

Cattleya Repotting

Cattleya orchids typically require repotting every few years. There are generally only 3 reasons to repot an orchid.

- It has outgrown its pot.
- It is a new acquisition, and it is growing in media that is different than the rest of my orchids and might require a different watering schedule.
- The orchid media has broken down (rotted) and at this point can rot the plant's roots and block off air flow to any remaining roots. Since healthy roots are a key to growing a healthy plant, keeping the media in good shape is essential to their remaining healthy.

Repotting some other orchid genera, for example, Phalaenopsis, is merely a matter of removing plant from the pot, shaking off the old mix while being careful with the healthy roots, placing them into a pot that will easily accommodate them, and pouring in new media. But Cattleyas and Dendrobiums and other genera are more difficult, because disturbing the roots usually destroys many or most of them. The following steps explain pot selection, media selection, rhizome clips, root pruning, and the repotting process.



Figure 1 – Cattleya plant in need of repotting. Because the newest part of the plant has grown over the side, it is oriented differently and not only will the plant not look so good, but the new roots emerging from the bottom on the new growth cannot grow into the media, so they will dry out too quickly. I try to repot them before they reach this point.

When to repot

I like to repot Cattleyas only when they are in active growth, especially with species, which tend to grow new roots only at particular times of the year. Ideally a new growth will have already started to grow, which means that roots should soon follow. This does though necessitate being extra careful, because the new growths are very easy to break off.

Pot size and type

Many people prefer decorative and clay pots, thinking that they look nicer than plastic pots, and that could certainly be true, but in my experience, clay, ceramic, or other types of pots do not perform well, at least under my growing conditions. I've tried several types of clay orchid pots that have extra holes or slots, but they are heavy, expensive, and mineral deposits build up on their surfaces, making them toxic to plant roots. I prefer to use plastic azalea pots, which

have at least 8 holes in the bottom, to maximize air flow, and when I bring them in the house in bloom, I place them in wicker baskets; they look great that way.

When I repot, I try to select a pot big enough to accommodate at least 2 years growth before the plant's newest growth reaches the far side of the pot. I do not use pots bigger than 10" because the media tends to stay too wet in the middle of larger pots. While I love large plants and find that they flower better, when the plants grow too big for 10" pots, it's time to divide them.

Media

The type of media that I use is partly dependent on the purity of my water. I have tried potting in lava rock and other inorganic mixes, but because my water is highly mineralized, deposits build up quickly on the media surface and repel or damage the roots that come in contact with it. Because of that, I use bark-based mixes, which are more forgiving, but which also rot within a few years. Fir bark has traditionally been the bark of choice, but I've found it more and more difficult to find fir bark of adequate quality, and these days am using Orchiata brand bark that is imported from New Zealand and is made from the bark of radiata pine. (Local and other American-grown pine trees have far too much pine tar in their bark, which is toxic to orchid roots.) I sometimes add some lava rock in the bottom of the pot and occasionally pieces of charcoal or large perlite into the mix.

Root pruning

After roots on a Cattleya are disturbed, many of the roots will die, and since I really don't want a big mass of dead rotting roots in my newly replaced media, I prune them before I repot the plant. **Figure 6** shows the plant from **Figure 2** with the roots pruned and ready to pot.

Rhizome clips

After I cut off most of the roots, not much remains to hold the plant in place in the pot. I can attempt to stake it in place with a bamboo stake, but even better is using a rhizome clip. You can buy these online or bend them yourself from 12 gauge wire.

Tip – the 12 gauge galvanized wire I bend into these clips is the same wire used to hang suspended ceilings and is available at most big box stores.

Repotting steps

Remove any rhizome clips and remove the plant from the pot. If it is hard to remove, you might need to soak it to make the roots let go, especially on clay pots. **Figure 2** shows a plant that has been removed from its pot that is in need of repotting because it has grown over the side. Be very careful to avoid damaging any new green root tips and any tender new growths.



Figure 2 – Cattleya removed from its pot.

Remove the media from the roots. When that is complete, I usually clean up anything else on the plant that detracts from its appearance and divide the plant if required. I like to make sure that any pieces of the plant that I intend to keep have at least 3 growths and at least 1 new eye that can grow into a new growth (see **Figure 4**).



Figure 3 – Media removed from the roots and the back part of the plant removed.

The eyes located at the base of the pseudobulbs are the part of the plant that will generate next year's growth (see **Figure 4**). Any piece of the plant that does not have a viable eye will not grow and can be thrown away. The eyes are a

favorite target of insects and should always be guarded. **Figure 5** shows a part of the plant with eyes that are no longer viable.



Figure 4 – Cattleya eye that is beginning to grow.



Figure 5 – Cattleya eyes that have been killed by insects.



Figure 6 – Plant with new growth emerging, media removed, roots trimmed, and ready to repot.

Orient the plant in the new pot in such a way that the oldest part of the plant is up against the inside of the pot and the new growths are given maximum growing space. Sometimes a plant grows in multiple directions, and I prefer to split them if they are big enough, so that they grow in only one direction. Sometimes that can't be done, and as long as the plant fits in a pot smaller than 10", I keep the plant in 1 piece. On the plant shown in **Figure 6**, there are 2 new growths on the right side of the plant, the growths on the far left are placed up against the inside of the pot (the plant will never grow to the left again unless something terrible happens to the growths on the right).

Select a pot slightly larger than the width of the plant and place a layer of lava rock chunks on the bottom. These serve several purposes.

- They add weight to the bottom of the pot so that it isn't so top-heavy.
- They allow plenty of air space around the holes at the bottom of the pot.
- They prevent the media from sliding around as I pack it. New pots can be slippery, and I like for the mix to stay in place as I press it into the pot. The rough surfaces of the lava rock help with that.

I like to allow enough room for the plant to grow 2 or 3 new growths before the newest growth reaches the side of the pot. That allows at least 2 years growth before the plant grows over the side.

Hold the plant in place in the pot and at the correct height as shown in **Figure 7** and begin to scoop new media into the pot. I fill the pot with media up to a little below the rim, and ideally the media will cover all of the roots but not cover any of the rhizomes (see **Figure 8**).



Figure 7 – Plant being held in place in the pot.

Continue to scoop media into the pot and fill in around the plant and its roots. I like to pack the media in as tightly as possible. When I think I am done, I like to press down with my fingers and make sure I have filled all of the little voids in the pot with media. Clip the plant securely into the pot using a rhizome clip. A secured plant is shown in **Figure 8** in a plastic pot and in **Figure 9** in a clay pot. Apply the rhizome clip in such a way that it can't slip and allow the plant to fall over. Also, take care in placing the rhizome clip to avoid damaging the plant or placing it over a viable eye. You can also tie the plant to a bamboo stake if necessary to hold the plant in place. The new growth on the plant shown in **Figure 8** has maximum room to grow before reaching the side of the pot.



Figure 8 – Rhizome clip on plastic pot.



Figure 9 – Rhizome clip on clay pot.

Warning about orchid viruses

Orchid viruses are one of the most deadly orchid pests, and with few exceptions they are spread from plant to plant with cutting tools. I use clippers rarely, preferring instead single use razor blades, which are used on a single plant and then discarded. Be very careful though; I have cut myself several times. In those rare instances when dividing large plants where a razor blade might not do the trick, I use clippers whose blades have been torched with a propane torch to destroy any possible virus. Just remember to always change tools between plants. It's not worth contaminating a \$50 pant to save a 10 cent blade!



Figure 10 – Single use razor blades.