

# ATLANTIC FORESTS

## *The Disappearing Forests of Brazil and Paraguay*



The Atlantic Forest © Carlos Renato Fernandes

Five hundred years ago, the Atlantic Forest was a green carpet spanning 330 million acres (twice the size of Texas) across all of eastern Brazil into northern Argentina and eastern Paraguay. Today, over 92% of this forest has been cleared, and the remaining 7%, about the size of Virginia, is fragmented.

Some of the Atlantic Forest's deforestation dates as far back as the 16th and 17th centuries, when Portuguese settlers shipped coveted tropical hardwood back to Europe. But most of it has happened in the last 100 years, and the clearing continues. Throughout the region, forests are being cleared for soybean production, ranching, and logging. Fast-expanding cities and coastal development have also contributed to the devastation of this biological gem.

Despite the large-scale destruction of the Atlantic Forest, it remains one of the most biologically spectacular areas on Earth. In one forest tract along Brazil's northeast coast, 458 species of trees have been identified on a single hectare

(about 2.5 acres), which are more tree species than are found on the entire U.S. eastern seaboard. This forest also supports 73% of the bird species considered at risk of extinction in Brazil, of which 49 are endemic. The uniqueness of the area is reflected in high endemism rates across the board for flora (half of the Atlantic Forest tree species and three-quarters of its other plants are found nowhere else on Earth) and fauna. It is no wonder that most international priority-setting efforts name the Atlantic Forest as perhaps the greatest conservation challenge of our generation.

In Brazil and Paraguay, the Conservancy is applying creative solutions to protect and restore this forest. We are using carbon sequestration as a financial tool to recover degraded lands and protect at-risk forests, land acquisition and other private land mechanisms to secure the most threatened parcels, and reforestation pilot projects to help us learn how to bring this magnificent forest back. Our work includes negotiations with the Brazilian and Paraguayan

governments to add new protected areas across the Atlantic Forest and create financial incentives for forest restoration and conservation.

The Conservancy's conservation success in the Atlantic Forest requires a strong network of partner organizations. The ultimate fate of this forest will depend on the capacity of these organizations to defend it in perpetuity, which is why our conservation strategy explicitly includes an institutional development program that builds both the scientific, administrative, and financial capacity of these organizations.

### **Carbon Sequestration**

Just 1,000 acres of Atlantic Forest store the equivalent of more than 200,000 tons of carbon dioxide. Protecting it from conversion to pasture offsets the emissions of approximately 40,000 cars every year. As degraded or cut-over forest regrows, meanwhile, carbon dioxide is taken out of the area and "sequestered" in the trees. Protecting and restoring forest in the Atlantic Forest, in addition to benefiting the Earth's atmosphere, protects scores of endangered plant and animal species – a multiple benefit! At Guaraqueçaba Environmental Protection Area, the Conservancy and its partner SPVS are working with General Motors, American Electric Power and ChevronTexaco, who together have invested more than \$18 million to restore and protect 50,000 acres of Atlantic Forest, which are now secured as private nature reserves. These companies are learning first hand how to use the power of these forests' growth to address the issue of carbon dioxide concentrations, an increasingly high-profile environmental issue.

### **Forest Protection**

Brazil's Araucária forests are located in the southernmost part of the Atlantic Forest. The Araucaria angustifolia, an ancient species of pine commonly known as the Monkey Puzzle tree because of its unique branching, dominates this forest type. But the Araucária Forest is fast falling prey to loggers and soybean farms. The Conservancy is working against the clock with local NGO partners, the Brazilian government, and private landowners to create new protected areas and set aside the last great examples of this ecosystem.

### **Parks and Public Lands**

While parks such as Guaraqueçaba Environmental Protection Area and the San Rafael Managed Resources Reserve look impressive on a map, they and other protected areas may have little real protection on the ground. A management plan outlining steps for hiring, training, and equipping park guards and creating mechanisms to boost park budgets has been developed for Guaraqueçaba. As there is no legislation supporting the enforcement of reserve

restrictions within Guaraqueçaba, the Conservancy and its partner SPVS have drafted legislation to protect the park and are currently working with the Brazilian government to implement these new regulations. Through workshops and publications, the tools being developed and tested at Guaraqueçaba are being replicated at other key conservation areas across the Atlantic Forest

### **Private Reserves**

The establishment of private nature reserves has been a pillar of the Conservancy's Atlantic Forest conservation strategy since the late 1980s, when the Conservancy and partners established and endowed the 160,000-acre Mbaracayú Forest Biosphere Reserve in Paraguay. Mbaracayú, which is managed by our non-profit partner the Fundación Moisés Bertoni, was designated a UNESCO Man and the Biosphere Reserve in 2001. In Brazil, the Conservancy and the Boticário Foundation joined forces in the 1990s to create the 4,200-acre Salto do Morato Reserve, the first of more than 60,000 acres of private lands acquired and protected in the Guaraqueçaba area. This is in addition to 2,500 acres that were recently acquired in Southern Bahia as part of a strategy to preserve one of the most biodiversity-rich ecoregions of the Atlantic Forest. In both Brazil and Paraguay, the Conservancy is working to promote national networks of private reserves that will safeguard the nations' forest treasures for future generations.

### **Ongoing Land Acquisition**

The Conservancy has targeted sites in five priority Atlantic Forest ecoregions for short-term purchase and protection: the Araucária Forest, the Bahian Coastal Forest, the Pernambuco Coastal Forest around Murici, the Guaraqueçaba Protected Area, and the interior Atlantic Forest near San Rafael in Paraguay. Our most expensive protection strategy, acquisition is used only in cases like these five, where the permanent loss of entire ecosystems and species is judged to be likely without our immediate intervention. These acquisitions also serve as core areas for further project development.

#### **contact information**

Cathy Kerkam  
South America Conservation Region  
4245 North Fairfax Drive, Suite 100  
Arlington, VA 22203 USA  
ckerkam@tnc.org  
tel [703] 841.2082  
fax [703] 841.4880  
nature.org