

The Search for a Pink Lady's Slipper

By Susan Camp

Every spring, I search our woods for one particular species of flower: the pink lady's slipper (*Cypripedium acaule*), a native orchid found in eastern North America from Maine to Georgia and as far west as Wisconsin. This lovely woodland dweller is one of 12 species of wild orchid found in the United States, but not in our woods.

The most commonly found lady slipper species in the eastern United States, *Cypripedium acaule* blooms between April and June. Also known by the less romantic name of moccasin flower, each light to rose-pink or pink-veined white flower sits atop a 12 to 18-inch stalk flanked at ground level by two opposite, dark green basal leaves with prominent veins. The large, showy, slipper-shaped flower is a pouch or sac, consisting of two petals that are fused except for a tiny opening in front, and two slender, reddish-brown or green petals that spread outward from the slipper. A single green sepal curves gracefully over the flower.

Pink lady's slipper grows in mixed pine and hardwood forests in mossy or rocky terrain. It prefers rich, moist, acidic, well-drained humus in dappled sunlight or partial shade. This plant does not tolerate full sun or dry conditions.

Lady's slipper plants are available from commercial nurseries, but may not survive transplanting. If they do, they may not bloom for years, if ever. They are easily damaged by application of too much fertilizer. One website recommends watering with distilled water or rainwater. They can be propagated by digging up a clump and dividing the rhizomes as you would divide irises, but like other native plants, they should not be disturbed in the wild and never removed from public land. Lady's slipper orchids are fussy plants and are best left to grow in their native habitats, where they can live for more than 20 years.

Cypripedium seeds must endure long periods of cold weather in order to germinate. The plant engages in a symbiotic relationship with a soil fungus of the *Rhizoctonia* genus. The fungus sends out hyphae, thread-like filaments that open the seedcase and deliver nutrients to the lady's slipper seed, since, unlike other seeds, it cannot produce its own. Once the lady's slipper plant is mature and producing its own food, the fungus will obtain nutrients from the plant's roots.

Lady's slipper orchids are pollinated by bumblebees that are attracted by the sweet fragrance and bright color. The bees enter through the tiny opening between the fused petals. They find no food inside the flower and cannot escape back through the entryway. A pair of exits at the back of the flower are located between two pollen masses. As bees pass beneath the masses, they pick up pollen on the way out. This pollen will be deposited in the next lady slipper and more gathered from the new plant.

The fruit of the lady slipper is an oval, copper brown capsule filled with thousands of tiny seeds that ripen in August and are forcefully expelled from the capsule. The seeds lack stored food reserves, so they must land in soil that contains the species of fungus required for them to germinate and sprout. It is inadvisable to attempt to harvest seeds from the capsule because it is unlikely they will germinate.

There are no serious disease or insect pest problems. Deer sometimes eat lady's slippers.

Most species of *Cypripedium* have a long history of medicinal use for nervous disorders, muscle spasms, toothache, and as a non-narcotic sedative. Tiny hairs on the leaves can irritate the skin of susceptible individuals, causing dermatitis similar to a poison ivy reaction.

The USDA Forest Service articles "Meet the Ladies: The Slipper Orchids" and "Pink Lady's Slipper (*Cypripedium acaule* Ait.)" and NCSU Extension Gardener Plant Toolbox entry "Cypripedium acaule" contain information and color photos of this springtime woodland wildflower.

And my search continues for one wild lady's slipper in our woods.