

Planting and Care of Mature Cypripedium

Thank you for purchasing Cypripedium from Gardens at Post Hill LLC. We have chosen high quality plants that we hope you will enjoy in your garden for many years. There are several Cypripediums in public gardens that are more than 100 years old.

Bareroot plants should be planted as soon as possible after receipt If they need to be held for a few days prior to planting, they should be placed into a refrigerator but must *not* be allowed to freeze. Potted plants should be kept in freezer bags and placed into a refrigerator or in a protected area like a garage (freezing is fine but avoid freeze/thaw).

Site

In siting your Cypripedium beds, keep in mind that most Cyp's require about two hours of direct sun and dappled shade the remainder of the day. Morning sun is best; afternoon sun will also work but may be harsh in mid and late summer if it does not become filtered by the leaves of tall trees as it sets. Noonday sun is not tolerated by any Cyp's with the possible exception of well-established *Cyp reginae*, *Cyp candidum*, or the *Cyp candidum* hybrids such as *Cyp xandrewsii* and *Cyp Favillianum*. Even for these relatively sun-loving species care must be taken to not let their roots become desiccated (keep them well-mulched!). Thus, an ideal location would be a wood's edge, fence or building wall that receives morning sun from the East or in front of a North-facing building or wall.

Once candidate sites are identified, examine the drainage of the site. Like any other orchid, Cypripedium will not tolerate a water-logged site. We recommend making specific beds for Cypripedium even if a single plant is being considered. We dig about 10 inches deep and discard the soil. Cypripedium, while "terrestrial" do not grow in dirt but rather the leaf litter and loose material, the "duff," of forest floors. Cypripedium roots are very shallow-growing, extending only 1 - 4 inches (2 - 10 cm) beneath the surface of the medium.

In choosing your planting site, one in which the plants may be left without disturbance will enhance the clumping of your plants. Cypripedium, like many perennials, are not fond of being transplanted. After transplantation they may not expand for a year or two, and some plants, in particular *Cyp reginae*, may not flower the spring after being transplanted. However, as long as the plant is happy with the site, the energy that was not used to support flowers is channeled into root formation and extension resulting in a much larger plant the following spring.

Growing Medium

While many enthusiasts include soil as part of their growing medium and that works reasonably well for many American species, we find that most Cyp's, and all Asian species, do much better over several years in artificial, inorganic media. Currently we use the following medium and have observed that our plants are all expanding numbers of stems much more rapidly than when we used soil-based media: Soil Perfector® : Turface® : gravel at 1 : 1. Soil Perfector is a large-grained grey perlite-like material made from shale and marketed by Espoma; it is often available at garden supply centers. Turface is a porous fired clay product available at Lesco landscaping supply stores. The same material is also found at our local Home Depot as Schultz Aquatic Plant Soil.

If some of these specialized materials are not available, then a good mix can be made using pea gravel from your garden center : sand (be careful with the white play sand, it is often toxic to plants – we use the "Play Sand" from Quikcrete, a yellowish-brown material available at all Home Depot stores in the concrete department) : potting soil, 2:2:1. Perlite is not good for outdoor beds since it will float to the surface over short times but is great for potted Cyp's.

See species notes at the end for specific instructions for many species and hybrids

Note: While we and many other growers find that artificial media serve us best over time, some growers use organic-containing media. For example, Hillside Nurseries, which produces more mature Cypripedium than any other company in the US, uses a mixture of sand:hardwood bark mulch at 1:1, and has outstanding results. However, since they are a commercial grower their plants are not in this medium for many years without being transplanted.

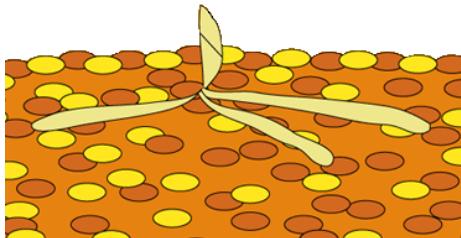
Planting

Usually Cyp's are obtained in the fall or early spring as bare-root, dormant plants. Plants should have mostly firm, off-white roots. In mature plants there will be some darker old roots – leave these attached as they have stored nutrients. Growth buds should be prominent (*Cyp reginae* have much smaller buds for their size than other species).

Plants should be placed in the media with their roots extending roughly parallel to the medium surface, only 2 - 4 cm deep. The depth of planting should result in the buds being about 1 cm from the medium surface. Remember that

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naturally occurring Cypripedium grow shallowly in the litter of the forest floor.



If planting in the fall, once the plants are in the medium and watered well, they should be mulched with leaves (we shred them in the lawn mower first since these are blown around less by winds) to a depth of about 4 inches. Unless the winter is extremely dry, no additional care is required until spring. In late April we rake most of the mulch away so that the sun can warm the surface – especially for early-blooming species such as Cyp parviflorum var pubescens and Cyp parviflorum var parviflorum (which bloom in early to mid-May). Once the stems begin to break the surface, if a hard freeze is predicted, we rake a few leaves near (taking care to not break the stems). Cyp reginae and Cyp kentuckiense bloom in June and often will not begin to form stems until mid-May.

Once the stems are up, we return about an inch of chopped leaves as mulch to provide nutrients and keep the soil moist and cool.

Care

Cyp's require little care except to take care that the beds never become completely dry. Early in the spring slugs may eat the emerging stems – we often put out slug bait (this saves hostas from damage as well). Once every few years in May a species of weevil may attack plants – an organic insect spray such as pyrethrin will take care of this immediately. We do provide time-release fertilizer, about 1 teaspoon per plant. We use Vigoro or OsmoCote time-release fertilizer that contain not only nitrogen, potassium and phosphate, but also trace elements including copper, boron, and magnesium. We add this in April and in late June.

Cypripedium in pots

Cypripedium do well in pots. The same medium may be used as in beds. However, to make a light medium we usually use Soil Perfector : Turface : coarse perlite 1:1:1. We fertilize once each week using Dyna-Gro Grow, ½ teaspoon per gallon. Pots must be kept cold for several months during the winter, kept between 35-38° F. This may be accomplished by placing the pots into plastic freezer bags (regular storage bags

will allow the plants to become dessicated) a few hours after watering, and placing these into a refrigerator, or placing the pots in their bags in a relatively protected place such as an unheated garage, or into a trench in the ground and then covered with several inches of leaves.

Species Notes

Cypripedium candidum: This is a small species, about 12 inches in height. It may form clumps with many stems over a few years. This species likes a very alkaline medium. In addition to the usual medium components, we add crushed oyster shell (available at feed supply stores for chickens) to 25% of the medium volume. When planting, we also add ¼ cup of lime and we continue to add ¼ cup of lime every fall. Cyp candidum needs more light than most Cyp's, 3 – 4 hours daily. Avoid noonday sun so as to avoid drying the medium. In nature Cyp candidum is a prairie species and while they grow in full sun, taller plants provide some protection in the form of a very light "shade."

Cypripedium parviflorum (including var parviflorum, pubescens and makasin): These plants like 2 hours of sun each day. Very well-established pubescens may tolerate somewhat more sun. On the other hand, in too little sun the plants will not bloom. If a mature plant produces nice leaves and stems each year but does not bloom, it usually needs a bit more sun.

Cypripedium reginae: This is a large species and plants must be given room to expand. In 5 years a happy plant may have 8 – 12 stems and a root system nearly 3 feet in diameter. We plant these no closer than 2 feet from one another. Cyp reginae tolerate more sun than some other species, 3 or even 4 hours are fine – but keep away from noonday sun and protect newer plants. With 2 hours of sun the plants may grow 3 feet tall when established and have dark green leaves and few flowers. With 3 hours of sun, plants are closer to 2 feet in height, have light green leaves and many more flowers. It is important to add ¼ cup of lime around each plant every fall, and once there are several stems, this can be increased to ½ cup.

Cypripedium hybrids: Gisela, Philipp, Aki, Hank Small, Ingrid, others: Treat all of these hybrids like Cyp parviflorum. Cyp Gisela, in particular often forms broad clumps. Plant them about 18 inches apart.



For additional information, or to ask questions, please visit us at www.gardensatposthill.com.