

Florida's Carnivorous Pitcher Plants

by Eric Sathre

To many people, carnivorous plants hold a certain mystique, but — though they are extraordinarily interesting — there is nothing mysterious about them. These plants have simply adapted in ways that allow them to survive in the nitrogen-depleted bogs in which they usually grow. The only source of nutrients is the animal life around them, so carnivorous plants use this food source to obtain the energy they need to sustain life and to reproduce.

Carnivorous plants use several techniques to "catch their food". The sundews (*Drosera*) and butterworts (*Pinguicula*) use a sticky mucilage to catch their prey, while plants such as bladderworts (*Utricularia*) and Venus flytraps (*Dionaea muscipula*) have leaflets that move to enclose insects.

A third type of trap, used by the pitcher plants (*Sarracenia*), is the "pit-fall" — a hollow tube into which insects fall and are trapped, and where digestion takes place. The top of the tube usually contains nectar and bright coloration to attract prey. Once the prey is lured to the top of the pitcher, it encounters a slippery, waxy surface where it is hard to find a foothold. Consequently, it slips into the pitcher where it is then digested by secretions of enzymes. All pitchers have hoods or lids to help keep out rainwater; when rainwater does get in, it dilutes the enzymes and inhibits digestion.

Six different types of carnivorous pitcher plants grow around the world, ranging everywhere except Europe, Antarctica, and the Arctic. They grow from two inches to four feet tall, and can eat anything that can fall into them. *Sarracenia*, 8 species, is restricted to North America; *Darlingtonia*, 1 species — California and Oregon; *Heliamphora*, 6 species — Northern South America; *Nepenthes*, 75 species, — Madagascar, Africa, and Tropical Asia.

The type that grows in North America is known as a trumpet pitcher (*Sarracenia*). Almost all of the *Sarracenia* species can be found in Florida. An example of a "textbook" pitcher is *S. flava*. It stands about three feet tall, and most have a yellow-green pitcher



stem and red markings on the throat. Variations of *S. flava* include red hoods or red venation along the stems, and some may be totally without red coloring.

Several other kinds of trumpet pitchers occur that are unique and unusual. *Sarracenia minor* uses windows (thin membranes that allow light to pass through) to create the illusion of an exit where there is none, luring the prey onto the waxy surface where it slips into the trap. *S. psittacina* also uses windows, but in a different way. Its pitchers, instead of being erect, lie on their side. There is a small entrance into the pitcher, and once the prey is inside and confused by the window, it slips into the shaft, which contains small, downward-pointing hairs that prevent it from getting out and keep it moving toward the bottom of the pitcher where it is digested.

Another interesting variety is *S. purpurea*. Unlike most pitchers, it doesn't

Eric Sathre is a senior at Boone High School, and has been growing carnivorous plants for two years. He says he started with one little Venus fly-trap, and has expanded to 80 plants in his bedroom and 80 liters of rainwater in the backyard (carnivorous plants cannot be watered with city water).

The editor heard him talk about his collection and saw his display of carnivorous plants at a Tarflower Chapter meeting, and asked him to prepare this article for The Palmetto.

Where to See Pitcher Plants

If you would like to see these spectacular plants in the wild and you do not know where to find them, then let me help.

Travel east on SR 98 from Panama City and then go north on SR 386 at Beacon Hill. Follow SR 386 until you are about half way to SR 71. On the north side of the road is a development called Creek View Estates.

On both sides of the road are *S. flava* plants. On the south side of the road, *S. psittacina* can be found. Continue on SR 386 until it meets SR 71. Go south (right) on SR 71. Three to five miles south of Honeyville is a newly cleared field. This is the field of *S. flavas* that I spoke of.

Remember that these plants go dormant in winter and will be harder to spot. Also, remember that they are a part of nature and therefore should not be disturbed. Please do not dig the plants; let others enjoy them. They are protected by state plant protection laws.

I sincerely hope that you take the time to look for and enjoy these plants. Personally, they are very special to me. I hope you enjoy them as much as I did.

digest its food directly. Its hood doesn't keep water out very well, so the plant has adapted by using aquatic larvae that live in the water-filled pitchers to break down its food and simplify digestion. The plant also uses a mild narcotic in its nectar that actually drugs its prey.

These plants and others, such as *S. leucophylla*, *S. alata*, and *S. rubra* can be found in north Florida. Only *S. minor* extends down into central Florida. Generally, they can be found in almost any wet, boggy place within their range.

Enjoy these miracles of nature and look for them in the wild.