

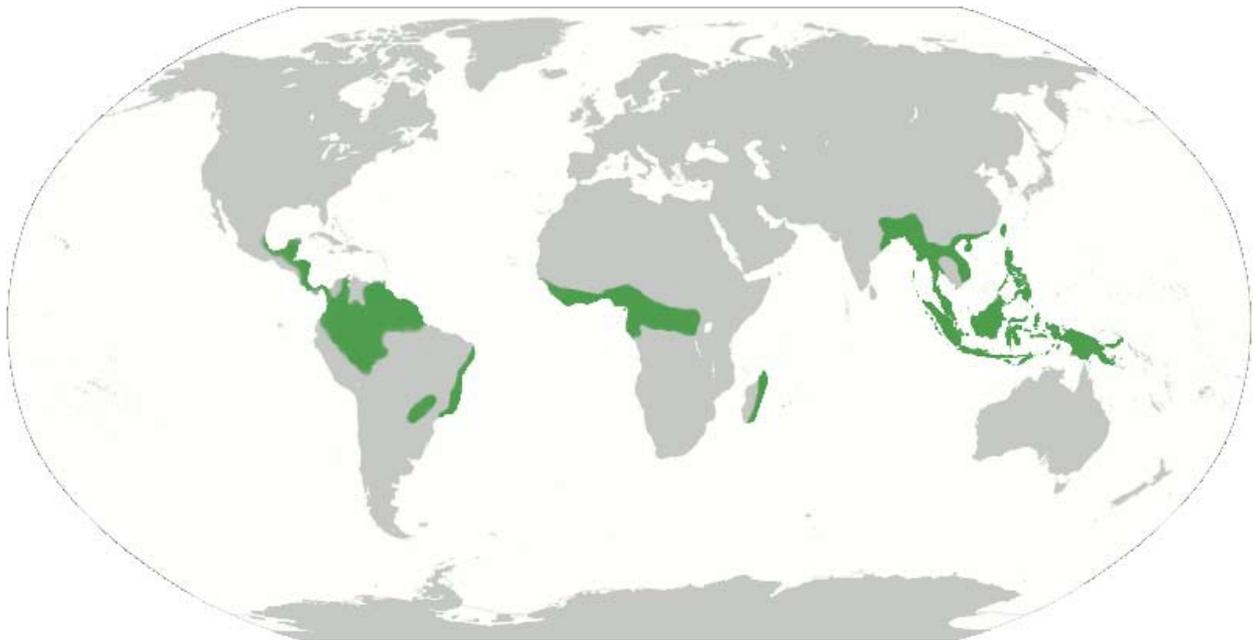


A Student Guide to Tropical Forest Conservation

by

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The world's tropical forests circle the globe in a ring around the Equator. They are surprisingly diverse, ranging from lush rain forests to dry savannas and containing millions of species of plants and animals. Tropical forests once covered some 15.3 billion acres. In recent times, however, they have been cut at a rapid rate to make room for agriculture and to obtain their many valuable products. Between 1985 and 1990, 210 million acres of tropical forests were destroyed.



The largest remaining areas of tropical rain forests are in Brazil, Congo, Indonesia, and Malaysia. Precipitation generally exceeds 60 inches (150 cm) per year and may be as high as 400 inches (1000 cm). Lowland rain forests are among the world's most productive of plant communities. Giant trees may tower 200 feet (60 m) in height and support thousands of other species of plants and animals.

All forests have both economic and ecological value, but tropical forests are especially important in global economy. These forests cover less than 6 percent of the Earth's land area, but they contain the vast majority of the world's plant and animal genetic resources. The diversity of life is astonishing. The original forests of Puerto Rico, for example, contain more than 500 species of trees in 70 botanical families.



The Caribbean National Rain Forest of El Yunque, Puerto Rico.

Tropical forests provide many valuable products including rubber, fruits and nuts, meat, rattan, medicinal herbs, floral greenery, lumber, firewood, and charcoal. Such forests are used by local people for subsistence hunting and fishing. They provide income and jobs for hundreds of millions of people in small, medium, and large industries.

Many medicines and drugs come from plants found only in tropical rain forests. Some of the best known are quinine, an ancient drug used for malaria; curare, an anesthetic and muscle relaxant used in surgery; and rosy periwinkle, a treatment for Hodgkin's disease and leukemia. Research has identified other potential drugs that may have value as contraceptives or in treating a multitude of maladies such as arthritis, hepatitis, insect bites, fever, coughs, and colds. Many more may be found. In all, only a few thousand species have been evaluated for their medicinal value.



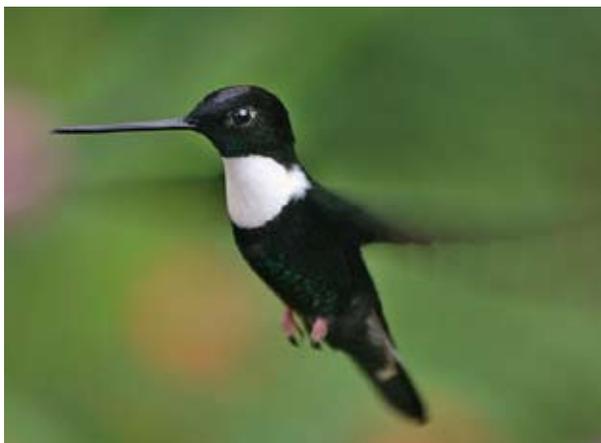
**The plant Curare,
found in South America.**



The Gambia River in the Niokolo Koba National Park, Africa.

Tropical forests do more than respond to local climatic conditions; they actually influence the climate. Through transpiration, the enormous number of plants found in rain forests return huge amounts of water to the atmosphere, increasing humidity and rainfall, and cooling the air for miles around. In addition, tropical forests replenish the air by utilizing carbon dioxide and giving off oxygen. By fixing carbon they help maintain the atmospheric carbon dioxide levels low and counteract the global "greenhouse" effect.

Forests are biological communities — complex associations of trees with other plants and animals that have evolved together over millions of years. Because of the worldwide loss of tropical forests, thousands of species of birds and animals are threatened with extinction. The list includes many unique and fascinating animals, among them the orangutan, mountain gorilla, manatee, jaguar, and Puerto Rican parrot. Although diverse and widely separated around the globe, these species have one important thing in common. They, along with many other endangered species, rely on tropical forests for all or part of their habitat.



The Collared Inca — A species of hummingbird found in humid Andean forests. (Male, left. Female, right.)

eText courtesy of US Department of Forestry website:
<http://www.fs.fed.us/global/lzone/student/tropical.htm>