



Showy Lady's Slippers

Growing Hardy Lady's Slippers

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Gardens of Rice Creek

Native Species of Lady's Slippers



Ruby Slippers Showy



White Form Showy



Large Yellow



Small Yellow



Kentucky Lady's Slipper



Correct Planting

If you see a lady's slipper in the wild, you invariably catch your breath. Walking in the woods and coming upon a Yellow Lady's Slipper among the trees is akin to seeing a fairy. Driving by roadside ditches filled with pink and white Showy Lady's Slippers is like a glimpse of heaven. They seem other-worldly. Of course, they are the ultimate plants that are "best enjoyed in the wild". Lady's slippers and all wild orchids are protected by state law from picking. Yet, we yearn to see them again and even dare hope we could somehow make them feel at home in our gardens.

What a puzzlement! Fortunately, there are nurseries for these special plants, both in our state and the U.S. Some offer seedlings and others mature plants grown from seed and tissue culture. The nurseries listed send excellent plants. In addition, licensed collectors save truly endangered plants from development. Roads, bridges and shopping centers expand into wild habitats, so before they are destroyed, these precious plants may be transplanted and released by local, established nurseries. Therefore, lady's slipper plants can be legally obtained, but how can we best get them to survive, thrive and to actually become a special part of our garden landscapes? Here are some of the ways I have fulfilled my half century love affair with lady's slippers by growing them in gardens.

Creating Garden Environments for Lady's Slippers

These are not easy plants to place, but a few basics apply. Find the coolest spot in your yard, usually the north or east side of a building or evergreen tree. Planting in well-drained, humus-rich soil is essential, which is then topped off with an organic mulch. pH is not important as long as it is not very acid. Though a fungal relationship is important to nourish seedlings, mature plants outgrow their need for this relationship. They actually do not like too much biological activity in the soil because it encourages rot. Avoid fresh compost and wood chips. Use well-aged organic matter as an ingredient in sandy soil to hold moisture and nutrients.

Site: Planting on the cool north side of a building can give plants reflected light from a nearby lawn or sidewalk. Make sure they will get rain and snow. Never try to protect them by planting them close to a building under the overhang. They will shrivel up and dry out no matter how much we intend to water. East can be a good exposure, since the spot is usually in afternoon shade, but avoid it if morning and noon sun makes it too hot. South and west facing sites are most always too hot in summer. A useful maxim is that lady's slippers want good light, but not burning sun. Planting in a woodland setting, with a high canopy from deciduous trees gives moving light and shade: the situation most like that in nature.

When planting with other garden plants, give them a place of their own of about 2 square feet. Good companion plants are shallow-rooted spring bloomers like woodland phlox, primroses and spring ephemerals, far away from large hosta, hellebores and shrubs.

Soil: Roots of these terrestrial orchids need to push easily through soft earth and not dry out. Ideal soil for them has just as much air as water in the pore spaces: 50:50 air to water.

Sandy soils are composed of coarse granules. It drains well because pore spaces are large, allowing plenty of air to enter the soil. However, water from rain or irrigation soaks away rapidly out of the reach of roots.

Clay soils are firm and fine-textured and do not drain well. Roots find it tough going. Pore spaces are small, lack air, and hold too much water when they are saturated. Conversely, when clay dries out and water is applied quickly, it can shed off the surface and not soak in.

Correcting Soil Structure: Normally a soil is neither pure sand nor pure clay. Dig up some of the soil where you intend to plant and squeeze a handful. If it forms a tight ball that can't be broken with your thumb, it is clay. If it falls apart in your hand it is sand. The best structured soil forms a fragile ball that breaks easily when you touch it with your thumb. Here are some ways to make soil amenable to your slippers.

Sandy soils are easy to correct by adding 6" of good garden soil. Turn it into the existing soil, at grade, to make a bed for the slippers. The bigger the better. Watered thoroughly and prepared well in advance of planting, the bed will be close to ideal.

For challenging—windy or sunny—sites with sandy soil, steady moisture is easier to sustain by creating a reservoir beneath the bed, sometimes called a false bog. A container such as a child's wading pool or even a bucket, is sunk into a hole in the ground and a few holes pierced in the bottom to allow for bottom drainage. Its lip should be 4 to 6" below the soil surface to allow surface water to wick out to the surrounding soil. Nearly filled with sand, it is topped off with a foot of well drained, humus-filled soil. Water ascends from below by capillary action to reach the roots and keep them moist and turgid. Mulch on top protects roots from drying out. Trilliums and primula respond happily to this construct as well.

Clay soils are a little more work to make ready for these plants because pure clay's structure may either resemble soup or cement. The most dependable solution is to make a raised bed on top of clay soil, supported on the sides by rocks or logs. It need only be a foot high. At ground level, put down permeable groundcloth to keep worms from bringing up clay from beneath. Fill the bed with a mixture of sand, pea gravel, perlite and some organic-heavy garden soil to create a well-drained soil with nutrients.

Muck soil like that next to a pond or swamp may seem ideal for moisture-loving Showy Lady's Slippers. Although these plant like more moisture than yellows, unless the soil has drainage, the underground parts can rot. Even though they grow in drainage ditches, they prefer the sides of the ditches where moisture can reach them, but where they dry out occasionally. We have made low berms for our plantings that are near Rice Creek, which give them both moisture and drainage. A groundcover of perennial forget-me-nots makes a sea of blue around them.

Planting Lady's Slippers

Are you getting the picture that these are "Goldilocks" plants? Not too wet/not too dry. Just right. These are some of the secrets I have accumulated from many years of my own and other gardeners' experiences.

After the bed is prepped, the fun part is actually planting. Dormant plants in fall or early spring are the most available, but those in leaf and flower must be planted immediately. Lady's slippers do not survive well in pots.

Surprisingly, the roots grow horizontally. They will rot if plunged downward where they can't get enough air. Therefore, make a shallow basin about 4 to 6" deep.

Lay the dormant plant in the hole and cover it with soil. Carefully integrate the roots with the soil and slightly raise the rhizome, the thick, underground stem, so it is covered by only an inch of soil. The tip of the growing point should be just showing above the surrounding soil. Gently compress the soil, and water it again to settle it around the roots, leaving no air pockets. Cover with a mulch 3" deep or so, of chopped oak leaves, evergreen needles or pine bark nuggets. Keep a reliable mulch on the plants all year around. In nature, lady's slippers reside in a narrow vein between soil and mulch because they need an even supply of both moisture and air. Kind of like a sandwich.

Lady's Slippers Easiest to Grow

Though there are several kinds of *Cypripediums* native to the northern U.S. I have found these species and hybrids most growable here in gardens.

Showy Lady's Slipper, *Cypripedium reginae*, is Minnesota's State Flower. Pink pouches with snowy petals and sepals, they are a spectacular sight as they stand two or three feet tall in wet meadows, forest edges and in the afore-mentioned ditches. Mid-June is their bloom time. Occasionally, one will be pure white. They need wetter soils and stronger sunlight than yellow slippers. Conditions need to be carefully balanced—lest they dry out and suffer leaf burn in the sun or languish in the shade.

Large Yellow Lady's Slipper, *Cypripedium parviflorum* var. *pubescens* and **Small Yellow Lady's Slipper**, *C.p.* var. *makasin*, are similar and quite amenable to ordinary garden conditions. Large Yellows have yellow, curling sepals and Small Yellows have striking, mahogany sepals. They happily coexist with trillium, bloodroot and small hosta and are tolerant of part sun and shade. They bloom earlier than the Showy Lady's Slippers in order to take advantage of spring light in the forest before trees leaf out.

Kentucky Ladyslipper, *Cypripedium kentuckiense*, though not native, grows well in Upper Midwest gardens. Large, creamy-yellow to white flowers and brown petals and sepals make it a standout in the woodland shade garden.

Hybrid Lady's Slippers (*Cypripedium*) display amazing vigor. They were first developed in Germany by Werner Frosch. Michael Weinert, also in Germany, is the first commercial producer and is still developing new hybrids. Several are derived using our native hardy yellows, pollinated by exotic Eurasian ones of pink, rose and white. Amazingly, for the most part, they are as hardy and even easier to grow than yellow lady's slippers. Now, others are continuing this work, crossing other species and creating what is called a *grex*. Seedlings are named for the parents, and like children in a family, may have only some common characteristics. Like the Johnson's kids, they may look like brothers and sisters but not like identical twins. Thus, one Gisela may be darker or lighter than another. (No single quotes for Gisela *grx.*) They all are good growers, but in high springtime temperatures, colors are lighter and in cool springs they are darker. Divisions of premium plants are available, called clones, and are written with single quotes, for example 'Frosch's Harlequin' (a selection of *Cyp.* Hans Erni). These plants take longer to produce so are more costly. The most vigorous hybrids are Gisela, Sabine and Sabine Pastel, Ulla Silkens and Victoria. Though flower color may vary, due to genetics or temperature, when they bloom in your garden, they are magnificent!

Plant Care and Protection

Steady moisture is essential to slipper growth. Because buds for next year are formed this year, leaves need to stay green and produce food as long as possible in the season. In hot weather, supply water often to prevent leaves from turning brown and plants going into early dormancy. But, if soil is saturated, sun is overhead, and temperatures approach 100F rig up something to shade plants, especially those newly planted.

Fertilize with a granular fertilizer early in the spring before flowering to give plants an extra boost when they are pushing growth. We use a slow-release 15-15-15--the same as other perennials, not less. After that, if leaves are pale green or yellowish, add some more slow-release to keep them dark green and producing food for the plant. All slippers go dormant in Fall, so don't overwater them when leaves turn brown in August.

Diseases very rarely happen, except for "drying up disease". Conversely, the biggest killer of lady's slippers is not cold, but rot. In a wet year, fungal rot makes leaves black and stems keel over. Cut off the damage and remove rotten shoots. To prevent this happening, use a mulch of pine or spruce needles.

Deer fancy the blossoms of all lady's slippers, so be sure to fence them out if they are in your neighborhood.

Summary

Many gardeners and nursery folk contributed to my own experiences. I am especially indebted to Lisa Taft, a devoted Minnesota gardener, who first introduced me to Frosch hybrids, Amy Murray of Hillside Nursery, and Michael Weinert, who commercially produces them, and who gave his expert help with growing hints.

I trust you understand how much I care for these plants and do not blame me for pointing out some growing pitfalls. You no doubt already have a deep affection for them. It is a privilege for me to give insights into how these fantastic plants can be a living part of our gardens and enrich our lives.

Sources for Lady's Slippers

These nurseries all grow their own plants, species and/or hybrids.

Hillside Nursery: Info@HillsideNursery.biz | Ashfield, MA | 413-489-1616

Plant Delights: PlantDelights.com | Raleigh, NC | 919-772-4794

Spangle Creek Labs: SpangleCreekLabs.com | Bovey, MN | 218-247-0245

Gardens of Rice Creek: GardensofRiceCreek.com | Minneapolis, MN | 763-242-5009

References: Native Orchids of Minnesota, Welby R. Smith, University of Minnesota Press

Information about Lady's Slippers

Frosch Exclusive Perennials | www.ladyslipper.de | Bavaria, Germany

Frosch Hybrid Lady's Slippers



Aki



Gisela



Maria



Sabine

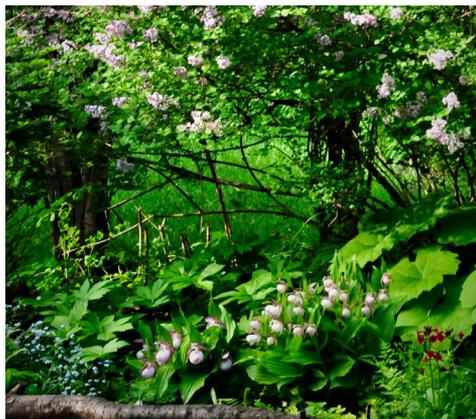


Ula Silkens



Victoria

Lady's Slipper Gardens



Frosch Hybrids



Raised Bed on Clay



Established Clump, Gisela



Showies and Primula



Otto in a Garden



Maria and Large Yellow