



The Amazon rainforest



FACTS

The Amazon is a vast region that spans across eight rapidly developing countries: Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, Suriname and French Guiana, an overseas territory of France.

The landscape contains:

- One in ten known species on the Earth
- 1.4 billion acres of dense forests, half of the planet's remaining tropical forests
- 4,100 miles of winding rivers
- 2.6 million square miles in the Amazon basin, about 40% of South America

The rain forests, which contain 90-140 billion metric tons of carbon, help stabilize local and global climate.



HISTORY

- The first European to explore the Amazon, in 1541, was the Spanish soldier Francisco de Orellana, who gave the river its name after reporting pitched battles with tribes of female warriors, whom he likened to the Amazons of Greek mythology
- The 2019 Amazon rainforest wildfires season saw a year-to-year surge in fires occurring in the Amazon rainforest and Amazon biome within Brazil, Bolivia, Paraguay, and Peru during that year's Amazonian tropical dry season. Surprisingly, 2,980 square kilometers of forest was cleared and burned in 2019, about 65 percent of the 4,500-square-kilometer area deforested between 2017 and 2019. Their analysis also showed that more than 1,600 square kilometers of primary forest burned in 2019.
- During the Amazon rubber boom it is estimated that diseases brought by immigrants, such as typhus and malaria, killed 40,000 native Amazonians



AMAZON WILDFIRES IN 2019



SPECIES

The Amazon contains **millions of species**, most of them still undescribed, and some of the world's most unusual wildlife. It is one of Earth's last refuges for jaguars, harpy eagles and pink dolphins, and home to thousands of birds and butterflies. Tree-dwelling species include southern two-toed sloths, pygmy marmosets, saddleback and emperor tamarins, and Goeldi's monkeys. The diversity of the region is staggering:

- **40,000 plant species**
- **3,000 freshwater fish species**
- **more than 370 types of reptiles**



MACAW



JAGUAR



POISON DART FROG



BLACK SPIDER MONKEY



AMAZON RIVER
DOLPHIN



SLOTH

PEOPLE & COMMUNITIES

More than **30 million people, including 350 Indigenous and ethnic groups**, live in the Amazon and depend on **nature for agriculture, clothing and traditional medicines**. Most live in large urban centers, but all residents rely on the Amazon's natural bounty for food, shelter, and livelihoods. Many of these populations existed along whitewater rivers where they had good means of **transportation, excellent fishing, and fertile floodplain soils for agriculture**. However, when Europeans arrived, these were the first settlements to be affected, since Europeans used the major rivers as highways to the interior. In the first century of European presence, the Amerindian population was **reduced by 90 percent**. Most of the remaining peoples lived in the interior of the forest: either **pushed there by the Europeans or traditionally living there in smaller groups**. From Pizarro's conquest of the Inca empire until the end of the Brazilian rubber boom around the beginning of World War I, the Spanish and Portuguese, in the name of Catholicism with the blessing of popes, continued the long tradition of abuse against these people—one that would be continued by **colonists, rubber tappers, and land developers**.



FOREST STRUCTURE

EMERGENT LAYER

□ **The top layer** of the rainforest is the **emergent layer**. Here, trees as tall as **60 meters** dominate the skyline. Foliage is often sparse on tree trunks, but spreads wide as the trees reach the sunny upper layer, where they photosynthesize the sun's rays. Small, waxy leaves help trees in the emergent layer **retain water** during long droughts or dry seasons. Lightweight seeds are carried away from the parent plant by strong winds.



CANOPY LAYER

□ Beneath the emergent layer is the **canopy**, a deep layer of vegetation roughly **6 meters thick**. The canopy's dense network of leaves and branches forms a roof over the two remaining layers. The canopy **blocks winds, rainfall and sunlight, creating a humid, still, and dark environment below**. Trees have adapted to this damp environment by producing glossy leaves with pointed tips that repel water.



UNDERSTORY LAYER

- ❑ Located several meters **below the canopy**, the understory is an even **darker, stiller, and more humid environment**. Plants here, such as palms and philodendrons, are much **shorter and have larger leaves** than plants that dominate the canopy. Understory plants' large leaves catch the minimal sunlight reaching beyond the dense canopy.



FOREST FLOOR LAYER

□ The forest floor is **the darkest** of all **rainforest layers**, making it **extremely difficult** for plants to grow. Leaves that fall to the forest floor decay quickly. Decomposers, such as **termites, slugs, scorpions, worms, and fungi**, thrive on the forest floor. Organic matter falls from trees and plants, and these organisms break down the decaying **material into nutrients**. The shallow roots of rainforest trees absorb these nutrients, and dozens of predators consume the decomposers!



THREATS

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THANK YOU FOR YOUR ATTENTION

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