



Carnivorous Plants

in North Carolina Wetlands



THE BASICS

Did you know - some plants can eat bugs?

Did you know that some plants eat bugs? They are called *carnivorous* plants. Carnivorous mean “meat-eating”. These amazing plants use special parts of the plant to capture insects. The insects give the plants extra energy that the soil cannot give them. Venus flytraps are amazing carnivorous plants, but there are other kinds too. Venus flytraps are found in the wild only in North and South Carolina!



Venus Flytrap

WANT TO KNOW MORE?

Carnivorous plants use bugs to give them extra nutrients.

Carnivorous plants live in sandy or very acidic wetland soils that do not have many nutrients in them. However, their **adaptations** let them get some extra nitrogen from insects so they can thrive in these nutrient-poor places.

Carnivorous plants use their different adaptations to capture insects. Some have containers of scented water or nectar that attracts bugs, which slide down into the water and drown (pitcher plants). Some have sticky leaves that trap small insects and slowly digest them (sundews and butterworts). Some have special “hairs” - when they are bumped, they quickly close a trap on an insect! (Venus flytraps and bladderworts)



Pitcher plant

Reminder: It is against the law to take Venus flytraps from the wild.



LET'S GET TECHNICAL

Four major types of carnivorous plants live in North Carolina's wetlands.

Venus flytrap (*Dionaea muscipula*)

Although they are grown by people worldwide, Venus flytraps are only native to a small area around Wilmington, NC! These amazing little plants grow in sandy damp soils in and near wetlands, in areas with pine trees and regular fires. Venus flytraps have special leaves with large and small trigger hairs, along with a red pigment to attract flies. When an insect touches the large trigger hairs, the leaves close onto each other and form a cage around the insect. It struggles to get free, which triggers the smaller hairs, and they cause the leaves to close even tighter! Digestive juices ooze out of special cells to digest the insect. After about one or two weeks, the trap will reopen to be used again. The Venus flytrap has been declared by North Carolina's state legislature as North Carolina's state carnivorous plant.

How do carnivorous plants avoid trapping insects they need to pollinate their flowers?

Carnivorous plants grow their flowers on long stalks to keep the flowers and pollinating insects far above the ensnaring leaves.

Pitcher plants (*Sarracenia* spp.)

Modified leaves on pitcher plants create a container for water to accumulate. The insides of these containers have downward pointing hairs on a slippery waxy surface, so unfortunate insects find it easy to crawl in but very difficult to crawl out! Several pitcher plants have a hood over the pitcher to keep it from flooding. Pitcher plants will grow in acidic wetland soil, especially in sunny spots - often in bogs, pocosins, pine savannahs, and peat filled Carolina Bays.

Sundews (*Drosera* spp.)

Sundews are more common than Venus flytraps or pitcher plants, and they can be found growing in sandy soil along the edges of grassy wetlands. They have little pads for leaves, with sticky hairs on them. Their small size limits them to catching small prey like gnats. When a small fly or ant crawls across the sundew, it can get trapped in the sticky liquid. The more the bug struggles, the stickier it gets! The pads slowly curl around the trapped insect and the plant digests it.

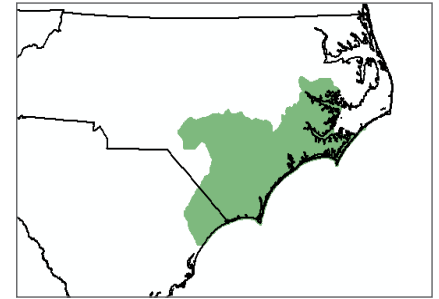
Butterwort (*Pinguicula* spp.)

Butterworts use a method similar to sundews. They have small leaves with sticky hairs on them that trap insects for the plant to later digest. The struggling of an insect causes the plant to release more sticky liquid which ends up encasing the insect. After it is trapped, digestive enzymes are released by other cells in the leaves. Butterworts in North Carolina live in pine savannahs and wet pine flatwoods.

Butterworts produce a strong chemical to kill bacteria to keep insects from rotting while they are being digested. Northern Europeans used to apply butterwort leaves to sores on cattle to help them heal.

Bladderwort (*Utricularia* spp.)

The genus *Utricularia* is Latin, meaning "little bag", referring to the "bladders" on the stems. Bladderworts are fairly common aquatic plants that require still, shallow water to cover small bubble-like structures that grow underwater. These small sacs have bristles that trigger a (very fast) trapdoor to suck a small aquatic insect or worm inside when it bumps into them. Once the animal is digested, the trap can be used again. In North Carolina, bladderworts usually have yellow or lavender flowers.



Current distribution of the Venus flytrap



Sundew



Butterwort



Bladderwort

SUPPLEMENTAL LINKS

Glossary: <http://www.ncwetlands.org/wp-content/uploads/NCWetlands-Glossary-of-wetland-terms.pdf>



CITATION

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