats than mooring space so they were just tied up in layers and to get on any particular boat you just had to walk over and through several others going from boat to boat hoping to find yours. A few hours ride, maybe 30 to 40 miles, up the river and we got to the Ariaú Amazon Towers <http://www.ariauamazontowers.com/> where I was staying. This hotel is quite isolated in the jungle and is built on an elevated structure to be above the flood waters in the wet season, with cat walks between the various buildings. During the few

days I was there a German guide took me and other guests on various trips around the jungle waterways in a canoe to explore the native people, game and plant life. A very shallow draft boat powered by a “Brigs & Stratton” lawn mower engine with propeller at the end of a very long shaft, perhaps 6 ft, is popular with the natives. (*Later encountered lots of these boats in Thailand*). I swam one afternoon in a river while natives were fishing for piranha a few feet away and lost no flesh – also saw no piranha. One night we went alligator hunting with the German and the canoe and caught one about 3’ long and passed him among the canoe occupants before releasing. I was disappointed the all the monkeys and exotic birds we saw were those being fed about the hotel. Expressing this to some folks at the airport in Manaus on the route home, they said go to the pantanal to see lots of jungle animals in their natural habitat. Hence, began my 10 year quest to get to the pantanal.