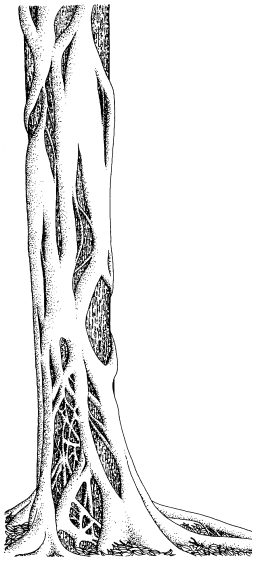
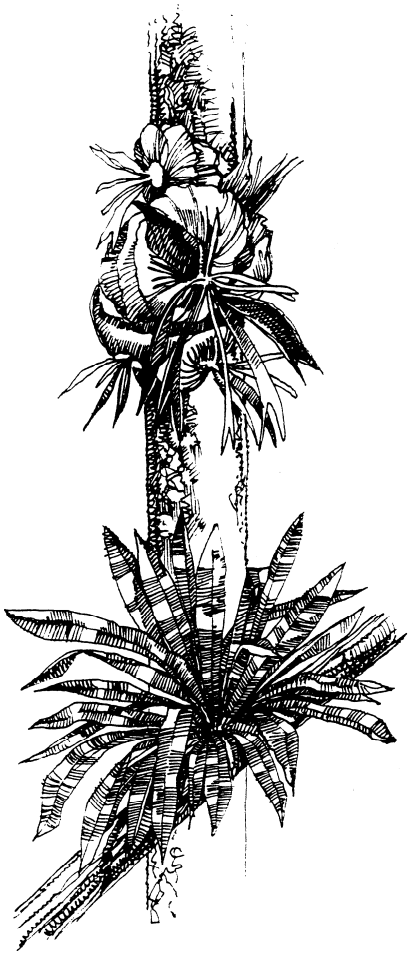
Tropical Factsheets

Climbing strategies



Strangler Fig

- Rainforest plants may be stretchers, climbers, jumpers or hitchhikers ***but*** they're all aiming to capture the sun's rays. Here are some of the different strategies plants use to **reach for the sky.**
- **Epiphytes** are not parasites — they don't extract food from their host tree, but use them to get closer to sunlight.
- The **strangler fig** is the biggest epiphyte in the rainforest. Its seed is planted in a bird dropping in the fork of a tree. It sends roots all the way to the ground and the fig grows up to the light. Roots encase and strangle its unfortunate host tree. Eventually the dead tree rots away, leaving the strangler fig standing tall in the forest.
- The **Birdsnest fern** is another common epiphyte. Its leaves are arranged in a funnel to collect debris for nutrients and moisture.
- The **Staghorn fern** has two distinct leaf types. **Shield leaves** hold the plant in place and contain the roots. As new shields grow on the outside, older ones turn brown and decompose to provide food for the roots inside. The longer green leaves photosynthesise and produce spores ('seeds') for the next generation.
- The **Basket fern** is a common epiphyte. The brown bracket or 'nest' leaves hold the plant together and trap leaf litter for food.
- Unlike epiphytes, parasitic **mistletoe** sends roots into the branch and feeds on its host. The tiny black and red mistletoe bird is one of the few animals which can eat the berries. The toxic seeds bypass its digestive system — then it carefully 'plants' them on a branch, ensuring future food.



Staghorn Fern (top) and Birdsnest Fern

Basket Fern

These fact sheets are based on the Tropical Topics newsletters edited by Stella Martin
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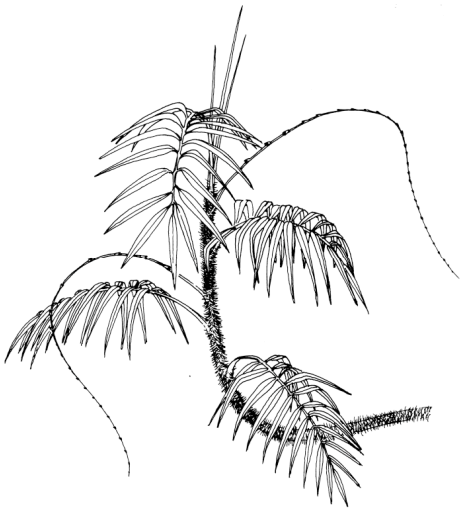
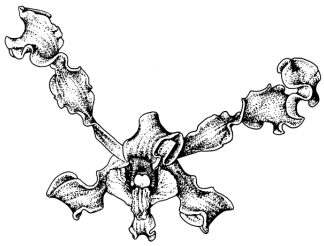


Lawyer cane

- Often all we can see of the numerous **lianes** are woody stems heading up towards the canopy – they seem to have climbed up without visible support. Actually, as young plants they have wound themselves around saplings which have since died and disappeared. The evidence is the empty woody coils.
- **Lawyer cane** is actually a palm. It thrives when more light is available, often dominating disturbed forests where there has been logging or the sides of roads. It puts out lines of 'grappling hooks' which circle around until they catch onto something. Then it uses that support to pull itself up. The process is repeated as the lawyer cane claws its way up. It often becomes too heavy for its support and falls back to the ground, but soon starts hooking its way up again.
- ***Flagellaria indica*** is a vine with curling tendrils at the end of its leaves which twine around other vegetation as the plant hoists itself upwards.
- To make the best of low light levels, ***Pothos longipes*** produces what look like double leaves. In fact, each 'leaf' is of a flattened stem, containing chlorophyll for the process of photosynthesis, and a proper leaf. It climbs up trunks using little claw-shaped rootlets. It's possible that some climbers using rootlets produce a chemical that adheres to tree bark.
- Many **orchids** are epiphytes. Their roots have a spongy sheath of special cells which can absorb water and nutrients rapidly, taking advantage of a shower of rain, cloud or mist. Some orchids are leafless but have **green roots** which photosynthesise.



Golden orchid flower