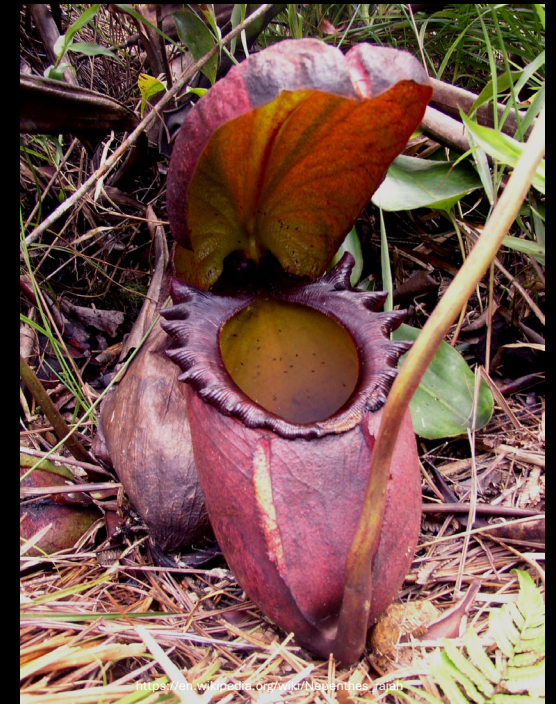


Carnivorous Plants

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What are carnivorous plants?

- Have adapted to live in soils poor in nutrients
 - Acidic bogs
- Plants that “eat” insects and other small animals
 - Supplemental food source
- Carnivorous plants still contain chlorophyll and photosynthesize



Types of Traps

- Snap Traps
 - Venus Fly Trap, Waterwheel Plant
- Pitfall Traps
 - Pitcher plants
- Flypaper Traps
 - Sundews, Butterworts
- Bladder Traps
 - Bladderworts
- Lobster-pot Traps
 - Corkscrew Plant



Venus Fly Traps

- *Dionaea muscipula*
- Native to small coastal areas in North and South Carolina
- Forms a rosette of flattened leaves
- Upper leaf has a trap-like structure
 - Two-lobbed and fringed with long, teeth-like projections
 - Three trigger hairs on the inner surface of each lobe
- Trap will close when one trigger hair is either touched twice or when two are touched in succession
 - Teeth-like projections interlock (trapping the victim)
 - Secretion of digestive juices



Waterwheel Plant

- *Aldrovanda*
- Rootless, aquatic plant
- Two-lobed, snap traps similar to the Venus Fly Trap
- Traps arranged in whorls along a free-floating stem
- Prey trigger bristles and the trap snaps shut
 - Zooplankton, small fish
- Produce small, solitary white flowers above the water



Pitcher Plants

- Several genera referred to as pitcher plants
 - *Sarracenia* and *Darlingtonia* of North America
 - *Heliamphora* of South America
 - *Nepenthes* of Asia
 - *Cephalotus* of Australia
- Modified leaves or leaf parts that resemble a pitcher
- Pitcher-like structure holds water and is topped with a hood/lid
- Prey cannot escape once inside of pitcher
 - Smooth surface, downward-pointing hairs, or in rolled rim
 - Prey will fall in water and drown
 - Prey is converted to nutrients by digestive enzymes in the water



Sundews

- *Drosera* spp.
 - More than 100 species
- Short-stemmed plants with foliage rosette
- Leaves vary from thread-like to paddle-shaped to nearly round
- Leaves covered with tiny hairs
- Hairs exude a clear, sticky fluid
 - Trap insects and other small animals
 - Movement of prey stimulates hairs to bend inward, drawing prey closer to leaf
 - Prey is digested into nutrients



Butterwort

- *Pinguicula*
- Native to North, South, and Central Americas, Europe, Asia, etc.
- Yellow-green to purplish leaves in basal rosette
- Glands cover upper leaf surface
- Leaves may curl into a cup when insects are captured
- Produces flowers on long, slender stalks
 - Pink, purple, yellow, and white



<https://plants.ces.ncsu.edu/plants/all/pinguicula/>

Bladderwort

- *Utricularia*
- Aquatic, carnivorous plant
 - Free-floating
- Found in North America
 - Lakes, ponds, wet marshes, streams, rivers, etc.
- Underwater leaf-like stems and “bladders”
 - The “bladders” capture small, aquatic organisms
 - When prey come into contact with the hairs on the bladder opening, the trap opens and draws in the prey and water like a vacuum
 - Enzymes and/or bacteria in the trap aid in digestion
- Produces yellow, two-lipped flowers above water
- Some species are considered invasive



Corkscrew Plant

- *Genlisea*
- Native to Central and South America, Africa
- Live in semi-aquatic environments
- Aboveground rosette of flat leaves
- Modified, subterranean leaves that trap prey
 - Lack roots
 - Twisted, tubular channels lined with inward-pointing hairs
 - Feed on Protozoans



<https://en.wikipedia.org/wiki/Genlisea>



<http://www.indefenseofplants.com/blog/2016/1/20/a-plant-with-lobster-pots>

Care and Maintenance

- Require moist, acidic growing medium
 - 2 parts sphagnum peat moss and 1 part coarse sand
- High Relative Humidity
- Bright Light
- 70 to 75°F temperatures in summer, 55 to 60°F temperatures in winter
- Plants grow well in terrarium type setting
- **Water plants with distilled water!!!
 - Tap water may be too alkaline and have too many minerals!
- Little to no fertilizer needed



Seed Instructions for Sweet Pitcher Plant

- Sow in high quality seeding mix
- Keep evenly moist at 70°F for 4 weeks
- Move to refrigerator (39°F) for 6 weeks
- Move to 50°F to complete germination. Provide Sun



References

- Jauron, R. 1998. Carnivorous plants.
<<https://hortnews.extension.iastate.edu/1998/12-11-1998/carnplants.html>>.
- <https://plants.ces.ncsu.edu/plants/all/pinguicula/>
- https://www.fs.fed.us/wildflowers/plant-of-the-week/utricularia_macrorhiza.shtml
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