

Preventing Extinctions in Brazil

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Brazil is one of the 12 megabiodiversity countries in the world. Together, these countries contain as much as 60-70% of all known species in the planet. However, this diversity of life forms is becoming increasingly threatened due to deforestation, wildlife trade, and habitat destruction in general, and Brazil is presently considered the country with the highest number of Critically Endangered species of birds in the world. In order to better understand the causes of these extinctions, and ultimately to reverse this picture, I have founded the NGO AQUASIS, in 1994, while still a student, together with a group of dedicated conservationists. Since then, we have been concentrating our efforts in preventing the extinction of the most endangered species in the State of Ceará, northeastern Brazil.

The Most Endangered Species in the State of Ceará

The three most endangered species in the State of Ceará are two birds, the Araripe Manakin and the Grey-breasted Parakeet, and one marine mammal, the Antillean Manatee. The **Araripe Manakin** (Figure 1) is only found in a small patch of moist forest, restricted to a range of only 28 km². It is threatened by the continuous loss of its already limited forest habitat. The **Grey-breasted Parakeet** is the most endangered parakeet in Brazil, and was severely affected by the wildlife trade due to its beauty (Figure 2). It used to live in a much larger area in NE Brazil, but today is restricted only to one mountain range in Ceará, the Baturité Mountains. The **Antillean Manatee** is suffering from a lack of suitable mangrove habitats for nursing their young, and it is estimated that less than 500 animals still survive in Brazil. Deforestation of mangrove areas for shrimp farming and coastal development has been reducing the available estuarine habitats for this docile and shy marine mammal (Figure 3).

What is our Approach to Species Conservation?

In order to prevent these species from going extinct, we conduct an array of activities related to:

- **Field research** – to determine biological features of the species related to its Conservation Status (remaining population, present range, genetic viability) and identifying major threats;
- **Conservation Plans** – based on information generated in the field, we produce strategic plans that identify priority actions and the people and institutions responsible for them;
- **Direct conservation actions** – conducted according to the Conservation Plans and priority actions (Figure 4);
- **Awareness campaign** – to explain local people and other key stakeholders about the critical situation of the endangered species and its implications to their welfare, and get them involved in conservation actions;
- **Public policies** – to establish legal tools to protect the species and its habitat, like formally designated Protected Areas and specific legislation.



Figure 1. **Araripe Manakin** (*Antilophia bokermanni*). Only 28km² of habitat remain for this Critically Endangered bird. Photo: Alberto Campos/AQUASIS.



Figure 2. **Grey-breasted Parakeet** (*Pyrrhura griseipectus*). The most endangered parakeet in Brazil, with less than 250 remaining in the wild. Photo: [Ciro Albano/AQUASIS](#).

Why protect endangered species?

Why do we spend so much effort to prevent species from going extinct? To answer this question, we must first understand the value of biodiversity. Simply put, biodiversity is the diversity of life forms in the planet. It is important to understand that diversity is the mother of evolution; without this diversity of species and

environments, living organisms would not have been able to adapt to our changing planet, including the natural cycles of climate change and the global catastrophic events that have been recorded in past, like the huge asteroid impact that caused the extinction of the dinosaurs 65 million years ago. In short, without diversity, life would not have lasted long on planet Earth!

But some people may argue that extinction is also a natural process in the history of our planet, that several species have become extinct during the 3,5 billion years of life on Earth. What we must remember is that the present rate of species extinctions is 1,000 times higher than the naturally expected rate of extinctions! And the vast majority of these recent extinctions are caused by human-related activities, like drastic alterations in natural habitats, direct poaching and others.

Our Shared Responsibility for the Future

Another important issue to consider is the amazing ecological services that the natural ecosystems provide for humankind, and for the welfare of all living beings. These services are naturally provided by healthy environments, and they can be translated into drinking water, productive soils, fisheries recruitment, coastal protection from erosion and sea-level rise, and many more. Alterations in critical natural environments (like mangroves, river mouths, wetlands, among others) coupled with the extinction of some species that regulate and maintain the balance of these ecosystems are hampering some ecological services that have been provided by Nature for millennia.



Figure 3. **Antillean Manatee** (*Trichechus manatus*). The loss of mangrove nursery habitats is threatening the reproductive success of this docile marine mammal. Photo: [Luciano Candisani](#).



Figure 4. **Manatee Rehabilitation Centre:** one priority action is to care for orphaned babies to be later reintroduced in the wild. Photo: Vinicius Lima/AQUASIS.

Species protection is also a matter of cost-effectiveness: in the future, our society will spend billions to rebuild natural systems to recover the services they provide, and without some key species, it will be virtually impossible to recover the natural balance that maintains healthy ecosystems. What I mean is that we will hardly be able to rebuild a single forest without the birds and bees and bats and the variety of beasts that pollinate and disperse their seeds.

In this sense, we have a shared responsibility to reduce our footprint on the planet and protect biodiversity and natural habitats for our own survival, quality of life, and the maintenance of a viable home planet. The future of Nature is our own future.