6. Air Plants

Air plants are any plants that grow off the ground, mostly on other plants, and mostly on trees. Air plants take the form of vines, bromeliads, ferns, mosses, lichens, orchids, and many others. Some are parasitic, such as mistletoe, that take nutrients directly from their host plants; some are epiphytic, such as bromeliads and Spanish moss, that do not take energy from their host plant.

Different air plants have evolved different adaptations to survive with the canopy of a forest. Root-bearing plants have specialized roots that can burrow into a host plant. Some have roots that grow into furrows along the bark of a tree to root, and some grow roots that just cling to the tree.

Bromeliads

Bromeliads have adapted to get water and minerals from the rain; they have adapted leaves that absorb water and minerals through trichomes, and their roots are used only for anchorage. There are two types of bromeliads; those that obtain water and nutrients from the atmosphere and those that collect water into tanks formed from the rosette of leaves. The leaves of bromeliads have special pores that collect water and nutrients. "Tank" Bromeliads store water within the tank that also collects animal and plant debris, giving nutrients to the bromeliad. "Tank" bromeliads are home to a variety of insects and frogs that find safe refuge within the tank. These "tank" bromeliads become mini-ecosystems of their own.

Ferns

Some ferns have adopted a life in the forest canopy. Ferns are ancient plants that reproduce through spores instead of seeds. Air ferns can vary greatly in size and all are epiphytic. Air ferns, unlike bromeliads, use their roots for footing and nutrient uptake. Common air ferns of central Florida are Shoestring Fern, Golden foot Fern, and Resurrection Fern.

Ferns tend to grow either along the furrowed bark on trees such as oak and red bay or in the boots (broken-off stems of fronds) of cabbage palms.

Other air plants, such as the butterfly orchid and mistletoe, have roots that penetrate their host tree for a firmer grip. But only mistletoe is a parasitic plant in that it takes nutrients directly from their host plant.

Air plants fit into two different groups, those that are parasitic and those that are epiphytes. Parasitic plants rob nutrients from their host plant and in some cases will eventually kill their host plant. Epiphytes are more common in Florida. Epiphytes simply use another plant (mostly trees) as a substance to live on. Epiphytes do not take nutrients and are relatively harmless to the host plant. Epiphyte comes from the Latin epi – "upon" and phyton – "plant:"