

Myths surrounding the Amazon region

by Geraldo Lino

From the fables of the first European explorers in the sixteenth century, to the fallacies propagated by the environmentalists today, few regions of the planet have been the source of more myths than the Amazon. If Francisco de Orellana and others were prevented from reaching the legendary "El Dorado" by imaginary "Amazons," their fantastic imaginings were not much more far-fetched than the prevailing conceptions today regarding the dynamics of the ecology of the tropical rain forest and the history and potential of the Amazon River region.

One of the most widespread myths is the oft-repeated claim that the tropical rain forests are the "lungs of the world," contributing to the global production of oxygen. But lungs do not produce oxygen; they take in oxygen. Furthermore, the rain forest is an ecosystem at the peak of ecological maturity; thus, the ratio of photosynthesis to respiration is equal to 1 or slightly less—i.e., the tropical rain forest consumes as much oxygen as it produces, if not more.

While the effect of the tropical rain forest on the dynamics of the atmosphere is not fully understood, it does play a key role in recycling water vapor back into the atmosphere. Nearly 50% of the precipitation in the Amazon Basin comes from evaporation-transpiration occurring in the forest itself, and it is probable that some of the water vapor that generates the rain in central South America is also from the Amazon Basin.

Primitive methods of extraction

Another misconception is the one regarding the use of so-called extractive reserves, such as rubber and Brazil nuts. The idea is that the use of primitive methods for tapping such reserves is an "ecologically correct" alternative to the exploitation of the Amazon forest. But, as has been pointed out by Alfredo Homma, an agronomist with the Center for Research on Agriculture and Animal Husbandry in the Humid Tropics of Belem, extraction is one of the oldest and least productive forms of agricultural activity known to man. To expand it, as the environmentalists propose, would mean restricting the population of the rain forest to an economic base appropriate to the Stone Age. According to Homma, the deficiency of such primitive extractive production of rubber is proven by the modern cultivation methods employed in the state of São Paulo, which result in rubber yields eight times larger than in the Amazon.

What level of population density?

One myth that was recently demolished concerned the cultural levels of the populations that occupied the prehistoric forest. According to an archeological view backed by environmental determinists, the forest could not have supported a technologically advanced population before the arrival of the Europeans. This line of thought held that cultural development in South America originated in the Andean region and that horticulture was introduced to the Amazon by invaders from the Andes who displaced the native hunting and gathering populations. Presumably the native populations could not evolve more complex societies because of the limitations of the forest's resources—or so the argument goes.

But, since the nineteenth century, explorers had been coming across evidence that contradicts that. And, in 1987 American archeologist Anna Roosevelt of Chicago's Field Museum of Natural History, and her collaborators, presented nearly incontrovertible evidence that relatively advanced cultures arose in the Amazon region. During excavations in Taperina, near Santarem, the archeological team discovered evidence of human settlements dating variously from 7,000 to 8,000 years ago. These findings, which included pottery fragments, are the oldest indication of civilization on the American continent.

According to Roosevelt, the Amazonian floodplain must have constituted one of the most densely populated regions during the pre-history of the Americas, given the heaps of shell middens and earthworks extending for tens of square kilometers that are commonly found all along the lower Amazon River. This discovery, she says, proves that the Amazon Basin supported populations that were much more numerous and technologically advanced than the remnants found when the Europeans arrived.

To the chagrin of the environmental determinists, she asserts that the various species found in the forest are not due solely to Mother Nature, but have been shaped also by the thousands of years of human habitation. For example, the areas with greatest biodiversity are located exactly where there is evidence of human settlements. The richness of fruit trees and medicinal plants in these areas was introduced by these early inhabitants. During a seminar on the pre-history of the Amazon, held in Manaus in December 1992, Roosevelt said that "due to an incorrect interpretation about what is natural, the experts with their theories have confused the complex causes of the biological diversity of the Amazon."

If Anna Roosevelt's hypothesis is confirmed, it would be a historical irony: That the great-granddaughter of Teddy Roosevelt, who was an ardent precursor of "radical environmentalism" and who, at the beginning of the century, supported the efforts of the Bolivian Syndicate of New York to take control of what is today the Brazilian Amazonian state of Acre, should today be contributing to shine the light of science on the region.