

IN THIS CHAPTER

- » Exploring this colorful unique group of plants
- » Deciding whether orchids are right for you
- » Knowing what to do for your orchids each month of the year

Chapter **1**

Discovering the World of Orchids

You're about to encounter a marvelous group of plants called orchids. You're in store for an exciting adventure! This is one of the largest plant families on the planet with an estimated 30,000 wild types (species) and many more human-made varieties (known as *hybrids*). No other plants can compete with orchids for their power to seduce and bedazzle the most jaded plant lover with their fantastically beautiful flower colors, shapes, and textures, and heady and sensuous perfumes.

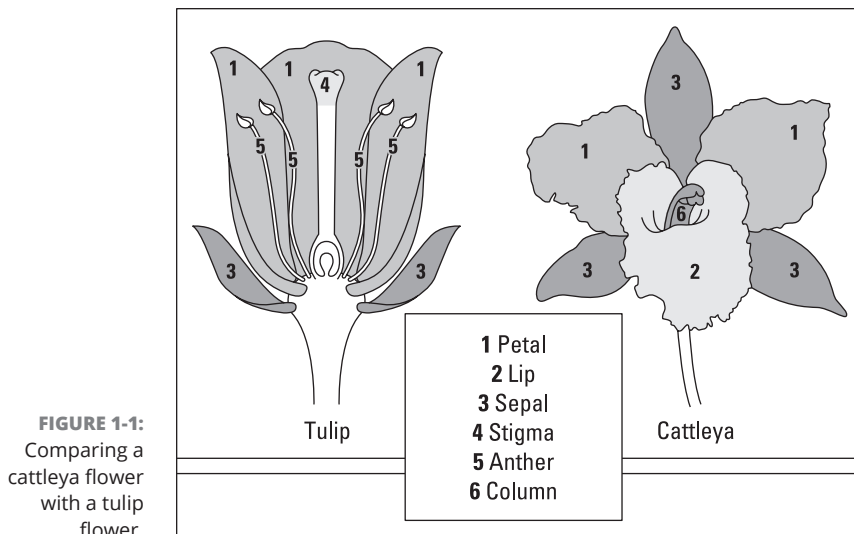
This chapter serves as your launch pad to the diverse world of orchids. They're unparalleled in their marvelous array of flower colors and shapes not to mention their alluring, fragrances. Here I reveal some of the many mysteries of these exotic plants.

Understanding What Makes an Orchid an Orchid

You can easily tell when a rose is rose, but orchids are quite a bit more complex and varied when it comes to their flower shapes and the construction of their leaves, stems, and roots. In Part 3, I give you lots of information on flower, leaf, and stem construction of specific orchids. In this chapter, I talk generalities.

Certainly, the flamboyant colors of modern orchid hybrids are a standout and are the primary reason these plants are so treasured. But there are so many distinct types of orchid flowers, so the question is, “Which one is typical?” There is no correct answer to this question. Many people think of the cattleya-type orchids (see Chapter 11), whereas others may picture moth orchids (see Chapter 10).

To get a better idea how orchid flowers are constructed, look at a typical cattleya flower and compare it to a more ordinary flower, a tulip (see Figure 1-1). Table 1-1 shows some of the major differences between these two flowers.



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So, what makes an orchid an orchid? The column. This fused sexual structure located in the middle of the flower is what separates the orchid from all other plants.

TABLE 1-1**Differences between Tulip and Orchid Flowers**

Flower Part	Tulip	Orchid
Petals	The most obvious part of the flower and what makes a tulip look like a tulip.	A very prominent part of the flower but comprises only half of the show.
Sepals	Hardly noticeable in the tulip flower, especially after they open.	Very striking in many orchid flowers. Can be as brightly colored as the petals.
Lip or labellum	Not found in the tulip.	Usually a very showy part of the orchid flower. Actually, a modified petal.
Anther and stigma	The two sexual parts of the tulip. The anthers are male reproductive organs, and the stigma is the female part.	These separate organs are not found in the orchid; instead, orchids have a column in which the male and female parts are fused.
Column	Not found in tulip.	Only found in orchids.

Knowing Where Orchids Come From

About 80 percent of orchids are from the tropics in both the New World (mostly Central and South America) and the Old World (Asia and Africa). A smattering of mostly hardy orchids can be found in countries with more temperate climates.

The ones that grow in your home, though, are all tropical or semitropical origin. They mostly hail from areas of high rainfall and humidity and enjoy tropical to above-freezing temperatures during the winter.

Orchids are divided into two major categories based on where they grow:

- » **Epiphytes:** They're commonly found clinging to branches of trees. Epiphytes have thick roots (called *aerial roots* because they're frequently suspended in the air), which are covered with a silvery material called *velamen*, which can absorb moisture from the air like a sponge (see Figure 1-2).
- » **Semiterrestrials and terrestrials:** They thrive growing on or in the ground. Many of the terrestrial roots are hairy, like those found in the slipper orchid (see Figure 1-3).

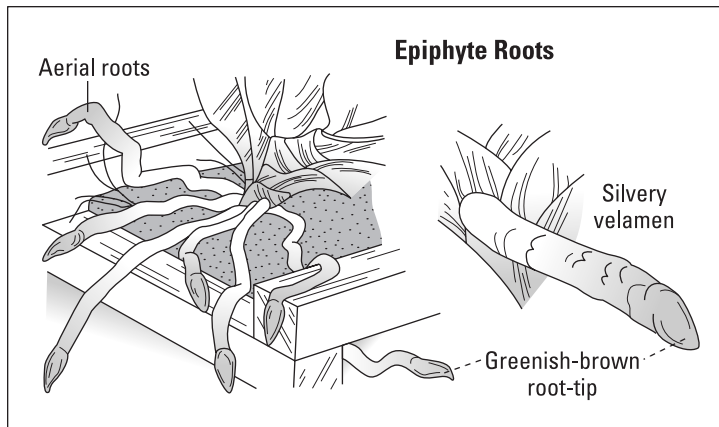


FIGURE 1-2: Epiphytic orchids have thick roots covered with silver velamen.

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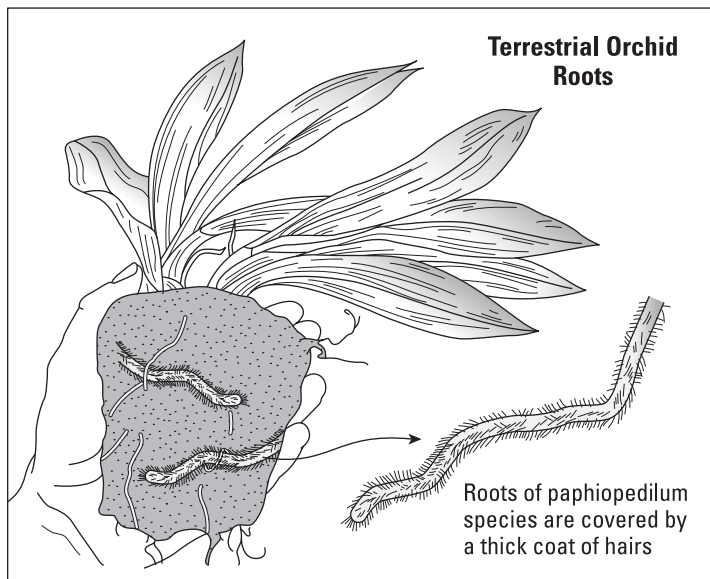


FIGURE 1-3: Terrestrial and semiterrestrial orchids, like most slipper orchids, frequently have hairy roots.

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Seeing Why You Should Grow Orchids

Growing and studying orchids provide you the ultimate horticultural experience and pleasure. Here are some key reasons to start growing orchids now:

- » **Growing orchids is fun!** That's the most important motive.
- » **Orchids are easy to grow.** See Chapter 5 for tips on how to be successful.

- » **You can start with beginner orchids that any newcomer can be wildly successful with.** See Part 3 for some plants to start you off.
- » **Orchids cost less than they ever have, and you can easily select just the right one for you.** See Chapter 2 to make this process a snap.
- » **No group of flowering plants comes close to the delicious perfumes that orchids emit.** Pay attention to the Fragrance icon used throughout this book to find the most-fragrant orchids.
- » **Orchids are available from big box stores, specialty growers, orchid shows, garden centers, botanical gardens, orchid societies, and mail-order suppliers.** These outlets have large selections, which was unheard of a decade ago. Even better, the orchids are reasonably priced.
- » **Because of the huge diversity of orchids, you'll never tire of them.** You'll always find new ones to try and enjoy. Check out the chapters in Part 3 for some of the many possibilities.
- » **You'll meet new friends who are as fanatical about these plants as you are.** See Appendix A for lists of orchid societies to join. Their magazines are a marvelous source for information and gorgeous pictures. These are some of the best-quality plant magazines in the world.
- » **Orchids don't require an expensive greenhouse to grow.** They'll be happy with a windowsill or artificial lights. See Chapter 5 for the skinny on how to grow these orchids to perfection in your home.
- » **They'll beautify your home and life.** See Chapter 4 for some tips on how to enjoy them to the fullest in your home.
- » **Orchids can live forever, so as they grow you can divide and multiply them to share with your friends or to trade for other orchids.** See Chapter 8 for more tips on dividing and multiplying your orchids.

Deciding Which Orchids to Bring into Your Home

Choosing an orchid is an exciting, but sometimes confusing, decision! So many types of orchids, so little space. In this book, I make this process easy for you:

- » Check out Chapter 2 to walk through some of the steps to take in deciding what orchid will fit in with your home environment and suggestions of where you can scope out and purchase them.

WHAT IS A NOID?!

You may have one and don't even know it. A *NOID* is an orchid that's purchased with no name (thus the word No ID — no identification — is commonly referred to as a NOID.) Usually, it has no name label. You commonly find these orchids at home stores and grocery stores. Does this mean they're in some way inferior? Not really. It just means that you won't know the exact name of the orchid you have. You may be wondering why this orchid doesn't have a name. More than likely it doesn't have a name because this orchid was mass produced and was never given a registered name.

The only real disadvantage of a NOID orchid is that you aren't able to enter it into a judged orchid show because the judges can't be sure of its name or its parentage, which are requirements of entries.

- » Consider starting your orchid collection with moth orchids. They're the most foolproof of all. See Chapter 10 for details about these.
- » Check out slipper orchids, another easy group. See Chapter 12.
- » If you want to try hardy orchids to grow outside, look at Chapter 15.
- » When you're ready to expand or you want more choices, check out all the other orchids in Part 3.

Identifying Orchids by Name

One of the most intimidating hurdles that the beginning orchid grower faces is the complex names given to orchids. When you realize what an immense group of plants this is, you'll soon come to realize why most orchids are referred to by their Latin or Greek rather than a common name. Very few orchids even have a common name. In this book, I always use the Latin name, because that's the universally accepted name, and I add a common name when there is one.

I know the Latin names can be a bit daunting, so much so that some folks wished this language had died with the Romans, but alas, it's alive and well in the natural-science world, and it's the standard language used worldwide to name flora and fauna. You'll start to make friends with Latin as its use becomes more familiar and comfortable to you.

Saying the name a little at a time makes it easier to digest. In the following sections, I show you the names, one word at a time, of a species orchid and then a hybrid.



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Unfortunately, these names can change as botanists discover that certain orchids were originally incorrectly assigned a name, or they find that orchids they thought were closely related and given names accordingly weren't actually related so they needed new names. Also, botanists from different countries don't completely agree on the name. They follow specific naming guidelines called the Rules of Nomenclature for the International Code of Botanical Nomenclature formulated by the International Botanical Congresses. Also, the *World Checklist of Selected Plant Families* is a standard reference. Talk about confusing and even aggravating! Just when you've finally learned one name for an orchid the name changes. I try to use the most recent name (nomenclature) for orchids, but you can be sure some names are likely to change. In no time you'll become comfortable, or at least less uneasy, as you become more familiar with these names.

Species orchid names

Plants that are sold as they were created by nature, not hybridized by man, are referred to as *species orchids*. They have two names (and possibly three):

» **Genus name:** It comes first and is capitalized.

» **Species name:** It comes second and is lowercase.

Both names are in Latin or Greek, so they're italicized (which is just the way foreign languages are usually treated).

» **Botanical variety:** You may see a third part to the name, the botanical variety, after the species name. This is a name given to an orchid that varies — it could be a larger flower or one with slightly different coloration — from the standard species. It's preceded by the letters "var." and will be in lowercase and in Latin.



TIP

The genus name is much like your last name and the species name is like your first name. In other words, orchid naming is backward to the way you say your own name. If my name were written as an orchid's is, I would be *Frowine steven*.

Here's an example of the name of a species orchid: *Cattleya walkeriana* var. *nobilior*. Table 1-2 explains the orchid's name.

Hybrid orchid names

Oh, it would be so simple if naming stopped here, but man got mixed up in all this and started developing *hybrids*. Hybrids result from *crossing* two species (taking the pollen from one orchid to use it to mate with another). A marvelous thing happens when two different species of orchids are crossed or mated to each other. Their progeny is usually stronger, easier to grow, and frequently produces larger

flowers than either of its parents — which is why hybrids are so desirable and popular.

Here's an example of a hybrid orchid name: *Brassocattleya* Cynthia 'Pink Lady' HCC/AOS. (See the color section for a photograph of this orchid.) Table 1-3 breaks down the name and explains its various parts.

TABLE 1-2 **The Components of a Species Orchid Name**

Part of Name	Name	Explanation
Genus name	<i>Cattleya</i>	The first name of the orchid is the genus and is like your last name. It's always capitalized and in Latin.
Species name	<i>walkeriana</i>	The second name of the orchid is the species. It's always in lowercase, italicized, and in Latin.
Botanical variety	<i>var. nobilior</i>	Sometimes, a third name appears for a species orchid. This is called a <i>botanical variety</i> and means this form of this species has something special about it (for example, flower shape or color) that separates it from the more usual form of the species. This name is in lowercase, italicized, and in Latin or Greek.

TABLE 1-3 **The Components of a Hybrid Orchid's Name**

Part of Name	Name	Comments
Genus	<i>Rhyncholaeliocattleya</i>	This genus combines two different genera — <i>Rhynchoaelia</i> and <i>Cattleya</i> — to result in the human-made name of <i>Rhyncholaeliocattleya</i> . The name is capitalized, in Latin, italicized, and frequently abbreviated <i>RLC</i> .
Species	None	This is a hybrid that has several different species in its parentage, so no single one is listed. When an orchid hybrid comes from just one species, the species name will also be listed, lowercase, in italics, and in Latin.
Grex	Cynthia	All the resulting progeny from this cross are given a name that's known as a <i>grex</i> . Think of this as you and all your siblings having a label. The <i>grex</i> is always written in a language other than Latin, is capitalized, and isn't in italics.
Cultivar (cultivated variety)	'Pink Lady'	This is a selection from this <i>grex</i> that was deemed, in some way, superior to the other members of the progeny. This name is always in any language other than Latin, is capitalized, is not italicized, and is in single quotes. There are frequently several or more cultivars in a <i>grex</i> . Think of the cultivar as one of your parents' children. You're all labeled with a <i>grex</i> , but the cultivar is you in particular.
Award Designation	HCC/AOS	Highly Commended Certificate from the American Orchid Society. (See the nearby sidebar for more information on these designations.)

WHY CARE THAT AN ORCHID WAS AWARDED?

Awarded orchids are the *crème de la crème* of the orchid world. They've been deemed this distinction by trained, discriminating orchid judges. The American Orchid Society, a nonprofit educational organization that is dedicated to the study of orchids, has established the judging criteria. Similar organizations serve the same function in other parts of the world.

At each accredited orchid show, a covey of judges carefully examines orchids that are exceptional. They use Internet connections to check all existing records of the orchids being judged. They look for ones of the same *grex* or similar parentage to see what has been awarded in the past to serve as a benchmark of excellence. These records will reveal which of their parents have been awarded, what size and number of flowers were on the awarded plants, and so on. They then use the criteria to decide if these specimens are indeed superior to others of this type and whether they're worthy of awards. The three award categories used by the American Orchid Society that you're most likely to encounter are (from highest to lowest):

- **First Class Certificate (FCC):** This is the coveted highest award that only a handful of orchids (10 or 15!) receive every year.
- **Award of Merit (AM):** Usually a few hundred orchids win this distinction every year.
- **Highly Commended Certificate (HCC):** Another few hundred orchids are given this level of award.

Of course, other countries also have their own award designations, and these award-winning plants are equally exceptional and worth searching out.

Very few orchids make it through this gauntlet. Because of modern cloning techniques (see Chapter 2), you can now obtain these prize winners for your own collection at very reasonable prices. Some types of orchids, like the slippers, are rarely cloned, so in that case, picking out those hybrids with awarded parents is a good idea. **Remember:** It takes the same amount of space to grow a high-quality orchid as it does a poor one, so why not grow the best?

Orchid hybridizing can produce plants with quite complex names, especially in some of the exceptionally large groups like the cattleyas (see Chapter 11) and the oncidiums (see Chapter 13). In these chapters, I deal with their names in more detail. Appendix A provides a pronunciation key of many of the orchids I discuss in this book.

You don't have to be an expert in orchid names in order to enjoy and grow orchids. You'll catch onto many other name nuances after you're drawn further into the orchid web. For now, don't worry about them much — they're only names!

Recognizing What Makes an Orchid an Award Winner

Various orchid societies have developed their own systems of deciding when an orchid is a winner.

Much of it's based on comparing the existing champion and of this particular type of orchid to the one being judged. Thank goodness for existing orchid databases complete with pictures and specifications. Does the one being judged have larger flowers or more flowers? Are its flowers better shaped, fuller, brighter, or better marked? There are just some of the primary criteria.

Of course, the truth is, all that really counts is you think your orchid is a winner. One thing that judging rarely takes into consideration is the vigor of the plant. Is it easy to grow and flower? Those qualities are particularly important to me and what good is it if your plant is an award winner if it isn't a robust grower and is a reluctant bloomer.

FEELING THE ORCHID MANIA

Being crazy about orchids isn't new. In fact, this orchid mania, also known as *orchidelirium*, seems to have reached its peak in Victorian times. It was similar in its extreme to Dutch Tulip Mania. During these times, some wealthy folks mostly in England spent vast amounts of money to send plant explorers to all parts of the world in search of new species of orchids that were then brought back to auction houses in London to be purchased for vast sums of money. These explorers risked life and limb to find new treasures. They faced tropical diseases, poor or nonexistent roads, steamy insect-infested jungles, and civil unrest in some of the countries they explored. The explorations were extremely competitive and cutthroat.

The explorers kept the locations where they found the orchids as a guarded secret, and they made very few efforts at leaving any plants behind to reestablish themselves in the wild. In fact, some accounts reported that the explorers burned the grounds where the orchids were originally collected so no one else could collect them. Unfortunately, not much information about growing and transporting orchids was known at that time so many if not most of the orchids died in transit or withered in greenhouses that didn't replicate their native environments. Some species of orchids probably went extinct because of these practices.

Growing Orchids Easy As One, Two, Three

To be successful in growing orchids, just follow these suggestions:

- » **Know the environment you have to offer your orchids and match this with the orchids that fit.** See Chapter 5 for more information on your growing environment.
- » **If necessary, modify your growing area to help your orchids perform to their best.** Chapter 5 also addresses this.

For the most common questions and problems, check out Part 4.

Beyond choosing the right orchid for your environment, you must pay attention to the time of the year to know what your orchid needs. In the following sections, I give you a rundown of the year, month by month. *Note:* You can't be too exact with the timing of this care schedule because the United States is a vast country with climates from the cold north to semitropics. Also, these guidelines are for the Northern Hemisphere. If you live in the Southern Hemisphere, take that into consideration. For example, January in the Northern Hemisphere corresponds to July in the Southern Hemisphere and so on.

January

This is a period of cold, short days and low light, so orchids don't grow much in such times. Fortunately, many moth orchids, slipper orchids, and some other cattleyas and their relatives will be budding up getting ready to show off their splendid blooms very soon. Consider the following:

- » For orchids such as some of the dendrobiums, cattleya species, and deciduous orchids, like the catasetums, this is a time of rest, so you'll want to reduce your watering.
- » Keep the humidity high with good air movement.
- » If you're using well water, warm it to room temperature before using it on your orchid plants. Ice-cold water can cause forming buds to drop and may stunt new growth.
- » Don't put your orchids too close to the windowpanes or the leaves could be damaged by the cold.
- » Apply little fertilizer. The orchids won't need it. In fact, if you apply too much fertilizer at this time, the excess salts in the unused fertilizer can damage orchid roots.

February

This is another dark month, but the days will be getting longer and brighter, which should cause an increase in growth. Keep the following in mind:

- » Toward the end of this month, increased light may mean you have to be careful with your orchids that require less light, like the slippers and moth orchids, so they don't get burned.
- » More of your orchids will be showing buds and some, especially some of the moth and slipper orchids and some of the oncidiums, should be blooming.
- » Don't overcrowd your plants. Make sure they receive as much light as possible.
- » Provide good air circulation to prevent disease problems.
- » Stake your cymbidiums, which should be spiking now.
- » Don't forget to keep your miltonias and miltoniopsis damp.
- » If you're growing under lights, take note of when you last changed your bulbs. Fluorescent lamps can lose up to 40 percent of their light output after several months of use. Because new growth is starting on orchids, this is a good time to change the lamps so the plants will receive the most light possible.
- » Apply very little fertilizer during this month.

March

Finally, signs of spring with longer and brighter days. Most orchids will respond very favorably to the increased light and warmth of this month. Here are some guidelines for March:

- » Be careful that the increased sunlight doesn't heat up your greenhouse or windowsill too much. Apply shading if necessary.
- » The increased light and warmth of this month means an acceleration of growth. Sprouting new roots should be more evident.
- » This is the beginning of the show for many orchids. Many cattleyas, moth orchids, slipper orchids, and oncidiums will be starting to bloom.
- » As the days get brighter and warmer, you can resume your regular fertilizing schedule.
- » March and April are prime times to check out orchid shows in your area.

April

In April, many orchids will be in glorious flower. You'll notice increased growth and new roots and foliage as spring is at full steam ahead. You'll be busy tending your orchids. Remember the following:

- » You'll probably have to increase the frequency of your watering because of the new plant growth.
- » As soon as you see new roots emerging in cattleyas, repot. Do it before the roots grow a few inches (5 cm) long.
- » Many other orchids showing new growth can also be repotted at this time.
- » Be on the lookout for bugs. The warmer temperatures cause them to hatch.
- » Dormant orchids should be showing new growth now so you can resume your regular watering schedule.
- » If you didn't apply shading on your greenhouse last month, it may be needed now.
- » A gauze curtain may be needed to soften the light for orchids growing in a south window.
- » Check out orchid shows in your area.

May

Rapid growth will continue at full this month as days get brighter and longer. May is another prime month for orchid flowering and another active month for you, their caretaker. Here are some tasks that will need your attention:

- » More frequent watering and fertilizing is needed.
- » If you're in a northern climate, move some plants to a shaded, protected spot outdoors by the end of this month, but be careful not to do this too quickly. Orchids that prefer it warm, like moth orchids, don't appreciate being too chilled at night, not below around 65°F (18°C).
- » Increase your ventilation to remove excess hot air and prevent fungal disease spotting on the flowers.
- » May is usually an opportune time to repot your orchids because they should be in active growth now. Attend to this right after they've flowered.
- » Continue your fertilizing program to strengthen new growth.

June, July, and August

Temperatures are starting to heat up now. Some orchids, like a few of the summer blooming hybrid cattleyas, moth orchids, oncidiums, and slipper orchids, will be in flower. These months aren't usually noted for a lot of orchid flowering, but they're a time when the plants produce many roots and leaves to build up energy for future blooming so pay attention to them in the following ways:

- » Be sure your windowsill or greenhouse doesn't get too hot. Consider moving the orchids you have in the south window to the east window, where they'll have reduced light and heat.
- » For orchids growing under lights, make sure your growing area gets plenty of ventilation because it could be getting very warm now under the lights. If you have trouble keeping the temperatures low enough, consider summering your orchids outside in a shaded and protected spot. They'll enjoy the vacation.
- » This is also a prime time for insect problems. If it gets hot and dry, be on the lookout for mites. If it's wet, slugs and snails will be a plague. Aphids, mealybugs, and scale can show up anytime. If you need to spray, do it in the morning when it is cool and be sure the orchids are well watered before you spray. Check out Chapter 9 for more information to handle bugs.
- » The orchids should now be responding to your earlier repotting efforts with new root growth.
- » Repot miltonias. **Remember:** They like to be pot-bound, so don't put them in too large of a pot. This is true for most orchids. If they're overpotted (the pot being larger than desired), there's a tendency for the potting material not to dry adequately between watering, which can result in rotted roots.

September

Cool evenings and shorter days are signs of the change of season. Many of the hybrid vandas will be at their blooming peak in September. The cooler nights are beneficial for initiating or setting flower buds for the fall-blooming cattleyas, oncidiums, dendrobiums, angraecums, and moth orchids and slipper orchids. Here are a few fall tasks:

- » If you're in a cold climate, bring indoors any plants that have been summering outside. Before doing so, check them closely for pests. If spraying is called for, doing so is much easier and safer to do while the plants are outdoors.

- » Start cutting back on the frequency of watering deciduous orchids like *Catasetums* (which will have yellowing foliage at this time of year).
- » Remove shade on the greenhouse in most parts of the Northern Hemisphere.
- » Move orchids that require a lot of light from the east window back to the southern exposure.

October

Some *Cattleya* species and their relatives and hybrids will be in bloom now. So will some moth orchid species and hybrids and *Oncidium*s. Do the following for your orchids, no matter if they're in a greenhouse, under lights, or on the windowsill:

- » As days continue to shorten and the angle of light gets lower in the sky, position the orchids in your windowsill and greenhouse so that they capture the most light.
- » Be sure your glass or glazing surface is clean. This can make a real difference in light transmission.
- » Growth will start to slow on many orchids from lower temperatures and light, so reduce watering and fertilizing accordingly.
- » Get ready for winter. Insulate your greenhouse. Get a standby emergency propane heater.

November and December

Flowering spikes will be showing up on some moth orchids, slippers, and *Oncidium*s. Some of the *nobile*-type *Dendrobium*s will be starting to show buds. Low light, short days, and cold temperatures of these two months bring most orchid growth to a stop or at least a crawl. You'll see more growth on plants grown under lights than in a greenhouse or on a windowsill because of the additional light that can be provided. Here are tasks to complete:

- » For the Northern Hemisphere and other cold parts of the world, November is the last month to safely purchase mail-order plants before it gets so cold that there will be a higher risk chance for freeze damage in transit. Visit orchid nurseries to pick out holiday presents for your orchid-growing friends (or yourself!).

- » Put orchids that require more light, like vandas, in a bright window, close to the lights, or high in the greenhouse to expose them to as much light as possible.
- » Water in the early part of the day to ensure that no standing moisture is on the leaves overnight. In cold, damp weather, especially, such moisture can cause disease outbreaks.

DOING YOUR PART TO SAVE ORCHIDS

Many orchids are endangered in their natural habitat. Overcollection and destruction of habitats have been the primary culprits. To save orchids, some international regulations prohibit the exportation or importation of orchids collected in the wild from their native countries. Various countries are also creating preserves to protect these unique plants.

So, what can you do to help? You can do the following:

- Don't ever collect wild orchids whether it be in your own county or on a vacation. If you do, you're contributing to the problem and could be facing severe fines (even jail time!) when you try to bring the foreign-collected orchids into your country.
- Only buy your orchids from reputable dealers who grow their plants from seed or by cloning. You'll have much more success with these nursery-grown plants than those collected from the wild because they have established root systems and they're adapted to growing in greenhouses, on windowsills, or under lights.

The practice of selling wild collected plants, at least from tropical and semitropical lands, is exceedingly rare today. For native orchids in North America and other temperate areas this can still be a problem.