

The Cecropia Tree

Cloudbridge Nature Reserve - Nature Notes No. 7

Natural Regrowth

Parts of the Cloudbridge reserve, notably those next to existing primary forest, are given over to natural regeneration. This is slower than deliberate reforestation but ensures consistency with the surrounding forest. Some of Cloudbridge already consists of secondary forest. Dense shubbery and light-loving pioneer species such as Guarumo (*Cecropia peltata*) prevail in these areas. They play a key role.

Cecropia Tree Cecropias

The cecropia is well adapted to succeeding in cleared areas, whether the disturbance is natural or human. To avoid the entangling vines of new undergrowth, it grows to 5-10 meters before extending any branches. As it grows higher, it discards the lower branches, giving creepers no hold. At this point it shades out the undergrowth, allowing slower, shade-tolerant canopy trees to grow.

Azteca Ants and the Cecropia

Many Cecropias are called myrmecophytes, plants that have a relationship with ants. In the Cloudbridge area Cecropia trees most commonly provide food and housing to species of Azteca ants. The stems of the trees are largely hollow and provide a space for the ants to live and raise their young. The leaves provide small white protein beads called Mullerian bodies that contain glycogen, which the ants harvest as food. The tree in turn benefits from having the Azteca ants as they are said to protect the tree from both herbivores and encroaching vegetation. When disturbed by insects or small mammals the ants swarm out onto the trees surface to deter or kill the invader.

The queen ants that first colonize the tree will chew through a soft area of the stem and seal herself inside. Here she will raise a few workers who will gather the Mullerian bodies and help her to raise more ants of all casts. In one young tree there may be several different queens but as the tree gets older one ant colony will usually dominate.



The species of ant found in each tree is thought to vary with many criteria some of which include the tree species, light availability, altitude, disturbance levels and the presence of other ants in the same tree or area.

The Tree and the Sloth

Sloths are said to be everywhere in Costa Rican cloud forests. Each family of sloths has a peculiar dietary preference, and many three-toed sloths seem to have chosen the cecropia's juicy leaves. Spider Monkeys have been seen at play in the cecropias of Cloudbridge. Many kinds of birds eat, and then disperse, the tree's thick hanging fruits. Other birds eat the many insects that thrive on the foliage. The Lineated Woodpecker actually pierces young trees and branches to feed on the Azteca ants.