

The Cloud forest of the El Yunque National Forest

Occupying over 28,500 acres, the El Yunque National Forest, locally known as El Yunque, is the only tropical rain forest in the United States National Forest System. One of the ecosystems found on its steep mountains is the **Cloud Forest** which is located over 2,500 feet over the sea level.

The Cloud Forest is unique and marvelous. It represents less than 2% of the total area of El Yunque and is found on the highest peaks of the mountains. Because its elevation, and difficulty to reach it, approximately 83% of the Cloud Forest remains undisturbed.

- ❖ Constant clouds and fog minimizes sun light, causing the reduction of the photosynthetic activities and other biochemical processes.
- ❖ Low temperatures (aprox. 62° F).
- ❖ Shallow soils.

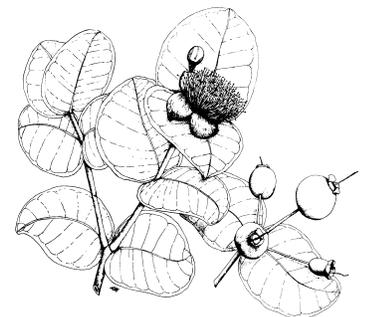


Flora

The soils as well as tree branches and trunks are densely covered by algae, hanging moss, ferns, bromeliads and tiny orchids. This is an adaptation to diminish the great amount of water received on this forest type. A vegetation study on this type of forest reveals the existence of around 97 plant species. Five of these 97 species are considered main species. These five are:

- ❖ Némoca (*Ocotea spathulata*) native
- ❖ Roble de Sierra (*Tabebuia rigida*) endemic
- ❖ Limoncillo (*Calyptanthes krugii*) endemic
- ❖ Guayabota (*Eugenia borinquensis*) endemic
- ❖ Camasey (*Calycogonium squamulosum*) endemic

Almost 40% of the Cloud forest is **endemic** (found only in a specific place) to Puerto Rico and at least 28 species of plants are endemic to this forest.

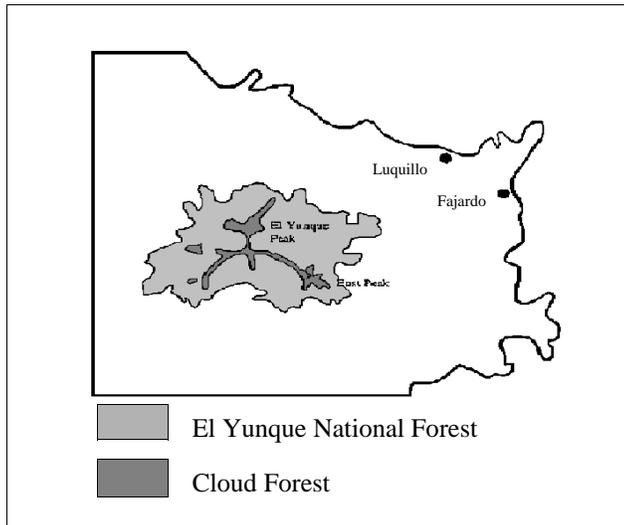


Guayabota

Characteristics

Compared to other forest types, the vegetation of the Cloud Forest is small. Arboreal vegetation rarely reach 15 to 20 feet in height. This is a result of various factors characteristic to this area such as:

- ❖ Strong humid winds which constantly hit the vegetation. These winds also cause the stunted and bent appearance of the vegetation.
- ❖ Minimal plant transpiration on this environment.
- ❖ Water saturation of the soil caused by the great quantity of rain received annually at this heights (200 inches); this also reduces the quantity of oxygen available for the roots.



Fauna

Due to the extreme conditions found in the Cloud Forest, few species of animals live in it. Various species have adapted to the excessive moisture found in the forest, as are the Burrow coqui, the Tree-hole Coqui, the Common Coqui, the Forest Coqui, the Cricket Coqui, the warty Coqui, the Wrinkled Coqui and the White-lipped frog among the amphibians. Among the reptiles are the Emerald Anole, the Common Dwarf Lizard and the Pigmy Anole.

Over 20 species of birds have been observed in the Cloud Forest. If you are patient among them you can see the Elfin Woods warbler.

This species was not known until 1971 when it was discovered by Kepler and Parkes. Other birds common to the forest are the Puerto rican Tody, the Puerto Rican Emerald and the Broad-winged Hawk.



Some mammals use the Forest as part of their habitat as are the Puerto Rican Flower bat, the Black rat and the mongoose; these last two species being exotic to the forest.

Cloud Forest around the world

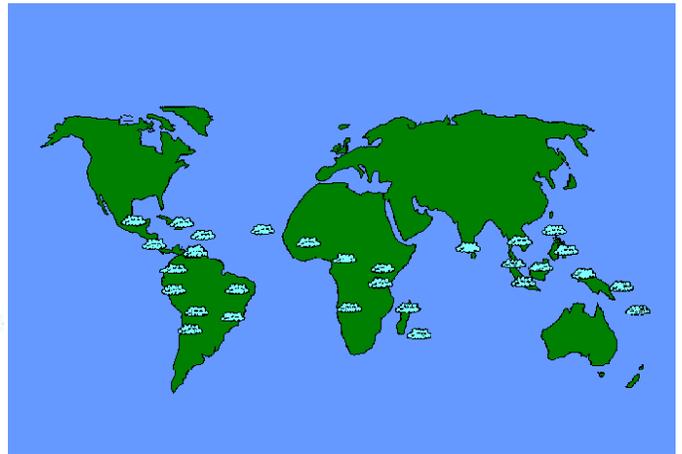
Cloud Forests are found in various parts of the world. In many of these places, the forests are threatened due to the great demand for food (as is the case in Cuba and Haiti). In other areas, the forests are in danger due to the overexploitation and extraction of products as are orchids, bromeliads, ferns and medicinal plants. This is a subsistence activity in some countries like Hawaii, Guadeloupe, Venezuela and Mexico.

Other Cloud Forests are threatened by:

- ❖ The capturing or hunting of birds and other animals for food or profit.
- ❖ Agriculture.
- ❖ Introduction of exotic species.
- ❖ Mining.
- ❖ The establishment of communication facilities

(i.e. antennas)

- ❖ Activities related to recreation and tourism.
- ❖ World climate changes.



General concentration of Cloud Forest around the world

The *The Cloud Forest at El Yunque* is a unique, marvelous and mysterious place. Lets conserve the beauty of this forest, visit and observe its marvels and characteristics that make it unique. Relate to its biological components, appreciate its weather conditions and contemplate its scenic beauty. It is an unforgettable adventure to be able to see up close all that the forest has to offer, but better still, be able to feel proud to have it so close and under good guardianship.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

For more information:

El Yunque National Forest
HC-01 Box 13490
Rio Grande, PR 00745-9625
787-888-1880
www.fs.usda.gov/elyunque

