

Museum ups and down

GUILHERME de La Penha is director of the Museu Paraense Emilio Goeldi, to give it its full title. The museum is old, established in 1866, and looks as though it has emerged from the pages of a Persian miniature painting. In a densely wooded, walled botanical garden are set pools and aviaries full of the birds and beasts of the Amazon: manatees, jaguars, giant river otters, cranes and toucans — 600 species in all. Almost half a million visitors come here each year. Its scientific heyday was early in the century when the Swiss zoologist Emil August Goeldi was director and began its collections of biological, ethnographic, archaeological and geological specimens.

The past few years have seen a revival at the museum, for which de La Penha can claim some credit. The museum is quite small, with around 100 scientists, and has been able to adapt to changing circumstances more quickly than INPA, the much larger Amazon research institute in Manaus.

De La Penha says some 30 or so of the staff are now producing "good science", and have won back an international reputation for the museum. Both the Ford Foundation and the MacArthur Foundation are supporting research there and more than 40 people have been sent away for postdoctoral training. The hope is that their gradual return will take the museum to a much higher level. The museum's rising fortunes were celebrated in October with the grant of 30,000 hectares of natural forest at the junctions of the Xingu and Amazon rivers. A new field research station is to be equipped, most probably with help stemming from an environmental memorandum of understanding signed between Great Britain and Brazil earlier this year. The agreement was a nice coup for the British Embassy's diplomats, having been signed at the height of Brazil's annoyance with foreign 'interference' in its Amazonian policy.

But that is the good news. The bad news is that the museum is very hard hit by this year's cuts in funding for science. De La Penha appears under siege. "We cannot buy equipment, we cannot buy books. Everything that is important and imported has become impossible for us", he says. Inflation has also taken its toll. "The value of salaries has fallen so much that most scientists are living on their savings", he says. "Now we're always worried about how we will reach the end of the month. You want some peace to publish manuscripts, but you go to bed wondering how can you survive."

Even in Belém, Brazil's political turmoil is felt. The museum is one of CNPq's institutes and CNPq has come out against the idea that all members of an institute —



In the depths of Goeldi's forested zoological garden.

including the large numbers of support staff — should have an equal vote in deciding how it is run and who runs it. But depending on the presidential election, 'democracy' may triumph. De La Penha is disgusted with the intrusion of politics into science. "Incompetents are reaching high positions in the universities and institutes", he says, "although there is meant to be evaluation by peers, peers are afraid the person they evaluate may prove to belong to the right political party. If you're popular you get elected, it doesn't matter if you're competent, you must be popular with students, clerks. . .".

De La Penha is not a stranger to political fights. He left the country in 1983 after quarrels over planning for research in Amazônia. He had been vice-president of CNPq and organized a meeting in Santarem to discuss a plan for development of the Amazon. "Even today it is the only written plan for research in the Amazon", he says, "then we tried to put on pressure to create a tropical research programme, we also criticized the Interior Ministry, showing that many of its project funds just supported the infrastructure of institutes

and were not used for research." These and other activities got de La Penha into hot water, and he accepted 'exile' to a job at the Organization of American States in Washington, DC. But two years ago he returned to Belém. His aim now is to establish a small, very strong scientific institute and not to interfere with the Amazon development agencies. "If it is strong it will be heard", he says, "and will provide hints, not solutions, of how to develop the Amazon on a rational basis. The Amazon is a complicated set of limited regions that need to be looked after differently, you cannot have a theory of the whole Amazon."

Foreign collaboration is bound to play a big part in the study of the Amazon, says de La Penha. He laughs at politicians who "every time you talk about foreign cooperation in the Amazon, say its a foreign trick". "We have to have added cooperation. Most of the research on the Amazon is still published by US and UK scientists. They have better continuity and can carry on a project for years. There are segments of Brazilian science who say, leave the Amazon to Brazilian scientists. But that would be one scientist for how many thousand square kilometres? Brazilian scientists must enter the international community. You cannot learn if you attend only regional conferences."

But foreigners who have jumped on the rain-forest bandwagon are another matter. He wishes that some of the 'Save the Rain Forest' groups in the United States would spend their money in Brazil where it is urgently needed, instead of on "parties and lobbying" in Washington.

The museum is desperate for the most basic equipment. De La Penha managed to buy up one truck load of glass containers that were not good enough for the Smithsonian Institution's needs. He hopes to get another, and dreams of good microscopes and, even more, of personal computers. □

Short shrift for foreign do-gooders

ASKING CPATU chief Emeleocípio Botelho de Andrade about his views on foreign interest in conserving the Amazon provokes an explosion. There is "nothing but emotion, disinformation and economic interest" behind international criticism of Brazil's conduct, he says, "foreign powers are afraid that Brazil will develop as quickly as Japan or West Germany".

CPATU's job is to help speed the agricultural development of Brazil's humid tropical regions, so Botelho de Andrade's annoyance over foreign criticism is understandable. The institute is one of the 27 research stations — each responsible for a particular product or agricultural zone — belonging to EMBRAPA, the agricultural ministry's research organization.

Energy policy is a prime example of foreign perfidy, in Botelho de Andrade's

view. West Germany and the United States have taken \$8,000 million from Brazil for the development of nuclear power plants with almost no return on the investment, he says. But when Brazil wants to develop hydroelectric power, the cheap and logical energy source for Brazil, the same nations stir up problems over the Indian peoples who live at dam sites and try to block Brazil's development.

He claims the foreign view of the agricultural capabilities of the Amazon is too pessimistic. The Amazon's soil and vegetation types were mapped in a huge radar project (RADAM) a decade ago. Much of Rondônia, where forest burning has provoked greatest outrage, has fertile soil capable of sustaining agriculture, he says. Overall, he estimates that 8 per cent of the Amazon will prove to be highly fertile, an