



VENUS FLYTRAPS



SUNDEW PLANT

PHOTOS BY WILLIAM D. WEEKES

by the enzyme-packed stickiness that breaks down insect tissues, providing the sundew with nourishment.

Sundews (droseras) are well able to garner nutrients for health and survival by gleaning them from the animals they catch. The plants' tentacles secrete an aroma that attracts arthropods. Once prey is in range, the glands in each tentacle send signals to other tentacles instructing them to bend over until the plant becomes a quagmire of sticky blobs – Charles Darwin is credited with discovering the tentacles' function.

Sundews obtain protein, genetic material and nitrogen from the insects they trap in their sparkling "dew." When "food" lands on a sundew's tentacles, they will slowly double back over the food and, after sandwiching it, emit digestive enzymes to consume it. Digestion and absorption of food is completed within five days to two weeks. Each tentacle does its duty no more than 3-4 times before becoming dysfunctional.

The **pitcher plant** uses gravity in collecting insects. The beauty and graceful flow in these plants make them a favorite of "trappist" carnivorous enthusiasts. Again, leaf modification allows pitcher-shapes to live on the edge, at least temporarily. The slick surfaces of the pitcher make it dangerously slippery for any six-legged critter, and may force them to meet a swift descent into a bath, making wings of fallen prey useless, their chitinous bodies easily dissolved for release of nutrients.

Pitcher plants make victims of a wide variety of insects. The yellow flava variety specializes in flies; "prayerlike" sweet and hooded pitcher plants attract ants; while the most low-lying purple pitchers scoop up grasshoppers, crickets and snails. Downward-pointing bristles inside the pitchers discourage any scrambles for freedom. Pitcher plants grow from underground rhizomes that emerge from the wetlands. The pitcher plant doesn't get energy to grow from trapped denizens of the animal world, but from photosynthesis off chlorophyll.

Why does Mother Nature pay deference to carnivorous plants by leaf modification? To compensate for the poor, acidic soils along the sea coast plains where nitrogen and phosphorous availability are insufficient. These unique modifications allow carnivorous plants to add animal nutrients to their diets to make up for the lacking soil.

According to the S.C. Nature Conservancy, the Venus flytrap, or *Dionaea muscipula*, is endemic only in the Carolinas, generally in south-eastern N.C. and northeastern S.C. Both states monitor areas where the species is located, and plants found in various areas are protected.

What carnivorous plants are protected from is starvation. Without bugs, they'd be denied nutrition. And thus, we can see that what some may view as nature's silent killers are actually just a group of very specialized plants, doing what they can to survive. – William D. Weekes

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