

Mastering Indoor Orchid Culture

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Many different types of orchids can be grown to *perfection* indoors.

**CASE IN POINT: Bulb. Elizabeth Ann 'Buckleberry' – 99 Point CCE on Nov. 19, 1994
It is said the owner of the plant, Nancy Joe Volpe grew it in her bedroom!**

It is not rocket science, it is not difficult, but it *is* different from typical houseplant culture. While most houseplants do come from tropical regions, just like orchids, they are for the most part terrestrial. Orchids, by in large, are epiphytic, requiring a more precise duplication of their natural environment for success. The average conditions inside your home are NOT particularly similar to those natural environments save for the absence of freezing weather. Therefore, a certain amount of effort must be expended in coming up with creative solutions to improving the conditions around your indoor orchid plants if they are to prosper for you. This doesn't necessarily mean a big investment in materials and equipment – there are many low tech options that will suit your orchids just fine, and we will explore some of these in this discussion.

What orchids are suited for indoor culture?

There ARE limitations as to which kinds of orchids will do well with any growing situation, be it indoors, a greenhouse or outdoors. Tropical orchids come from many different climate niches, some are easy to duplicate within the confines of your home, while others are nearly impossible. (For sake of this presentation/discussion we will deal with home culture in the specific climate of the Southeast USA.)

The one factor that above all else governs which orchids will do well inside the home is temperature. We control the temperature in our homes to be comfortable for US, and aren't likely to make drastic changes for the sake of our orchids outside the range that suits people. Luckily, there are many orchids which adapt very well to the 65 to 80 degree range that most of us keep our houses. But two groups are NOT the best choices:

Cool growers – come from higher altitudes in the tropics and are MUST have temps in the 50's at night and not over the 70's during the day to perform well over the long term.

High warmth growers – that come from near sea level in the deep tropics, often need more warmth than we are comfortable with and higher light levels that we can provide in the home.

Best and worst choices using the 9 Mid America Orchid Conference classes or orchids:

Class I -Cattleya Alliance

- Best: Most compact intergeneric hybrids are adaptable to the home environment. Especially *Bnts*. Richard Mueller hybrids, and any others that mix species from many different areas.
- Worst: small *Sophranitis* (formerly) species and their immediate hybrids, Mexican *Laelia* species – these want cooler nights than people are comfortable with. *Mymecophila*, *Laelia* (former *Schomburgkia*), *Broughtonia* species generally want it warmer and brighter than possible inside a home. In fact, species in general should be considered somewhat more advanced than hybrids since they are adapted to more specific environments and often need seasonal changes in cultural practice to flourish. But if you are adventurous, you may still wish to try species!

Class II – Cymbidium Alliance (Cym's are generally terrestrial with slightly different cultural requirements.)

Best: Compact hybrids created from warmer growing species.

Worst: Standard hybrids which need cool to cold conditions in winter to properly develop bloom spikes.

Class II – Dendrobium Alliance

Best: “New Guinea” hybrids, also known as Latouria types like even temperatures and only need moderate light.

Worst: ‘Hard Caned’ hybrids – usually want more heat and light than homes can provide.

‘Nobile’ hybrids – want a cooler winter rest with less water, but high humidity to flower. A few Newer hybrids, such as *Den. Pixie Charm*, don’t require the cooler rest.

Class IV – Epidendrum Alliance

Often overlooked, many types do well in home conditions.

Best: Intergeneric hybrids using *Encyclia*. Many *Encyclia*, *Epidendrum*, *Barkeria* can be grown in the home.

Worst: High altitude and cloud forest species that like it constantly cool and damp.

Class V – Oncidium Alliance

Best: Most complex modern intergeneric hybrids do fairly well inside the home. The more *Odontoglossom* or *Cochlioda* in them, the cooler nights must be. The showy ‘Miltoniopsis’ (Pansy Orchids) can be adapted to the home with adequate humidity and attention to moisture. The warm growing *Miltonia* species are the best species in this group for home culture.

Worst: Most species in this group either want more cool, or more heat than the home environment.

Class VI - Cypripedium Alliance

Best: Most of the ‘mottled leaf’ *Paphiopedilum* hybrids and modern *Phragmipedium* hybrids will do very well in average home temperatures, as will the complex ‘Bulldog’ *Paphiopedilum* hybrids,

Worst: Multifloral ‘strap leaf’ *Paphiopedilum* species and immediate hybrids, and *Phragmipedium besseae* are more difficult, but not impossible in the home.

Class VI – Phalaenopsis Alliance

Best: Most modern *Phalaenopsis* and *Doritenopsis* hybrids will do well in the home environment.

Worst: Miniature ‘twig epiphyte’ species, *Phal. violacea/bellina* need high humidity at all times.

Class VII – Vanda Alliance

Best: Hybrids that involve *Ascocenda*, *Rhyncostylis*, *Neofenetia* can tolerate the temperature range, and more importantly, the light conditions of home culture. They are often smaller plants too.

Worst: *Vanda* species and hybrids, *Renanthera* species and hybrids – generally need very warm and very bright to grow well and bloom. Many Angraecoids need constant high humidity.

Class IX – Miscellaneous

Best: *Cycnoches*, *Dendrochilum*, *Coelogyne*, *Phaius*, *Lycaste* (with exceptions).

Worst: *Masdevallia*, *Dracula*, *Pleurothallis*, *Bulbophyllum*. (Cloud Forest species in general)

O.R.C.H.I.D. – Basic elements for successful orchid culture in the home.

O ptimal Light

Most houseplants are foliage plants that only need enough light to make leaves, but enough light to make leaves isn't always enough light to make orchids bloom! Many orchids come from tropical forests, but they are found as epiphytes in the tree canopy where they get dappled bright light rather than shade. The light inside many homes is more like the forest floor than the tree canopy! So, with rare exceptions, orchids need to be in the brightest exposure in your home you have. For most species, the correct, healthy foliage color is yellow green and not dark green. Most orchids are fine with direct exposure to sunlight in the morning hours and some shading from it the rest of the day – usually just a sheer curtain is enough, or simply placing the plants far enough back from the glass that the light is diminished slightly. The lower sun angle of winter usually means more direct sunlight entering the windows, but the intensity is lower so this is usually a good thing. If no windows have optimal light, consider supplementing your plants with high intensity grow lights set on a timer. If you have especially low light conditions, then stick with orchids that WILL bloom in lower light, such as the mottled leaved *Paphiopedilum* and *Phalaenopsis*, or created a dedicated growing area under lights.

R egular Feeding

While orchids are NOT heavy feeders, and can usually receive some basic nutrients from their potting mix, they benefit greatly from frequent, light feeding. You probably have already heard the phrase 'weakly, weekly' as an illustration of this preference. While most commercial orchid fertilizers will suffice, used at ¼ to ½ the strength listed on the label, the new, more complete orchid fertilizers with micronutrients included are better. The best known example of this is the MSU (Michigan State University) formula with 13 macro and micronutrients. It comes in two formulations: RO (Reverse Osmosis) meant to be used with very pure water with little or no dissolved minerals and the Well Water formula designed for areas of the country where well water with heavy amounts of dissolved minerals is used (Midwest and Florida for example). Tap water and well water in this area is generally very pure and the RO formula should be used.

C areful Watering

Perhaps the greatest reason orchid plants die in home cultivation is improper watering! Usually this means that the plants are OVER watered and suffer the loss of roots as the mix stays too damp. The plant may be shriveling and may look like it needs even MORE water! This is true only because it no longer has viable roots to bring moisture into the plant and keep it healthy! Let plants go nearly dry before watering them again, and make sure the mix is open with plenty of airspace for roots to breath and dry off. Most orchids will die if they have wet feet!

H ealthy Airflow

Plenty of fresh air is vital to healthy orchids. Stagnant air, whether too dry or too damp, is the instigator of disease and pests! Therefore in one's efforts to create a suitable growing area inside the home, a way to keep the air moving and fresh needs to be considered.

I ncreased Humidity

Both winter heating and summer air conditioning of your house reduces the relative humidity to levels well below the optimum for growing orchids. Tropical orchids grow in areas where even on the driest days, the humidity is usually at least 50%, and tends to approach the dew point at night. While many are tolerant of less than ideal conditions, prolonged exposure to dry air will be detrimental to your plants, and increased watering cannot compensate for it. Humidity trays and humidifiers are the best low tech solution in the home. A low

tech way to provide both good humidity and airflow is to use an inexpensive 'cool mist' humidifier along with a small plastic dime store fan to propel the mist across your plants.

Diligent Potting

Diligent potting = *intelligent* potting. Some growers repot too often some not often enough. How do you know when (or if) you should repot an orchid plant?

When plant is growing over edge of pot? Maybe, but not necessarily. Some orchids, such as bi-foliolate cattleyas, may actually grow better around the edge of a clay pot, than in it, *and*, are very sensitive to being disturbed. If the plant is performing well, consider NOT repotting it. Plants on mounts our in baskets can often grow indefinitely without needing to be disturbed.

When the mix is starting to break down? **YES!!!!** Do not wait for signs that the plant is starting to suffer. Monitor the mix and if the bark component is becoming mushy and breaking down, repot at the earliest opportunity.

Don't assume newly acquired plants from major orchid nurseries can stay potted as is when you receive them! Many large nurseries use a mix high in peat, and water very sparingly to save labor and resources. This mix is very tricky for home orchid growers to work with over time and usually leads to root rot if not replaced with a more open mix at the earliest opportunity.

ALWAYS REPOT WHEN ROOTS ARE ACTIVELY GROWING – IDEALLY WHEN NEW ROOTS ARE EMERGING FROM THE NEWEST GROWTH.

Giving Mounted Orchids a Try in the Home:

1. Mounted orchids are growing as nature best adapted them to do.
2. Mounted orchids will grow healthier, more copious roots, essential to vigorous orchid plants.
3. It is easier to assess the overall health of a mounted orchid than a potted one.
4. It is easier to spot and treat common orchid pests on mounted orchids.
5. Watering, fertilizing, and providing adequate humidity, light and air circulation for mounted orchids is straight forward with many easy solutions possible the home orchid grower.
6. Mounted orchids can stay as they are for many years with no need to worry about repotting them.
7. Mounted orchids are easier to care for out of doors in the warm season and less likely to suffer from the common cultural mistakes of potted orchids. It is very difficult to over water them.

'ADVANCED' INDOOR CULTURE:

Modified Sunrooms/Greenhouse windows/Basements under lights

Additional considerations:

Pest Control

Summering plants outdoors