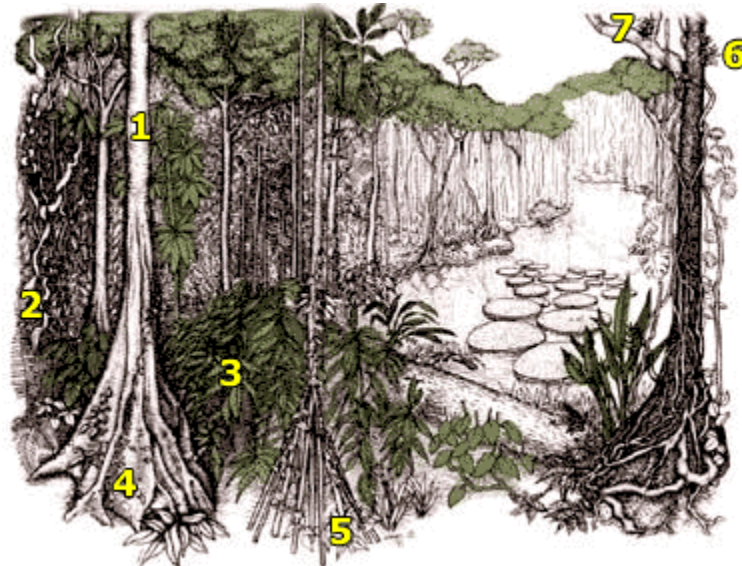


Rainforest Plants

Plant Adaptations



1. Bark

In drier, temperate deciduous forests a thick bark helps to limit moisture evaporation from the tree's trunk. Since this is not a concern in the high humidity of tropical rainforests, most trees have a thin, smooth bark. The smoothness of the bark may also make it difficult for other plants to grow on their surface.

2. Lianas

Lianas are climbing woody vines that drape rainforest trees. They have adapted to life in the rainforest by having their roots in the ground and climbing high into the tree canopy to reach available sunlight. Many lianas start life in the rainforest canopy and send roots down to the ground.

3. Drip Tips

The leaves of forest trees have adapted to cope with exceptionally high rainfall. Many tropical rainforest leaves have a drip tip. It is thought that these drip tips enable rain drops to run off quickly. Plants need to shed water to avoid growth of fungus and bacteria in the warm, wet tropical rainforest.



4. Buttresses

Many large trees have massive ridges near the base that can rise 30 feet high before blending into the trunk. Why do they form? Buttress roots provide extra stability, especially since roots of tropical rainforest trees are not typically as deep as those of trees in temperate zones.

5. Prop and Stilt Roots

Prop and stilt roots help give support and are characteristic of tropical palms growing in shallow, wet soils. Although the tree grows fairly slowly, these above-ground roots can grow 28 inches a month.

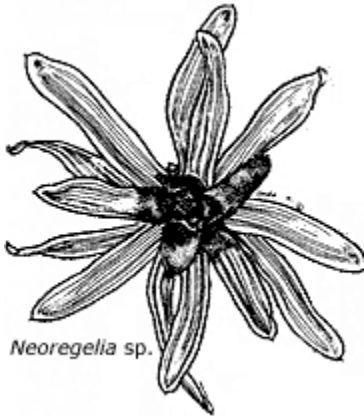
6. Epiphytes

Epiphytes are plants that live on the surface of other plants, especially the trunk and branches. They grow on trees to take advantage of the sunlight in the canopy. Most are orchids, bromeliads, ferns, and *Philodendron* relatives. Tiny plants called epiphylls, mostly mosses, liverworts and lichens, live on the surface of leaves.



Cattleya sp.

7. Bromeliads



Neoregelia sp.

Bromeliads are found almost exclusively in the Americas. Some grow in the ground, like pineapple, but most species grow on the branches of trees. Their leaves form a vase or tank that holds water. Small roots anchor plants to supporting branches, and their broad leaf bases form a water-holding tank or cup. The tank's capacity ranges from half a pint to 12 gallons or more. The tanks support a thriving eco-system of

bacteria, protozoa, tiny crustaceans, mosquito and dragonfly larvae, tadpoles, birds, salamanders and frogs.

Mangroves

On tropical deltas and along ocean edges and river estuaries, trees have adapted to living in wet, marshy conditions. These trees, called mangroves, have wide-spreading stilt roots that support the trees in the tidal mud and trap nutritious organic matter.



Rhizophora sp.

Nepenthes



Pitcher plant vines in the family Nepenthaceae have leaves that form a pitcher, complete with a lid. Sweet or foul-smelling nectar in the pitcher attracts insects, especially ants and flies, that lose their grip on the slick sides and fall into the liquid. Downward-pointing hairs inside the pitcher prevent the insects' escape. The insects are digested by the plants and provide nutrients. Pitcher plants are not epiphytes but climbers rooted in the soil.