

## Repotting Orchids

To remain healthy, orchids must be repotted periodically. This is not done to necessarily give them more root room in a larger pot (as is the case with most other container plants), *but to give them fresh potting mix as the old mix breaks down*. The importance of this cannot be emphasized enough. To thrive, orchid roots must have an open mix that drains freely, retains some moisture, and allows air to circulate. This is because of the epiphytic nature of most orchids we grow in pots. In nature they would be growing on tree trunks, branches, or rocks (and more rarely on, the soil surface) with their roots exposed or at most covered with a thin layer of leaf litter and/or moss. This is why so many orchids are grown in bark, bark based mixes or moss. These media provide the free drainage and the air movement the roots need.

Over time, however, natural bacterial and fungal action causes these organic materials to decompose. The size of air spaces decreases, and moisture retention increases. If not repotted, roots are deprived of air, stay wet for too long, and ultimately rot. As a general rule most orchids should be repotted every two or three years. Some such as lady slippers prefer to be repotted every year. Some orchids should only be repotted when necessary (if in doubt, ask).

The process is also different from repotting conventional container plants. The steps are as follows:

1. Gently remove the plant from its pot, and this may be easier to do if the plant has been watered within the last 24 hours. Tap the sides of the pot, or invert the pot (cradling the plant with your hand so it doesn't fall!) and tap the bottom if necessary to loosen it. With some plants, or with plants in clay pots, this may take considerable effort. Be patient, and resist the urge to simply grab the base of the plant and pull. You may have to break the pot in some circumstances to get the plant out!

2. Untangle the root mass, and remove all (or almost all) the old potting mix. This may take time if the root system is large or very tangled (as with Cymbidiums). There will be damage to roots, and in fact sometimes you may need to attack the root system with a sharp (and sterile) cutting tool. This is not necessarily a bad thing, and with many orchids reducing the size of the root system will promote vigorous new root growth. Roots that are rotted or dead (soft, mushy, dark, hollow, or otherwise bad looking) need to be removed, either into live healthy tissue or as close to their base as possible. Similarly, roots that have been mashed or bruised in the untangling process must be cut back into firm healthy tissue. Some growers reduce the length of all long roots so that the plant easily fits back into the same pot.

3. At this point the plant may be divided if necessary, or some of the backbulbs (older leafless growths) may be removed to produce a more manageable plant size (this does

not apply to plants such as Vandas or Phalaenopsis, those referred to as monopodials). This is also a good time to remove dried old leaf sheaths and examine the plant really carefully for insects and disease that may have been hidden within the mass of it.

4. *Pot size will be based on the size and health of the root system, and less on the size of the top growth*, though ideally the pot should provide room for two years of growth. For mature plants such as Phalaenopsis you may never need to put them into a pot larger than 8" in diameter, with some being happy in a 6" pot their entire life. With vigorous plants you may increase pot size, but usually no more than 1" or 2" in diameter. Where root damage has occurred, a smaller pot is often used. If the plant needs room to spread, but the root system does not warrant use of a larger diameter pot, a balance may be struck by using a pot slightly wider, but shallower such as those referred to as Azalea pots or Bulb Pans. This will give you a larger surface area, but no real increase in volume. This is usually a good idea for large specimen plants.

*Your pot must have drainage holes, the more the better.* If a plant has been doing well for you, I don't recommend changing the kind of mix it is potted in, especially for a beginner. If it was in medium bark put it back into medium bark. Different mixes have different characteristics, and watering frequency, feeding and so on need to be adjusted for this.

5. Always pre-moisten your mix before repotting. Begin by putting a small amount of potting mix in the bottom of the pot (many people put in a layer of "drainage material" such as rock or Styrofoam peanuts. I do not, but make no recommendations either way). Place the plant in the pot and either center it or place it such that the oldest portion is nearest the rim, giving the plant room to crawl across the surface (this does not matter for monopodials). The plant's base (root crown) should be just slightly below the level of the rim. Holding the plant in place with one hand, the potting mix can be added slowly and worked gently in among the roots, tamping it as you go. Pots are generally filled almost to the rim, with the root crown right at the surface or ever so slightly below it (never buried). The mix should be tamped enough so that the plant is stable and does not rock easily (if necessary a stake can keep the plant stable till new roots anchor it). Some people feel you should be able to lift a properly potted plant by its top, and the pot should come right along with it. I strive for this, but don't insist on it, and rarely try it when I use a clay pot!

6. Water the plant well.

7. For the next two weeks or so newly repotted plants should be kept in subdued light and out of strong air movement. They may be misted lightly in the morning, but watering frequency should be reduced. They should not be fed for at least two weeks, and you may wait until new root growth is seen in the case of plants that had damaged root systems. After two weeks the plants may be slowly re-introduced to their preferred

window locations, and watered normally.

Except where emergency repotting is necessary, plants should be repotted while a flush of root growth is in process. This is often in the spring or at the point where new growth is several inches tall. It is never a good idea to re-pot while a plant is in flower.