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www.windmillgarden.com

16009 60th Street East, Sumner, WA 98390
(253) 863-5843



Care & Feeding of *Sarracenia* sp, Pitcher Plant

By Karen Oudean

Sarracenia (Pitcher Plants) are carnivorous plants that grow in bogs in eastern North America. They do not actively trap their meals as some carnivorous plants do. They are passive, relying on a pitfall trap for extra nutrients. Leaves, shaped like water pitchers with lids, wait for tasty morsels to come to them. Nectars that have a sweet or musk fragrance, lure victims to the slippery lip rolls of pitchers containing liquids. These liquids contain enzymes that digest visitors when they fall to their fate. Insects that pollinate are not attracted to the nectar. The plant makes the fluid in the pitcher itself. Only plants, with rain hoods (lids) that do not extend over the mouths of the pitchers, use rainwater to drown insects. If you want to hand feed a plant, make sure the insect is one you just caught, not one killed by insecticides. Worms are completely digestible. Be sure you kill cutworms and other plant-eating insects before you drop them in the pitcher or they will damage it, before they can be digested. The pitcher plant can not kill a bug quickly like the Venus' Fly Trap can. Filling the pitcher with too many bugs will make it fall over. They can not close their mouths when they are full. Carnivorous Plants do not need to eat bugs to survive. The process called photosynthesis is their basic food source. Insects are just dessert. Meat is not a good substitute for insects. A discolored spot on the pitcher leaf can result from what I call indigestion. Bacterial action on insects, which collect in the pitcher above the digestive glands, burns a round spot in the tube. As long as the leaf is green, you don't need to cut it off. Hoods and upper parts of leaves may turn brown and die as they are replaced with new leaves. Cut off just the brown part. The green part of the leaf is still doing the plant some good. Pitcher plants bloom in spring. Flower color varies from shades of pink to burgundy to yellow depending on the species. The flower resembles an abstract daffodil. The petals last about 3 weeks. The rest of the flower parts last well into autumn. On a patio, a large pot with several large pitcher plants can be as effective in controlling certain wasps, hornets and flies, as a bug zapper; and a lot less annoying. Add a big pot of sundews and you will also eliminate most of the mosquitoes, crane flies and gnats in a 6-8" radius.

Sarracenia species *S. alata*, *S. flava*, *S. rubra*, *S. leucophylla*, *S. minor*, *S. psittacina* and *S. purpurea* and their subspecies and hybrids are tough, long lived perennials. They are easy to grow if you understand and provide their few basic but very important requirements.

Light Requirements

A. Indoor Culture: place the plant in a south facing window that gets direct light for 6-8 hours a day measured in June, or in 10 or more hours of light a day, provided by a 40W fluorescent light located 4-8" above the plant's leaves. When the plants are kept at summer temperatures, summer light levels must be provided. Pitcher plants may also be grown in a terrarium with a fluorescent plant light. Cut off the flower stalk to divert the plant's energy to trap (pitcher) productions.

Outdoor Culture: in the Pacific NW, place the plant in at least 4 hours (more is better) of unfiltered late morning and early afternoon sunlight. In hot climates, use structures or deciduous trees or shrubs to shade the plants from the sun during the hottest part of the day.

Water Requirements

A. Indoor Culture: Pitcher Plants are bog plants. Never let the soil dry out. Keep potted plants in bowls of water at least 2" deep. Use distilled or rain water whenever possible. Going on vacation? Fill the water bowl to the top of the plant's pot. These plants are used to periodic flooding in their natural habitat. Pour water only into the pitchers of plants with rain hoods that do **not** extend out over the mouth of the pitcher.

Outdoor Culture: Pitcher Plants are bog plants. To clarify growing conditions, I define a bog as an area of soil that is always wet, but not under water. An area that has standing water in the winter and is dry in the summer does not fit this definition. A container garden is the simplest ways to provide good conditions for a mixed planting of several types of carnivorous bog plants. Creating a miniature bog is easy and inexpensive. The best system I have found so far is to use two containers, one inside the other. This system can be used to build container bogs in the ground or to make a patio bog bowl. In dry climates, a circulating water system with an underground reservoir of purified water would need to be added; but the principles of the container

system would be the same. The outer container (let us call it a bog pot) should have no holes in the bottom and be watertight. The inside container (let us call it a pond pot) needs to have holes in the bottom. The pond pot should hold $\frac{1}{4}$ of the volume of the bog pot. A Rubbermaid dishpan makes a great bog pot, but you can use any watertight container 12" deep or deeper and 18" side or wider, made of anything except treated wood or untreated cement. Most carnivorous plants do not tolerate calcium, alkaline conditions, or petroleum residues. Drill a $\frac{3}{8}$ " – $\frac{1}{2}$ " hole in the side of the bog pot 2" from the top. Wrap your pond pot with weed cloth and place it inside the bog pot, next to the edge and the hole you drilled in the side. Fill the rest of the bog container with soil mix made of 1 part clean sand and 1 part peat moss, thoroughly mixed and wet. Plant all of your Pitcher plants except *S. psittacina* and *S. psittacina* "Giant". Pot *S. psittacina* in sand, a $\frac{1}{2}$ a handful of peat moss and some gravel in a separate, shallow pot. Cover the sand with pea gravel 1" deep. Put it in the pond pot or a separate water pot of its own. Fill the pond with water slowly, and gently water the plants to clean and settle them. Top the bog with $\frac{5}{8}$ " minus crushed gravel or chopped live sphagnum moss. The water level in the pond may be allowed to drop to 1" in summer between refills. *S. psittacina* can trap bugs under water or above the water when water levels drop. It needs to be covered with 6-8" of water during the winter to survive hard freezes. In the summer, the water level may be allowed to vary. Do not allow the soil to dry out. The larger the container, the less care required, as long as $\frac{1}{4}$ or more of the surface area is a water reservoir.

3-5 Months of Dormancy

Pitcher Plants are not tropical. They are hardy perennials, native to eastern areas of North America. They appreciate a rest period.

A. Indoor Culture: place plant and water tray in an unheated room or garage where temperatures do not drop below freezing, 35-40 degrees F for 3-5 months, e.g. December-march. Date a strip of tape on the pot for reference. If you don't have a cool place indoors artificial light must be provided. See paragraph 1.A.

Outdoor Culture: in the Pacific NW, Pitcher Plants do not need to be mulched. Where temperatures drop below 20 degrees F for more than a week between thaws, cover the plants with 6-12" of wood chips, leaves or pie boughs. Remove mulch when all danger of frost has past.

Potting Instructions

If your plants are bare-root, keep them damp and out of the sun and wind until they are planted. Inspect the roots for damage. Broken roots should be cut with a sharp knife or scissors. Remove dead roots and brown or black leaves. Healthy Pitcher plant roots are white when young, black and firm when mature. Use 4-6" pots. Fill with a soil mix of 1 part builder's sand or superfine perlite and 1-2 parts peat moss. If a plant appears to have a thick taproot, place the root vertically in the soil with the crown above soil level. If a plant has an obvious rhizome, place the rhizome horizontally at or just below soil level with the roots in a vertical position and the crown exposed. Gently firm the soil. Water the plants in and jiggle the pot to remove air pockets in the soil. Shade the plants from strong sun for 3 or 4 days.