

Spectacular Costa Rican Forests

By Dr Reese Halter

Costa Rican forests are teeming with biological diversity. There are four exquisite forest types found in Costa Rica: clouds forests, Caribbean rainforests, Pacific rainforests and dry forests.

Costa Rica has an area of over 19,691 square miles (51,000 square kilometers), it is smaller than Nova Scotia. Yet, it contains an awesome diversity of animal and plant life.

For example, Costa Rica has over 830 species of birds about as many as the U.S. or Australia including 52 species of hummingbirds. There are 205 species of mammals half of which are bats; over 400 species of bizarre and colorful reptiles and amphibians, including 74 lizards, 131 snakes and 134 frogs, and 560 species of butterflies not counting metalmarks, blues or skippers which total another 1,000 species.

At last count there are over 10,000 species of plants including about 1,200 different kinds of orchids.

Up until about 5 million years ago the land between North and South America was not continuous. Rather it was made up of a chain of volcanoes which finally joined together to create a bridge. Cerro Chirripo is the highest mountain in Costa Rica at 12,530 feet (3,819 meters) above sea level and it was glaciated up until 10,000 years ago.

Costa Rica embraced conservation in the early 1970s and today its National Parks and Biological Reserves protect an astounding 18 percent of the land area.

The cloud forests drape the tops of all but the highest Costa Rican mountains. These forests are bathed in moisture and are a rich with orchids, bromeliads and lush vines which thrive in high humidity.

At least 50 species of birds including black guans, fiery-throated hummingbirds, prong-billed barbets, and black-and-yellow silky flycatchers are endemic to the cloud forests.

Also the cloud forests are home to the resplendent quetzal arguably the most colorful bird in the world. During the wet season many species of birds including the quetzal migrate altitudinally thus avoiding the atrocious mountaintop weather.

Most of the mountain orchids are pollinated by bees, wasps and flies but a few cloud forest species rely upon hummingbirds because they are able to pollinate during cool wet weather when insects become inactive. Those plants usually have flowers that are red or orange conspicuous to hummingbirds but

not insects.

Over 30 species of exquisitely colored butterflies also live in the cloud forests.

The Caribbean rainforest has huge trees, massive strangler figs and many kinds of palms. It receives over 23 feet (seven meters) of rainfall annually or 300 rainy days. Not surprisingly these forests are home to the greatest diversity of animals in Costa Rica.

Mixed species of birds flock together as more watchful eyes are better at spotting predators. Some flocks of birds follow raiding swarms of army ants as they scour the forest floor for prey.

Impressive arrays of bats are drawn to pale and musky-smelling flowers and fruits. Bats play a crucial role in tree seed dissemination as many seeds are defecated intact, often far away from the parent trees.

Psychedelic-looking red-eyed, barred, Spurrell's flying and strawberry poison-dart frogs grace these forests. The spectacular golden eyelash viper is only found in the Caribbean rainforests coiled on large red flowers awaiting an unsuspecting hummingbird.

The Pacific rainforest has a more distinct dry season but it too supports impressive 230 feet (70 meters) tall trees. These forests have the richest assemblage of plants in Central America.

Corcovado National Park provides essential habitat to jaguars, large herds of white-lipped peccaries, harpy and crested eagles, big snakes, crocodiles and 660 pound (300 kilogram) Baird's tapirs (a South American relative of horses and rhinoceroses).

The Pacific rainforests have extensive areas of mangroves. These trees live on the sea shoreline and have specially adapted roots enabling them to cope with extreme saline conditions. Mangroves provide breeding sites for herons, ibises and spoonbills as well as roosting sites for shorebirds.

Three toed sloth's, ants eaters and cauchins, the most visible monkey in Costa Rica, also rely upon the Pacific rainforest for habitat.

The dry forests occur in the northwest of Costa Rica. They receive only seven feet (two meters) of rainfall annually. During the dry months, December to April, trees drop all their leaves to conserve water.

The dry forests are important wintering territory for migrant birds from North America including the entire world's population of scissor-tailed flycatchers.

Flowers are pollinated by insects rather than hummingbirds in the dry forests. Tropical rattlesnakes, roadguarders and green-headed racer snakes are confined to the dry northwest of Costa Rica. Many species of ants play a pivotal role by breaking down leaves and recycling nutrients in the thin and nutrient-poor tropical soils thus maintaining forest health.

Nothing has escaped the wrath of global warming - from the poles to the tropics and everything in between - and Costa Rica is no exception. There are twice as many dry days now compared to 20 years ago in the Monteverde Cloud Forest Preserve. And the last golden toad in the cloud forest was seen in 1988; 20 other species of frogs including the lemur, granular glass and harlequin's are also missing.

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