

## ***Cypripedium* Seedlings – Cultivation During the First Three Years**

*Cypripedium* lady slipper orchids originate from northern temperate climates. All of them grow during the summer, lose their leaves in the fall, and are dormant during the winter. *Cypripedium* seeds are very small and do not contain any nourishment. We collect seed, sterilize them on their outside surface using bleach, then grow them in sterile medium containing sugars, amino acids and vitamins in complete darkness for several months.

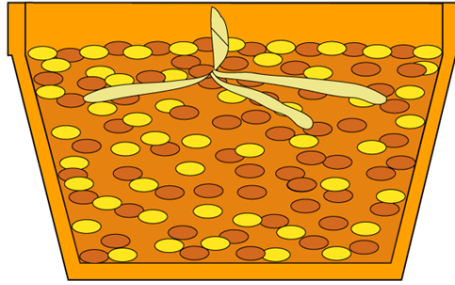
By this time the nearly microscopic seeds have grown two–four roots and one–three shoot buds. Once the shoot buds form the seedlings require a cold dormant period that simulates winter, often referred to as vernalization. We accomplish this by removing the seedlings from their flasks, washing them carefully to remove all traces of growth medium, then storing them in small bags with a bit of water in a refrigerator for at least four months. It is at this stage that you have acquired your seedlings.



If you plan to keep your pots outside in a protected location, in mid–May the seedlings may be removed from their bags (earlier if you see that the shoot buds are beginning to grow noticeably – but you will have to keep the pots inside until any danger of frost is past). Because they are small, seedlings should be planted in a small flowerpot that contains a mixture of roughly equal amounts of perlite, Pro’s Choice Soilmaster® or Turface® and natural aquarium gravel (the kind that has particles about the same size as the Soilmaster). If Soilmaster is difficult to locate in small quantities a mixture of two parts perlite and one part gravel will work well. We often use a six inch pot for six first year seedlings. A pot this size will be adequate to grow these seedlings for three years until they are ready for beds.

Wet the media components in a bowl and mix thoroughly. Place a wire mesh over the drain holes in the pot, then add media. The seedlings should be planted so that the roots are roughly parallel to the media surface, with the buds just below the surface – do not plant too deeply!





*Cypripedium* seedlings must be kept moist – *never* let the media dry completely. This usually means a light watering every other day or so. For maximum growth, your seedlings should receive fertilizer every other watering. We recommend either Miracle Gro Bloom Booster or Dyna-Gro hydroponics fertilizer. Each of these contains a complete mixture of trace elements, which is important since your seedlings are growing in an artificial medium. We use each of these fertilizers at a concentration of  $\frac{1}{4}$  teaspoon per gallon of water.



During their first year or two your seedlings should be in a bright location but should never receive direct sunlight. Once the seedlings reach three – four years of age, they enjoy about two hours of morning sunlight each day – never noonday sun.

In raising *Cypripedium* seedlings, the only difference from tropical orchids is that *Cypripedium* must have winter. The easiest way to provide winter for potted plants is to make sure the medium is moist but not wet, then to place the pot into a plastic bag and into the refrigerator for four months (five months is better for most Asian species except *Cypripedium formosanum* which comes from a warmer climate). Make sure the pot is placed where the seedlings will not freeze and thaw. Alternatively, pots may be placed in an unheated garage or other area where temperatures will not change radically.

*Cypripedium* seedlings, like many orchids, mature slowly. While an occasional precocious seedling may bloom in its third year out of flask, most will require about five years.

We hope you enjoy your *Cypripedium* seedlings and we look forward to receiving images of their first flowers! Please visit us at [www.gardensatposthill.com](http://www.gardensatposthill.com) where you will find much additional information about temperate terrestrial orchids.

