

CPF do candidato: _____

The Atlantic Forest Hotspot

The Atlantic Forest stretches along Brazil's Atlantic coast, from the northern state of Rio Grande do Norte south to Rio Grande do Sul. It extends inland to eastern Paraguay and the province of Misiones in northeastern Argentina, and narrowly along the coast into Uruguay. Also included in this hotspot is the offshore archipelago of Fernando de Noronha and several other islands off the Brazilian coast.

Long isolated from other major rainforest blocks in South America, the Atlantic Forest has an extremely diverse and unique mix of vegetation and forest types. The two main ecoregions in the hotspot are the coastal Atlantic Forest, the narrow strip of about 50–100 kilometers along the coast, which covers about 20 percent of the region. The second main ecoregion, the interior Atlantic Forest, stretches across the foothills of the Serra do Mar into southern Brazil, Paraguay and Argentina. Some 20,000 plant species, 40 percent of which are endemic, are found here, as are about 950 bird species.

Species

For thousands of years the Atlantic Forest has been floristically isolated from other South American tropical forests by the surrounding savannas and woodlands, which explains the hotspot's remarkably high plant endemism—of the 20,000 vascular plant species occurring there, about 8,000 are endemic. Endemism in trees is particularly high, with more than half the species found nowhere else.

More than 450 tree species have been recorded in a single hectare of forest in southern Bahia. Two trees of great value in the timber industry are today very rare: Brazil-wood (*Caesalpinia echinata*) and Brazilian rosewood (*Dalbergia nigra*). Brazil-wood has been threatened since the early 19th century because of its value for furniture and musical instruments. Another endemic timber species, *Paratecoma peroba*, is approaching extinction in the region.

The Atlantic Forest has spectacular bird diversity, with more than 930 species, about 15 percent of which are found nowhere else. Because most of the region's forests have been cleared during 500 years of exploitation, many species are now threatened, and at least one is extinct in the wild, the Alagoas curassow (*Crax mitu*). The species was last sighted in the wild in 1987 and now exists only in a small captive population in Rio de Janeiro. There are many unusual birds in the hotspot, including the Endangered red-billed curassow (*Crax blumenbachii*), which has its last stronghold in the Sooretama Biological Reserve in the Brazil state of Espírito Santo, and the Critically Endangered Brazilian merganser (*Mergus octosetaceus*), a flagship for the southern Atlantic Forest in Brazil and Misiones. There are also a number of threatened parrots, such as the Vulnerable red-tailed Amazon (*Amazona brasiliensis*) and the Endangered red-browed Amazon (*Amazona rhodocorytha*). More than 70 of the 260 mammal species in the hotspot are endemic. They include species such the Vulnerable thin-spined porcupine (*Chaetomys subspinosus*) and Endangered painted tree rat (*Callistomys pictus*). The Vulnerable maned sloth (*Bradypus torquatus*), a larger relative of the widespread three-toed sloths (*B. tridactylus* and *B. variegatus*), is also found here.

Of the more than 300 reptile species occurring in the hotspot, approximately 95 species are endemic. About half of the nearly 20 species of *Bothrops* snakes present are endemic.

Five of the world's marine turtle species are known from Brazilian waters: the Vulnerable loggerhead (*Caretta caretta*), Endangered green (*Chelonia mydas*), Critically Endangered hawksbill (*Eretmochelys imbricata*), Vulnerable leatherback (*Dermochelys coriacea*) and Vulnerable olive ridley (*Lepidochelys olivacea*). The Abrolhos reefs, off the coast of southern Bahia, are important feeding grounds for the first three.

Amphibian diversity is very high in the Atlantic Forest, with more than 450 species recorded, more than half of which are endemic. Fifteen genera, and one entire family—the *Brachycephalidae*, with six species of the genus *Brachycephalus*—are endemic.

There are at least 350 fishes known from the Atlantic Forest streams and lakes, and 133 species and 10 of the 68 genera are endemic.

Threats

Deforestation in the state of Bahia began with commercial exploitation of Brazil-wood and expanded due to agriculture and cattle grazing. The Brazil-wood was originally used in charcoal production, but more recently as

building material for homes. Coffee and Eucalyptus plantations and cattle pastures are the predominant land uses in the region.

At the start of the 19th century, coffee was a cash crop in the state of Minas Gerais. Cultivation of coffee spread throughout the Zona da Mata and the Serra da Mantiqueira. Coffee plantations expanded through the forests, but were cultivated in foothills between mountain ranges, restricting native forests to hilltops. Uneven land and unsustainable cultivation techniques caused serious erosion and soil depletion. Coffee plantations then gave way to pastures, which extended to the hilltops, further fragmenting forest remnants.

In the state of Espírito Santo, coffee is a major source of income, and plantations represent a serious threat to the forest. In the 1960s, when the coffee industry was affected by declining prices, cattle grazing emerged as an alternative, causing new and extensive deforestation in the state.

Increasing human presence near forested areas is a constant threat to biodiversity, mostly due to small-scale extraction activities such as hunting; collecting ornamental and medicinal plants; capturing songbirds and ornamental birds; and poaching. Serious water pollution from untreated sewer emissions, intentional embankment of lakes, and deforestation of mangroves and restingas are also common effects of urban expansion in this area.

Most of the wood extracted in Espírito Santo is used as firewood or charcoal. Today, much of the wood used as an energy source is wood rejected by the cellulose industry; yet this is not enough to meet the demand for firewood for residential heating, and the Santa Maria and Jucu Rivers, for example, are still under intense deforestation pressure as a result.

Low income has been one of the major factors in the use of firewood in forest regions in Rio de Janeiro. In the past, exploitation of forests for charcoal production has been a serious problem in the state.

In the municipalities of Resende and Itatiaia, illegal extraction of palm heart trees has been a serious problem. Organized gangs invade and camp in the forest, transport the palm hearts, and process and sell the product. In a few days, poachers can cut down thousands of palm trees, extract the heart of palm, and pack it for transportation.

Wildlife trade affects more than 200 Brazilian species directly. These animals are exploited in local fairs, and many are typical species from the Atlantic Forest.

Hunting has also contributed to the decline of fauna in the Una Biological Reserve and adjacent areas in Bahia. Small-scale farmers hunt more often than large-scale farmers because they have more acute subsistence needs. Although not practiced on a large scale, sport hunting has also been a problem as it contributes to local extinction.

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Source: <https://www.cepf.net/our-work/biodiversity-hotspots/atlantic-forest>

Perguntas:

1. Segundo o texto, o que justifica a alta taxa de endemismo da Mata Atlântica?
2. Além do pau-brasil, que outras espécies vegetais estão ameaçadas?
3. O texto faz vários comentários sobre a taxa de endemismo e diversidade deste bioma. Em relação aos mamíferos, qual a diversidade estimada e quantas espécies são exclusivas do bioma?
4. Explique como a expansão da cafeicultura colaborou com o desmatamento do bioma.
5. Qual o principal uso da madeira retirada do bioma no Espírito Santo?
6. Qual uma das ameaças à biodiversidade que ocorre na Reserva de Una?