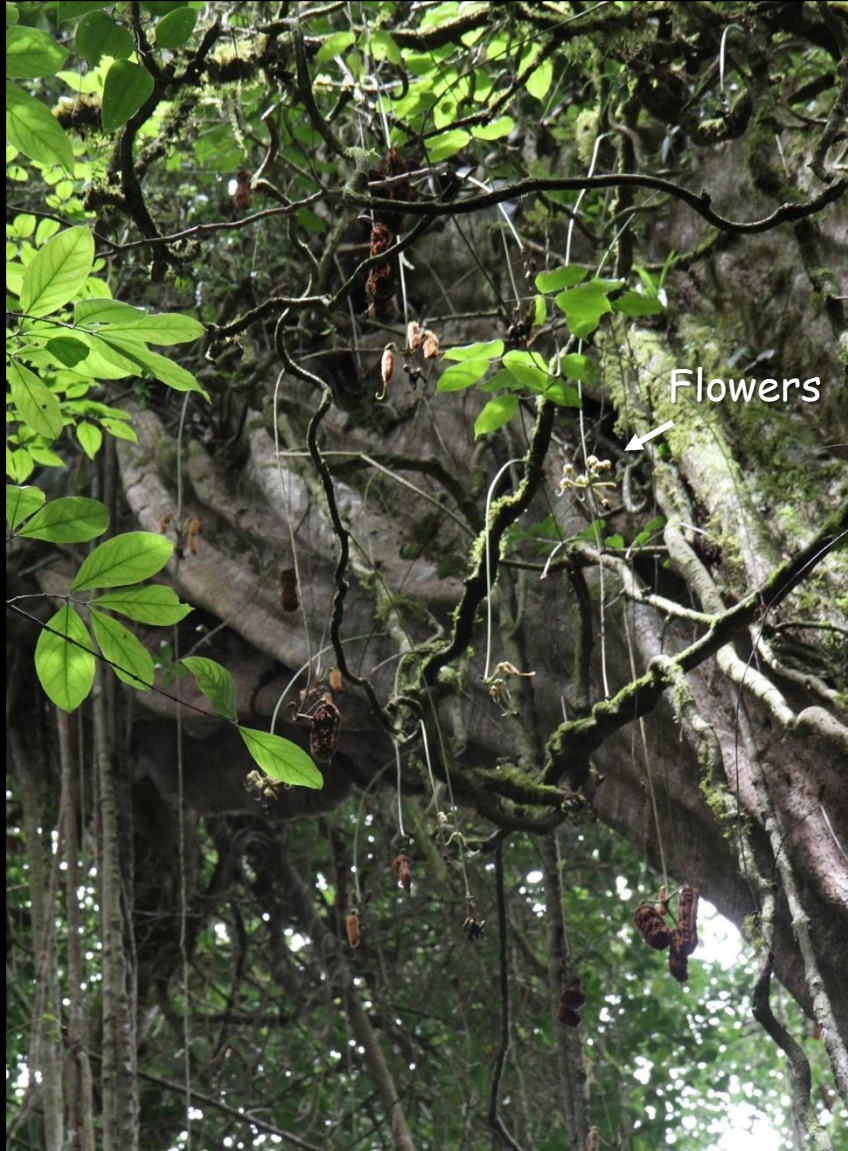


Sea bean (*Mucuna*) is a legume vine with flowers and fruits that hang in clusters. The flowers are pollinated by bats.



The fruit is covered with hairs that cause irritation when touched.

The specific epithet name *Urens* means "like stinging nettles" and the spines on the pods cause itching because of a enzyme called mucunain that is injected into the skin.



Mucuna urens

Hamburger bean is another common name for *Mucuna*, because of the line running the circumference of the seed. They are one of the common drift seeds dispersed in salt water oceans.

Drift seeds can travel great distances and there are examples of seeds from the tropics washing up on Northern European beaches.



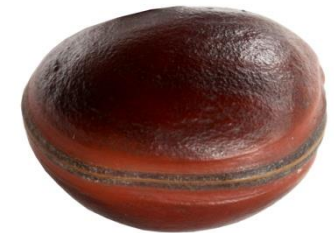
Common drift seeds



Sea heart (*Entada gigas*)



Sea bean
(*Mucuna*)



Sea purse
(*Dioclea reflexa*)

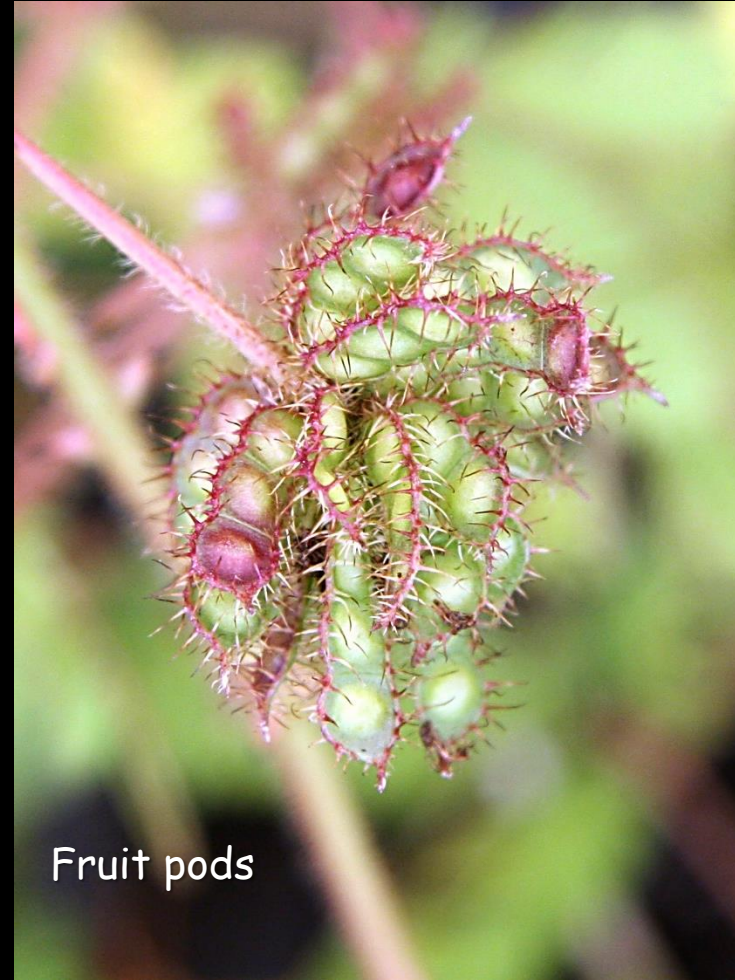
Wild tamarind (*Cojoba arborea*) is a very interesting member of the legume family. It produces red pods that open to expose hanging black seeds.



Most woody legumes produce seeds that dry as a "hard" seed. The outer seed coat becomes impermeable to water (physical dormancy) and typically last years in the seed bank. Wild tamarind is very different. It produces a seed with a soft, pulpy seed coat. The seeds do not tolerate drying and must germinate within a few weeks of dropping from the trees or the seeds will die (i.e. recalcitrant seed behavior).



Sensitive plant (*Mimosa pudica*) is another member of the legume family. It is called the sensitive plant because the leaves fold up at night (nyctinastic) or when touched (thigmonastic).



Fruit pods

The group was quite taken with the sensitive plant.



The woody legume Guanacaste (*Enterolobium cyclocarpum*) is the national tree of Costa Rica. It is also called the elephant ear tree because of the shape of the fruit.



Kapok (*Ceiba pentandra*) is one of the giants in the rainforest. It is the national tree of Guatemala.



Kapok is in the mallow family (Malvaceae) that also includes plants like cotton. The fruits produce a cotton-like material that forms around the seeds. These fibers were once used in pillows and as a stuffing for life preservers.



The strangler figs (*Ficus*)
can also form large trees in
the rain forest.



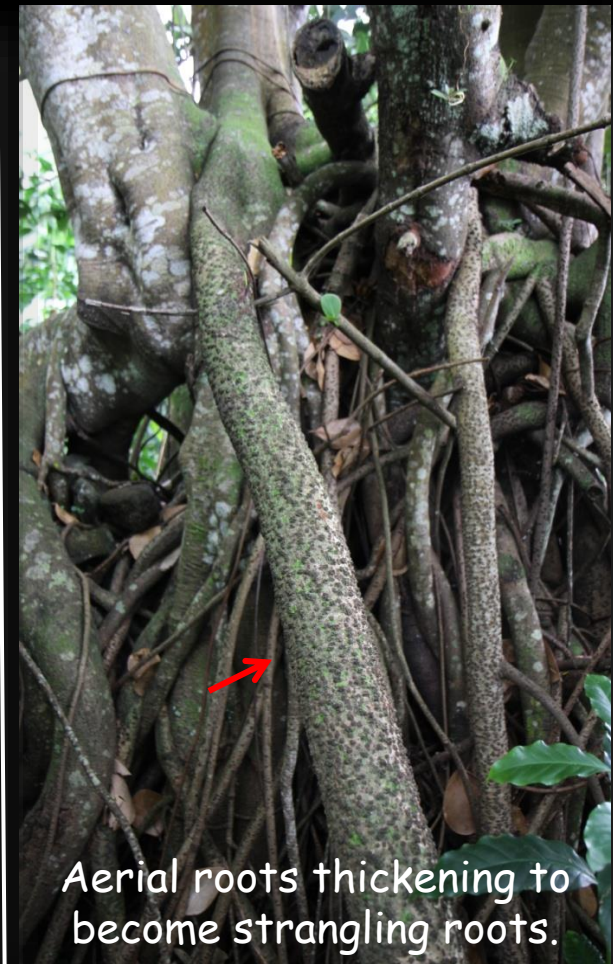
Stranglers are technically called hemiepiphytic plants.

The largest group belongs to the strangler fig group (*Ficus*) where there are approximately 500 species classified as hemiepiphytes.

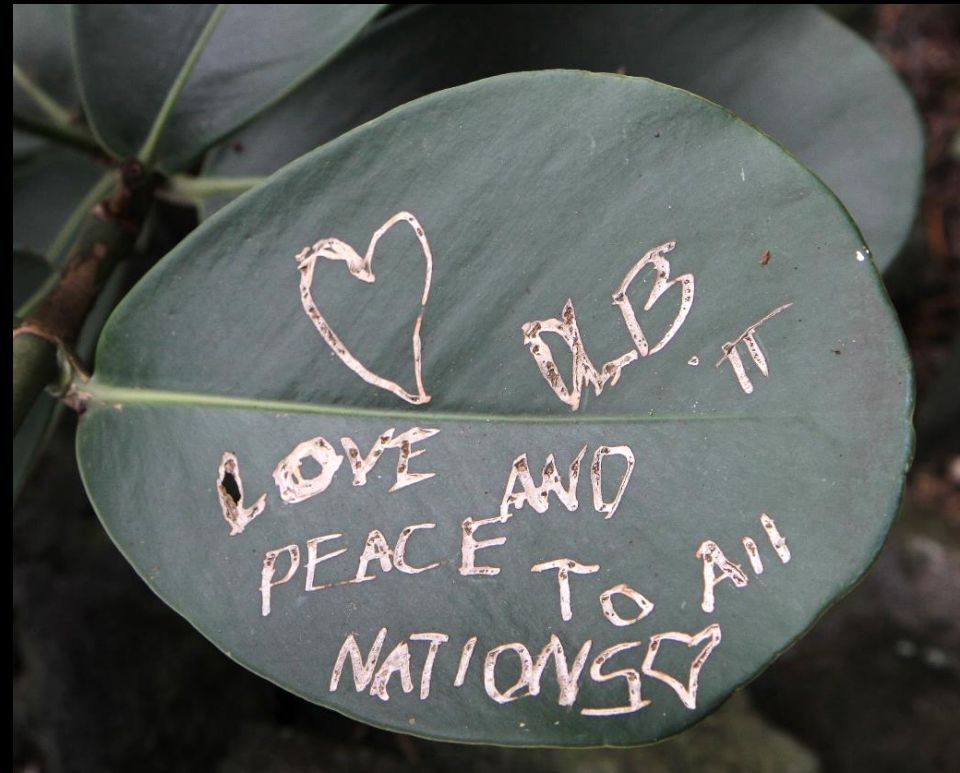
Fig seeds germinate in the tops of the trees and send down aerial roots that become stem-like after reaching the forest floor. Their expansion eventually strangles the host tree.



Autograph tree (*Clusia*) can produce free standing or strangler hemiepiphytic plants.



It is called the autograph tree because writing on the leaves is retained as graphic scar tissue.



The flowers in *Clusia* are waxy and usually white with hints of pink.



Clusia grandiflora



Clusia sp.



Clusia lanceolata

The fruits of *Clusia pratensis* we found in the Monteverde cloud forest were so showy, they could easily be mistaken for flowers.



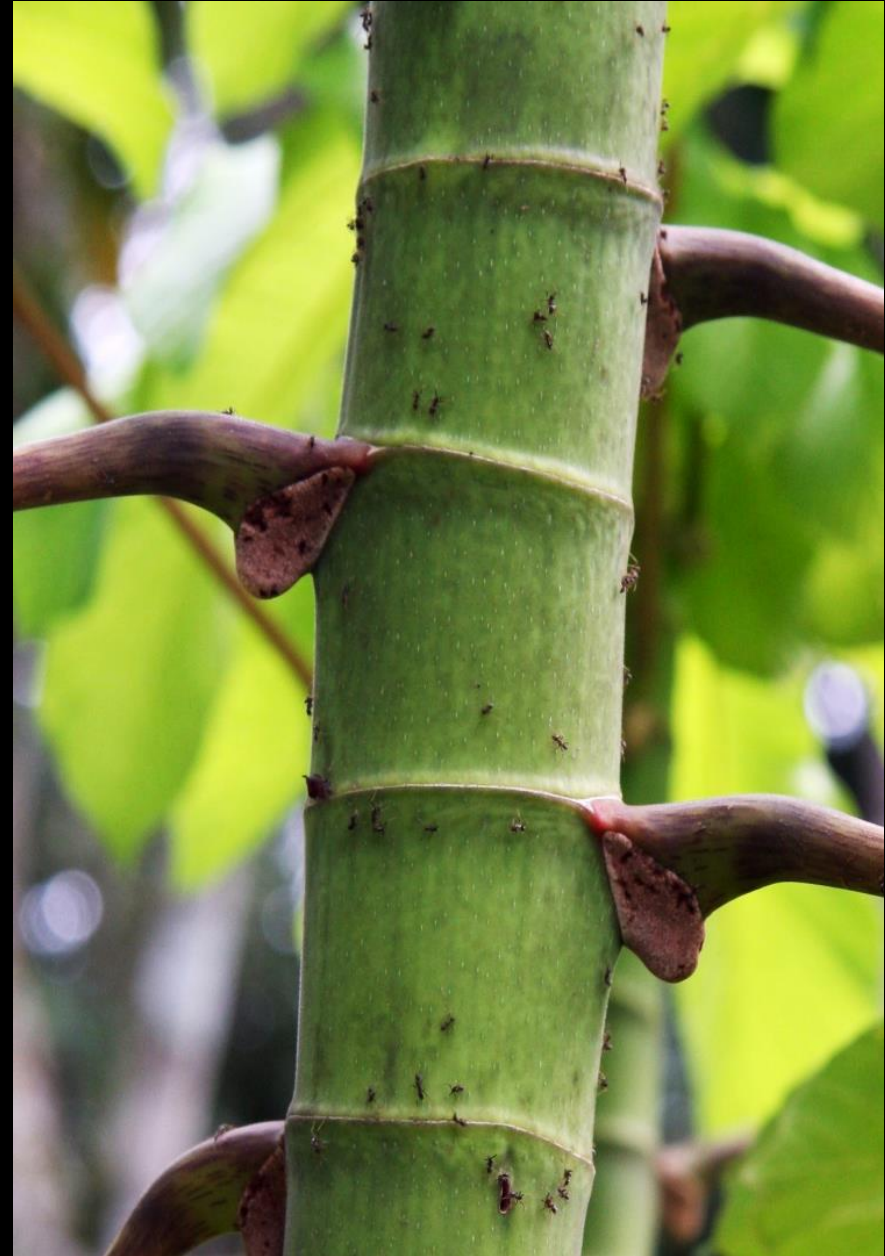
Cecropia is easily recognized for its large umbrella-like palmately, compound leaves.



Cecropia species are light gap specialists and the seeds require light to germinate. As the main stem bends towards the light, some species of *Cecropia* produce prop roots to support the bent stem.



Cecropia is a tropical plant that produces a swelling at the base of the leaf petiole that provides food for Aztec ants in return for ant protection. These food bodies are referred to as Müllerian bodies.



Ylang-ylang (*Cananga odorata*) is a member of the annona family with very fragrant flowers.



Ylang-ylang is the commercial source of the fragrance for Chanel No. 5 perfume.



Panama hat plant (*Carludovica palmata*) resembles a palm, but it is actually in a separate family (Cyclanthaceae).

As the common name suggests, fibers from the plant are used to make Panama hats.

The interwoven leaves creates a water proof roof for local buildings.



The flowers and fruits of Panama hat plant are very distinctive and more closely resemble an aroid than a palm. Initially, the flower spike is covered with long thread-like modified stamens (staminodes). These fall off when the female parts of the flowers are receptive. The orange red seeds become exposed as the fruit peels apart.



Shingle plants (*Monstera*) are remarkable because they are climbing vines with small leaves apressed to the support tree. With age the leaves enlarge and can become very large.



Monstera dubia



Monstera deliciosa



Hot lips (*Psychotria elata*) produces a pair of red bracts that resemble lips. It is a popular post card image in Costa Rica.



The flowers and fruits of hot lips (*Psychotria elata*).



Miracle fruit (*Synsepalum dulcificum*) gets its name because after you chew a fruit any sour tasting food like lemon will miraculously taste sweet.

