

Fragrant Orchids



Steven A. Frowine

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*A Guide to
Selecting, Growing,
and Enjoying*

Steven A. Frowine

TIMBER PRESS

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Published in 2005 by
Timber Press, Inc.
The Haseltine Building
133 S.W. Second Avenue, Suite 450
Portland, Oregon 97204-3527, U.S.A.
www.timberpress.com
For contact information for editorial, marketing, sales, and distribution
in the United Kingdom, see www.timberpress.com/uk.

Printed in Hong Kong

Library of Congress Cataloging-in-Publication Data

Frowine, Steven A.

Fragrant orchids : a guide to selecting, growing, and enjoying / Steven A. Frowine.

p. cm.

Includes bibliographical references (p.) and index.

ISBN 0-88192-739-2 (hardback)

1. Orchids. 2. Aromatic plants. 3. Orchid culture. I. Title.

SB406.F67 2005

635.9'344—dc22

2005001444

A catalog record for this book is also available from the British Library.



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*To my mother, Janet Allen Frowine, and deceased father,
Samuel E. Frowine, for encouraging me to pursue my love and
passion for the cultivation and appreciation of plants.*

*My father bought me my first orchids from
Alberts and Merkel Brothers in Boynton Beach, Florida,
when I was a teenager while on a family vacation.
He had a fluorescent light fixture installed in our basement
where I grew these orchids and other tropicals.
I truly felt my little “indoor greenhouse” was
a magical place.*

*And to my loving wife, Sascha, who shares my curiosity,
appreciation, and fascination with the natural world.*

*She has been my partner, staunch supporter,
and soul mate in discovering nature’s wonders.*

*And to Janet and Paul Bowman, who gave me
my first job working in their greenhouses
in my hometown of Portsmouth, Ohio.*

*They were a generous, kind couple
who provided me a wonderful experience,
which sealed my decision that a life centered
on horticulture was my destiny.*

Acknowledgments



The orchid community is a disparate group of people bound together by their common love of this extraordinary family of plants. Certainly, the history of orchid discovery as well as today's rapidly increasing interest in this group of plants proves that orchids have had and continue to have a very strong lure to anyone who sees them. Fortunately, unlike earlier days when orchids were expensive and information about them was a guarded secret, accessible only to a select few aristocrats, orchids have rapidly become plants that everyone can now enjoy and afford.

Most growers, amateur or professional, are free with their thoughts and opinions and are eager to have others join the orchid fraternity. For this I am very grateful for without this openness from the many amateur and professional orchid growers, this book would not have been possible. To the many people who have "lent their noses" and given their personal descriptions of scents that I received at the various orchids shows and gleaned through the literature, thanks!

I would like to recognize a few of the people who gave exceptional help:

My wife, Sascha, who read over and made suggestions of countless drafts and who put up with my driving obsession to bring this book to print.

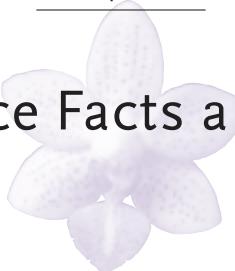
Judy Becker, who, in reviewing my drafts, generously contributed her encyclopedic knowledge and eye for nomenclatural detail. She was of great help with this book.

Rita Buchanan, an amazing multi-talented Renaissance person, for her encouragement and horticultural and editing judgment.

Russ Vernon, a classmate of mine in the horticulture program at Ohio State University, who reviewed various proofs and lent his life-long orchid growing expertise.

Chapter 1

Fragrance Facts and Fancy



*In the quiet valley I can see no orchids growing—
By accident, a gentle breeze betrays their presence.
It is a liberating fragrance, pure unsullied—
One sniff of it is enough to give enlightenment.*

SU SHIH, ELEVENTH-CENTURY CHINESE POET,
“THE LONELY ORCHID”

The Sense of Smell Plays an Important Role in Our Lives

The Sense of Smell Institute states in its brochure, *Living Well with Your Sense of Smell* (1996), “Compared to our other senses, relatively little was known about our sense of smell and it was certainly the one most taken for granted.”

Writers can sometimes express phenomena more comprehensibly to the lay person than can a scientist. Helen Keller wrote, “Smell is a potent wizard that transports us across thousands of miles and all the years that we have lived” (Sense of Smell Institute 1996).

A poet, Diane Ackerman, wrote in her book, *A Natural History of the Senses* (1990),

Breaths come in pairs, except at two times in our lives—the beginning and at the end. At birth we inhale for the first time, at death we exhale for the last. In between, through all the lather of one’s life, each breath passes air over our olfactory sites. Each day we breathe about 23,040 times and move around 438 cubic feet of air. It takes us about five seconds to breathe—two seconds to inhale and three seconds to exhale—

and in that time, molecules of odor flood through our systems. Inhaling and exhaling, we smell odors. Smells coat us, swirl around us, enter our bodies, emanate from us. We live in a constant wash of them.

Our sense of smell is most acute between the ages of 20 to 40. In general, men seem to have less perceptive noses than females. Three scientists from the Monell Chemical Senses Center in Philadelphia postulated that odor pleasantness evaluations were better perceived by the right nostril and that odor name or recognitions was perceived by the left nostril (Herz et al. 1999).

What Is Scent and How Is It Perceived?

The world is full of an impressive array of scents. The literature states that there are between 4,000 and 10,000 distinct odors, all of which humans can detect and are sensitive to.

Smell is said to be one of the “chemical senses” (the other being taste), since it depends upon chemicals to be triggered. Both of these senses are closely related; in fact, some scientists say that about 75 percent of taste is really smell. This is probably one of the reasons that many of the words we use to describe fragrances are actually favorite foods, such as coconut, chocolate, vanilla, oranges, candy, apples, bread, flavored soda, and chewing gum, or spices for foods, such as cinnamon.

Roy Genders, a venerable British horticulturist and writer, stated in his book, *Scented Flora of the World* (1977), in reference to plants,

Scent is the oxidation of essential oils of flowers and leaves. In flowers, the essential oil is in the epidermal cells of the petals, or in the sepals or bracts, and the oil is usually present in the upper surface of the petal.

This clinical definition leaves out a critical element of scent: the strong emotional connotations that scents have in our lives. The fresh smell of a new day, the perfume of spring flowers, the unique scent of a loved one, the heavy perfume of lilies that hangs in the warm humid summer air are all poignant “scent memories” of treasured experiences in our lives. This aspect of scent is very subjective and difficult to define or quantify, but nonetheless is a very important quality of scent to humans.

The Language of Scent

For our other senses like hearing, taste, and sight, we have a well-established vocabulary to describe them, but for the sense of smell it is frequently much more difficult for most of us to come up with definitive descriptions. Usually the most we can do is rely on similes such as, “It smells like jasmine.” A report

from the Howard Hughes Medical Institute titled *Seeing, Hearing and Smelling the World* (1995) states,

Our culture places such a low value on olfaction that we have never developed a proper vocabulary for it. In *A Natural History of the Senses*, Diane Ackerman notes that it is impossible to explain how something smells to someone who hasn't smelled it. There are names for all pastels in a hue, she writes—but none for the tones and tints of smell. Nor can odors be measured on a kind of linear scale that scientists use to measure the wavelength of light or the frequency of sounds.

Some scientists have attempted to assign word descriptors to scents, with varying success. Carolus Linnaeus (1707–1778) is best known for his development of the binomial classification system used by life scientists throughout the world. Few people are aware that he also developed one of the first systems of categorizing odors. He placed them in seven groups:

- Camphoraceous
- Musky
- Floral
- Pepperminty
- Ethereal
- Pungent
- Putrid

More recently, Roman Kaiser, a fragrance and flavor chemist, in his book, *The Scent of Orchids, Olfactory, and Chemical Investigations* (1993), described four basic orchid scents according to “olfactory and chemical criteria”: white-floral, rosy-floral, ionone-floral, and spicy-floral.

White-floral is the fragrance found frequently with white flowers. Most common examples include jasmine, gardenia, honeysuckle, and orange blossoms. These highly and pleasantly scented flowers are often most potent in the evening or at night and, as is commonly the case with white flowers, are night pollinated. Among orchids this group would include the genera *Aerangis*, *Angraecum*, and *Brassavola*.

The rosy-floral scent is derived from roses, specifically *Rosa centifolia*, *R. damascena*, and *R. gallica*. Other rose species, like those of Chinese descent and including many of the hybrid teas in our gardens, do not share this same scent. Among the flowers that fall in this category of scents are cyclamen, lily-of-the-valley, and sweet pea. The scents from this group are at their strongest during the day when it is sunny and warm.

The third group, the ionone-floral, is found in orange-yellow and yellow-brown flowers. It includes the heavy fragrance of freesia and *Osmanthus fragrans*. This group can cause olfactory overload so that after a few seconds of



An old favorite, *Brassocattleya* Mount Hood, is typical of many white cattleya hybrids with a heady vanilla fragrance.



The gloriously colored hybrid *Miltoniopsis* (Alysen Ono × Pearl Ono) has a roselike fragrance.

inhaling flowers in this category, the perception of scent is dulled to such a degree that the nose needs to have a “time-out” before being able to accurately detect and recognize other flower scents.

The spicy-floral group is the last category and is best expressed by carnations. *Masdevallia glandulosa* is an orchid with such a scent.

The Most Fragrant Flower Colors

Genders (1977) cited an interesting study completed at the end of the nineteenth century by a French authority on scented flowers. Of the more than 4000 plants examined, white and yellow flowers accounted for more than 60 percent of all fragrant flowers, and most of the remaining fragrant flowers were colored pale pink or purple. This study further found that the order of the strength of scent or perfume by color was “white, bluish white, pale pink, mauve-pink, pale yellow, yellow, and purple; plants bearing blue, orange, red, or brown flowers have a high degree of pigmentation and generate little or no scent.” While many of these generalizations hold true for the orchid family, there are exceptions. One glaring example is *Oncidium* Sharry Baby, which has a very sweetly scented dark red flower (and various other color forms).



The ease of growing and blooming combined with the luscious chocolate scent make *Oncidium Sharry Baby* one of the most popular orchids in the world.

But it is true that many of the most fragrant orchids are, indeed, white, pink, and pale yellow.

Related Plants Sometimes Have Similar Scents

Genders (1977) made another interesting observation, namely, that scents of the various genera are very much alike throughout the family. This is true, to some degree, with the orchid family. In appendix D, *Orchids by Intensity of Fragrance*, you will see that some of the species within the same genus do have similar fragrance descriptions.

Many people identify "orchid scent" as being the heavy sweet fragrance of the large cattleyas. This is primarily the popular belief because cattleyas were at one time the quintessential orchids sold at Mother's Day and for prom corsages for so many years. For numerous people, the only orchids they saw at florist shops were cattleyas. Very few other orchids were known or available. Now, orchids with seemingly endless varieties, shapes, colors, and scents are available from box stores to specialty orchid growers, so there is no longer any "typical orchid scent."

Fragrance Has Notes

In his humorous and very informative book, *Orchid Fever*, Eric Hansen (2000) relates how Katsuhiko Tokuda, a senior perfumer from the Japanese cosmetic company Shiseido, explains this concept.

You have to smell through the first thing that hits your nose because this is usually the lighter aspect, often a lemony point. It is the most volatile component. The different notes or aspects reveal themselves in stages, and you have to smell through them to get to the bottom of the fragrance puzzle. If you open a bottle of perfume, what is in the neck of the bottle is what hits you first. This is the top note. Then you put the fragrance on your skin and let it evaporate for about 10 seconds, which gives you the middle ones. The base notes are the least volatile and they come up last. Use the same criteria for evaluating and understanding the scent of orchids or any other sort of flower.

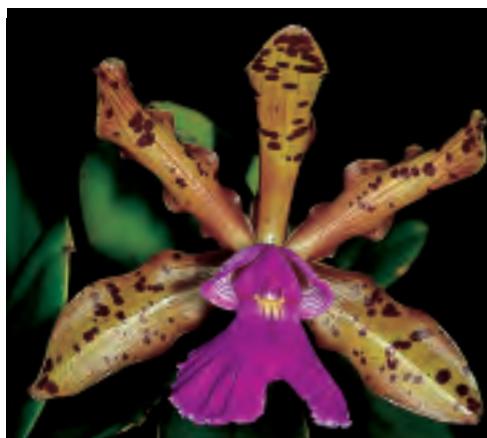
When Does an Orchid Smell Its Best?

Frequently, people are disappointed when they cannot detect the fragrance of an orchid that has a reputation for its sweet scent. There are many variables in this mystery of flower fragrance, and scent can be elusive.

Some orchids smell strongest for only a few hours in the morning while others, especially the night-pollinated varieties, only yield their alluring scent in the evening. If the flowers are normally fragrant in the day, they usually

reach their peak of fragrance when it is warm and in the mid part of the day. Cold, gloomy days put a damper on fragrance. If it is very humid, scent tends to hang in the air longer.

For many orchids, the maturity of the flower has some bearing on the strength of the scent, and it takes a few days after they are open before their scent can be detected. If the air is still, the fragrance is stronger than if it is gusty. Immediately after a rainfall, the oils that emit the fragrance frequently have been diluted and are thus weaker. A plant in good health also tends to produce a stronger scent.



A primary hybrid with *Cattleya aclandiae* and *C. schilleriana* as parents, *C. Peckhaviensis* emits its strongest scent on a sunny, warm afternoon.

There can be variation even with the same species; some selections are more fragrant than others. Also, there is much variation among people regarding their individual abilities to detect different scents. And what one person will describe as a heavenly aroma, another may find repugnant.

Why Aren't Flowers as Fragrant as They Used to Be?

It is a common lament among gardeners everywhere that flowers of today don't have the heady fragrances they used to have. Genders (1977) noted that "as color (pigment) is bred into flowers, scent is usually lost." This has happened quite a bit in many horticultural arenas. It has probably been most obvious with roses and some of the old-fashioned flowers that more recently had been primarily bred for larger flower size, a wider range of flower colors, compact plant habit, increased production and vigor, and insect and disease resistance. For the most part, orchids have faced the same plight. It has not been a conspiracy by plant breeders to banish fragrance, scent has just not been a high breeding or selection priority. As a result, the other sought-after attributes won out.

Times and garden trends are changing. Rose and other flower breeders and their customers, gardeners, are showing a new appreciation for fragrance, whether they grow in outside gardens and greenhouses or in sunrooms and on windowsills. It seems that many people today, gardeners or not, are attracted to a more holistic lifestyle where it is more natural for a flower to have a pleasant fragrance. Large flower size is taking a back seat to fragrance and other desirable qualities, such as ease of growing and flowering and compact growth habit. Some orchid growers now have separate listings or notations in their catalogs or on their Web site to show which orchids are particularly fragrant. Orchid breeders are looking with a new eye (or nose) at the importance of their new hybrids having this alluring feature.



Phalaenopsis are now bred more frequently to produce fragrant results. An example is this hybrid, *Phalaenopsis (Gelblieber-violacea × Coral Isles)*.

The Function of Fragrance in Orchids

As lovely and as appreciated as some orchid fragrances are by our sense of smell, their reason for being fragrant has nothing to do with us. We are just one of the inconsequential (to the plant) beneficiaries. Fragrance is an important tool that plants use to insure their survival by attracting pollinators. Lee C. Soule (1990) identified some ways that fragrance serves this function for orchids. It attracts pollinators to an important food source because fragrance is associated with liquid nectar and pollen, both of which contain highly nutritious sugars sought out by bees, hummingbirds, flies, butterflies, and other creatures. Fragrance is also a powerful sex attractant to various pollinators. We do not need the birds and the bees to tell us about this feature, as this is what the perfume industry is all about.

For detailed information on the various intriguing pollination mechanisms in orchids, readers are referred to the classic study on this topic, *Orchid Flowers: Their Pollination and Evolution* (Van der Pijl and Dodson 1969).

Fragrance in Orchids Gets New Respect

Orchids have been formally judged for 150 years, but the primary criteria used to choose award winners has been flower size, substance, color, and shape. In



Dazzling color combination and light honey fragrance make this hybrid *Miltassia* (*Brassia Rex 'Pieper'* × *Miltonia* *Honolulu 'Warne's Best'*) a winner.

1989, the famous Japanese Prize International Orchid Show took a major step by becoming the first orchid show in the world to establish a fragrance competition for orchids. The judges were both perfume professionals and expert orchid growers. The Japanese have a long history of appreciating flowers purely for their scent. Some of the Asian *Cymbidium* species have been greatly revered for centuries for their delicate, sweet fragrance, so it seems logical that the Japanese would be pioneers in evaluating this quality in orchids.

From this show new standards for evaluating and classifying orchid scents were established. The Japanese divide orchids into two types, To-Yo-Ran (Asian cymbidiums) and Yo-Ran (Western orchids). Within each

group, orchids were evaluated on four basic qualities of fragrance: intensity, gorgeousness, elegance, and freshness. What a job the judges must have had to have to quantify these qualities for all the entries!

The Greater New York Orchid Society Show of 1992 was the first show in the United States to judge orchid fragrance. Professional perfumers from Europe and Japan and American Orchid Society judges rubbed shoulders to select the orchids with the best fragrance. The show officials reported a great deal of interest from the public in this fragrance competition. Having such a prestigious orchid show place importance on fragrance demonstrates how scent in orchids is finally getting its due.

The Process of Judging Orchid Fragrance

The obstacles to judging orchid fragrance are numerous. Heading the list is the fact that scents are very personal experiences, so myriad opinions exist about what a particular orchid smells like and whether this scent is pleasant or not. Also, orchids emit their scent at different times of day or during the evening.

Linet Hamman, a director of Van Rooyen Orchids in South Africa and an accredited orchid judge, has been involved with orchid fragrance judging. Hamman (pers. comm.) states,

The science of smelling/sniffing is quite controversial. Some people believe that you only need to whiff the air above the flower (called “head-space” by perfumers). Others suggest a waving or sniffing action, while another school believes that you have to stick your nose right into it.

Hamman explains that the South African Orchid Society has come up with a practical, simple approach to evaluate orchid fragrance. It judges on these criteria:

- Intensity. How strong is the fragrance?
- Diffuseness. Can you smell the fragrance from a distance or only very close?
- Pleasantness. How pleasant (or unpleasant) is the fragrance?
- Elegance. How well rounded and “perfumistic” is the fragrance. Chemical notes and “thin” fragrances are marked down.

All characteristics are scored on a 1-to-10 basis except for pleasantness, which is scored 1 to 20. A maximum of 50 points is possible.

Get Your Nose into Shape

In her book *The Essence of Paradise* (1991), Tovah Martin proclaimed that among humans “olfactory proficiency has taken a nosedive in the last century. We don’t exercise our nose enough. And, as a result, our sense of smell has suffered.”

Jochen (Joe) Heydel, a retired senior perfumer with Symrise Company and a fragrance judge for the New York International Orchid Show, says it takes five to six years of intensive odor training before a professional perfumer's nose is up to snuff (J. Heydel, pers. comm.). By this time the perfumer should be able to recognize about 3000 odors. Heydel makes constant use of his olfactory skills in everyday life. He says he experiences life in three dimensions—sight, sound, and smell—and that his nose is “always on alert.”

Heydel commented that all noses are not the same and that some people naturally have a higher odor perception than others. Since he made his living with his nose, he obviously was blessed with a super nose. But he suffers from Salmon Nose Envy. He said, “Just think about how sensitive the sense of smell is for a salmon. It finds its way from the ocean to its nesting place in freshwater, hundreds or more miles solely depending on its fabulous sense of smell!”

Although few of us are blessed with a nose that is as highly perceptive and trained as is Heydel's, we can all do our part to make fragrance and smelling a more important part of our lives. The orchids in this book give you the perfect opportunity to perform painless, sweatless, sweet calisthenics with your nose. What a delightful way to work your way back to the nose fitness with which you were born.

A Word of Caution

I wish I could say that I am 100 percent certain of all the fragrance descriptions, but I am not. This subject is not pure science; much of it is anecdotal and personal opinions. We are breaking new ground with this book and I expect and welcome feedback from readers who disagree or have other opinions as to the description or intensity of the fragrance.

Chapter 2

Selecting and Buying Orchids

This is the fun part, but doing it right requires homework before you step foot in an orchid supplier's greenhouse or place an order with a mail-order company. Once this happens all reason loses out to the excitement of the moment. To buy orchids that strike your fancy, without first thinking through what fits your needs, growing requirements, and available space will frequently result in disappointing results. The orchid family is huge—in the tens of thousands! This is great in that the possibilities are vast, but the downside is that the choice can be daunting. To make the best selection you must know your preferences and consider the limitations of your growing area so you can choose orchids that will perform best under your conditions.



A super beginner's orchid, *Phalaenopsis* Orchid World 'Bonnie Vasquez' AM/AOS is a sought-after variety readily available from tissue culture. PHOTO BY ALLEN BLACK.

If you are a beginning orchid grower look over those orchids listed as being easy. As you get more confident and experienced you can try out some of the others. See appendix A, Orchids by Ease of Culture.

Light

If you have a greenhouse, you can grow all the orchids mentioned in this book; they will receive sufficient light in such a setting to grow fine. If you grow plants under lights or on a windowsill, you will be somewhat limited in your choice of plants by the lower light intensity of these situations.

While all orchids can be grown under the right light setup, especially using HID (High Intensity Discharge) lights, there still is the practical consideration of the cost of electricity. Most orchid growers who use lights choose systems with fluorescent lights because of the purchasing and operating costs. This being the case, those orchids requiring low light will do great, while those requiring medium light will do OK if they are not too tall, under 12 inches (30 cm).

For windowsill gardeners, the amount of light available for growing orchids depends upon the direction your windows face and how large they are. If you have a spacious, unobstructed south-facing window that receives at least five to six hours of sunlight, then orchids requiring high light are a possibility. For most other window exposures, the orchids preferring medium to low light intensity will be the better choice.

See appendix B, Orchids by Light Requirements, to help you choose.

Temperature

Greenhouse owners in most parts of the country find that orchids in the intermediate temperature range, 55–60°F (13–15°C) night temperature, 65–75°F (18–24°C) during the day—are the logical choice. Fortunately, most orchids in cultivation are in this category. All greenhouses have microclimates that are warmer or cooler than average. In these spots you can grow some of the orchids with warmer or cooler temperature requirements. For growers in very hot climates such as southern Texas, southern Florida, and Arizona, it is a real challenge to grow the orchids requiring cool night temperature. Without heroic efforts on the grower's part, these orchids usually suffer a slow death in such climates.

Most indoor gardeners will also find the intermediate-temperature orchids easiest to manage. If the air temperature is on the cool side, warmer orchids, like *Phalaenopsis*, can be successfully grown by placing their pots on waterproof heating pads used for seed starting. These pads increase the media and root zone temperature by 10 to 15 degrees Fahrenheit (5–8 degrees Celsius) without the cost of heating the entire growing area.

To provide lower temperatures for those orchids requiring it, windowsill growers can place the plants closer to the windows where heat is lost during the evening. Light growers using tiered carts should plant cooler loving orchids on the bottom shelf (which is also closer to the cool floor) and the warm loving ones on the top where they will benefit from the warmer air rising from the bulbs and ballasts. With HID lights the warmest area is the one closest to the bulb.

See appendix C, Orchids by Nighttime Temperature Preferences, to help you choose.



Dendrobium Aussie Quest × Den. Ku-Ring-Gai is an example of cold-tolerant and fragrant dendrobiums being produced by Australian orchid breeders.

Size of Plant

A large cattleya in full bloom is a spectacular sight, but whether it will fit in your growing space is an important consideration. If you are growing in a greenhouse, windowsill, or under HID lights, a large cattleya probably will probably fit, but how much space do you want to take up with one plant? Under fluorescent light carts, such a plant is not likely to be suitable. The plant may not fit under the light unit, and even if it does, the lower leaves will not likely receive enough light for the plant to grow and bloom well. Fortunately, breeding compact plants has become a very important criteria to orchid hybridizers today, so many of these more space efficient orchids of all types are now available.

Favorite Colors

Orchids come in such a myriad of colors, why settle for anything less than your favorite colors? When choosing orchids for color, remember that the type of light under which you view plants makes a big difference as to how the colors appear. All colors look accurate in diffused natural light, but regular fluorescent lights make reds pale and blues darker, and incandescent lights make reds redder and blues dull. Also, be aware that orchids will not frequently reach their true color until they have been open for several days.



Nobody ever has enough blue-flowering plants, and very few of them are fragrant, like this one, *Neostylis* Lou Sneary 'Blue Moon'. A compact grower, this orchid is perfect for lights or a windowsill.

Favorite Fragrances

Fragrance preference is very personal. A scent that may be heavenly to one person may be non-existent or nauseating to another. Check out appendix D, Orchids by Intensity of Fragrance, where fragrance descriptions are also given.

Time of Day and Year for Blooming

When are you home to enjoy your orchids? Do you work long days and rarely make it back for supper? Maybe orchids with an evening fragrance would be more rewarding for you. See appendix E, Orchids by Time of Fragrance for help in choosing your plants.

Also, what time of the year are fragrant orchids most important to you? Do you want to have a sweet-smelling orchid in your house year-round, or is winter when you would most appreciate the fragrance of flowering orchids to help you get through the winter blahs? See appendix F, Orchids by Season of Bloom, to select orchids that will put on their show when you want them to.

You will notice that some species and many of the hybrids in appendix F have a “variable” season of bloom. This includes varieties that bloom only once, but at various times of the year. Some of these varieties are triggered to initiate flower buds after they have gone through a cool drop of 15 degrees Fahrenheit (8 degrees Celsius) between daytime and evening temperatures



This cross of *Brassolaeliocattleya* Erin Kobayashi and *Potinara* Marlene Lunquist is a wonderful combination of sumptuous color and sweet fruity fragrance. It will frequently bloom more than one time a year.

or dry period for a few to several weeks. This treatment mimics what the plants would face in their natural habitats during winter when temperatures naturally cool off or in tropical areas where plants go through a dry season. Large-scale producers of orchids like the hybrid *Phalaenopsis* can deliver blooming plants year-round by temperature manipulation. To some degree this is possible with many orchids, especially the hybrids. Some of the species adhere more to their natural biological clocks.

The Plant Selection Process

After you have worked through the exercise of deciding which orchids fit your requirements, you are now ready to shop. To find the closest orchid supplier to you, check out the American Orchid Society's marketplace on the Web (<http://www-aos.org>), where dealers can be searched by state. *Orchids*, the publication of the American Orchid Society, also contains ads from various orchid growers.

After you pick a grower, have arrived at the greenhouse, and have live plants in front of you, here are some things to look for. Make sure all the plants around you are healthy. If they are covered with bugs or disease, the likelihood of the plant that you pick out having them, whether you see evidence or not, is high. Assuming the plants in the greenhouse look good overall, it is time to look closely at the specific plants that interest you. Make sure they are clearly labeled. Gently lift up on the plant to see how firmly it is rooted in the pot. If it wobbles around, indicating few roots, pass it up. Notice if there are any weeds in the pot. A few cloverlike weeds, *Oxalis*, may be acceptable, but too many weeds is a sign of careless culture and these intruders will be difficult to eradicate. Since the oxalis roots wrap around the orchid's roots, the only way you can really get rid of these weeds is to repot the plant. Check out the leaves. They should be free of spots from disease and have a healthy green color.

Mature vs. Immature Plants

For the quickest, most predictable result, buy blooming-size plants. And, if you are new to orchids, you are better off purchasing a plant that is as mature as possible. If you can buy it in bloom, it is all the better. You will pay more for it, but this way you will see exactly what the flower looks like, what it smells like, how large it gets when it is mature, and it won't take as long for it to bloom again.

If you decide to buy immature plants, beware that the designations used by many growers to indicate the size or maturity of their plants—BS (blooming size) and NFS (near flowering size)—can vary quite a bit as to how long it will actually take until they flower. The usual rule of thumb is that NFS plants



What you see is what you get when you buy a mature flowering plant. This *Zygoneria* hybrid displays wild and wonderful colors and a hyacinth fragrance.

could bloom within a year; BS plants within six months. To be sure your supplier agrees with these definitions, ask him or her how long it will be before the plants bloom.

Buying Orchid Plants by Mail

Buying plants by mail is another alternative and is the only one viable for many people who live too far away for a personal visit to the grower. Fortunately, there are plenty of highly reputable orchid dealers that have excellent quality plants and know how to ship them across the country and still have them arrive at your home in top condition. I have compiled a short list of some of these reputable dealers and have annotated it with comments relevant to fragrant orchids. See appendix G, Sources for Fragrant Orchids. When you search for fragrant orchids, deal with a grower who has knowledge about and interest in these types of orchids.

To choose fragrant orchids from these vendors you can take several approaches. Some of the dealers have Web sites that allow you to do a search for fragrant orchids. Others have Web sites or catalogs where fragrance by variety is noted. Also, look for the various fragrant species mentioned in this book or hybrids that contain at least one of these species, but be aware that within a species certain selections can be much more fragrant than others. Ask the grower if his or her selection of the species you are after has a pleasant scent. Hybrids with two fragrant parents are almost certainly fragrant themselves. If only one parent is fragrant, the result is less certain. Look for specific fragrant clones that are listed in this book because they will be dependably fragrant.

Chapter 3

The Basics of Growing Orchids



Orchids have been given a bad rap. Many people still feel these plants are reserved for wealthy individuals who are endowed with a fancy greenhouse and deep pockets. While it's true that some folks spend an unimaginable amount of money on this hobby (or obsession), wealth is not a requirement. Modern production techniques have made better-quality, easier-to-grow varieties of orchids available at prices at or below what they were ten to twenty years ago. Award-quality clones can be purchased for the price of a shrub, and they are available at a variety of sources ranging from home supply stores to specialist growers. Orchids have become plants that anyone with a sunny windowsill or fluorescent light setup can afford and enjoy. They have rapidly become one of America and Europe's most popular houseplants; in fact, in the United States, they are now the second most popular blooming plant next to poinsettias! And unlike poinsettias, their popularity and sales are climbing every year.

Orchids are not difficult to grow. They just have cultural requirements that must be met, like all plants. In this chapter I will present fundamental orchid growing information, based largely on my own experience of growing orchids in a greenhouse, under lights, and in windowsills for about 40 years. Fortunately, many fine books are available on basic orchid care that you can consult for more detailed information. Check out the American Orchid Society's Web site and their bookstore for some sound advice on book selection based on your level of knowledge, what part of the country you live in, and which types of orchids you prefer to grow.

Sufficient Light

Light is one of the most critical cultural requirements for orchids as it is for all green plants. It, along with water and carbon dioxide (CO_2), are the raw material plants use to produce their food. Providing sufficient light is the cultural

requirement most challenging to meet for indoor gardeners in areas of the country like New England, the Northeast, and the Midwest that suffer from short days and low light during the winter. Fortunately, plenty of species and hybrids of orchids don't require super high light intensities and so are more suited to these climates. Orchid growers blessed with naturally high light in places like Hawaii, California, and Florida have more of a problem reducing the light intensities and lowering high temperatures.

The Ins and Outs of Light Intensities

Orchids are traditionally categorized by their light requirements—high (2500 foot candles or higher), medium (1500–2500 foot candles), and low (less than 1500 foot candles). Modestly priced light meters are available to measure light in these units. All the orchids mentioned in this book are listed in appendix B by their light requirements. Most of them are in the medium light category. Those in the low to medium categories are very feasible under lights or in bright windowsills throughout the United States. From a practical point of view, the ones with high light requirements are most successfully grown in bright greenhouses.

Greenhouses collect light and are the brightest light option for growing orchids. The amount of light penetrating the greenhouse is determined by the glazing material used, the geographical location of the greenhouse, how it is sited, and whether it is shaded or not by surrounding trees or a commercial shading compound or fabric.

Windowsills also collect light, though not to the degree that greenhouses do. The amount of light that windowsills can provide is primarily determined by the size of the windows, the direction the windows face, and how far the plants are placed from the windows. The time of the year can also make a great deal of difference. During winter, for example, the sun is lower in the sky and the day length is shorter. As a result a south-facing window may be fine for certain orchids during the winter, but in summer the increased light intensity and duration of light may require moving the orchids to an east-facing window.

Artificial light sources make it possible for people without greenhouses or bright windowsills to still enjoy this hobby. Although what can be grown under these light sources is only restricted by equipment and electricity costs, growing plants under lights is a most practical method with low to medium light orchids.

The Canadian Orchid Congress published a handy chart showing the light levels offered in various growing situations. It is used here with their permission. Light levels for windowsill orchids was measured by the number of hours of sunlight offered and the direction of the window. Greenhouse light levels were expressed as a percentage of summer light to be deducted from 100 percent, the amount of light a greenhouse would receive in full sun in

summer. For example, to grow an orchid requiring very high light, the last category in this chart, you would subtract 45 percent from 100 percent, leaving 55 percent. That is, an orchid requiring very high light should be grown in a greenhouse under shading with a shade density of 55 percent. Finally, light levels for plants grown under fluorescent lights were calculated in number of watts per square meter (9.84 square feet) rather than in foot candles.



Displaying tropical orchids in bloom on a plant stand indoors is a great way to chase away the winter blues. This stand backs up to an east-facing sliding glass door.

LIGHT LEVEL	WINDOWSILL & HOURS OF SUN	GREENHOUSE	FLUORESCENT LIGHTS
Low	Bright north or east facing; 1–2 hours of sun	15% of summer light	100–200 watts/meter ²
Medium	East or west facing; 2–3 hours of sun	25% of summer light	200 watts/meter ²
High	West or south facing; 4 hours of sun	35% of summer light	400 watts/meter ²
Very high	South facing; 5–6 hours of sun	45% of summer light	Not recommended

Orchids Tell You How Much Light They Need

Different types of orchids have varying light requirements since they naturally grow in a wide range of habitats. Some thrive in full sun on exposed rock, while others are at home in dense jungle shade. The leaves of the plant give you some clue as to their light requirements. Very tough, thick, stout and sometime narrow leaves frequently are adapted to very high light intensity. Softer, more succulent, and wider leaves usually are from a lower light environment.

Although some orchid growers rely on light meters to read foot candles to determine correct light levels, the plant themselves are very good indicators. Orchids will tell you by their growth habits and leaf color if they are receiving adequate, too little, or too much light. When orchids are receiving sufficient light, the mature leaves are usually a medium to light green, the new leaves are the same size or larger and the same shape as the mature ones, the foliage is stiff and compact, not floppy, and the plants are flowering on schedule.

One of the most frequent results of inadequate light is succulent, dark green foliage and no flowers. Other symptoms include “stretching,” where the distance between the new leaves on the stem of orchids like *paphiopedilum*, *phalaenopsis*, or *vandas*, are further apart than with the older, mature leaves. Also, the new leaves and leads tend to be longer and thinner.

When orchids receive too much



The light yellow coloration indicates this cattleya leaf is receiving the maximum amount of light before sunburn will occur.



Notice that the long distance between the leaves on the stem of this paphiopedilum causes a ladder effect. This is the result of insufficient light.



A paphiopedilum leaf with a round or oval brown spot caused by too much light or sunburn.

light the leaves turn a yellow-green or take on a reddish cast and may appear stunted. In extreme cases, the leaves show circular or oval sunburn spots. The “sunburn” is actually caused by the leaf overheating and although, in itself, this leaf damage may not cause extreme harm to the plant if it is isolated to a small area, it does make the plant unsightly.

If the sunburn occurs at the growing point, it can kill that lead or the entire plant. It is possible to grow orchids under higher-than-usual light intensities if the ventilation is increased to lower the elevated leaf temperatures. Some orchid cut flower growers “push” their orchids to produce the maximum number of blooms by growing plants under the highest light intensity that does not burn them. Most hobby growers, however, want a plant that has attractive foliage and flowers and thus do not follow this practice.

Many Options with Artificial Lights

It can be rather daunting for a beginner to wade through the many lighting options available today. Fluorescent systems are still the most accessible and economical ones to buy. Three-tiered light carts are highly versatile and practical. Most of them are about 2 feet wide by 4 feet long (60 by 120 cm) so their three shelves provide 24 square feet (about 2 square meters) of growing area. If you grow compact orchids, this will be enough space to have at least one or more orchids in bloom year around. If you grow miniatures, it will provide space adequate for an entire collection. The convenience of such a cart can't be beat. You can place it in a heated garage, in the basement, or in a spare bedroom.

The choice of which bulbs or lamps you burn in your fixtures is a highly debated topic. Years ago the only real choices were cool white and warm white tubes. Some people still feel that a mix of half cool white and half warm white



Four-tube, rather than two-tube, units are highly recommended for low to medium light orchids.



An adjustable light fixture like this one is very handy for accommodating developing flower spikes.

tubes is the best option because they are bright and very inexpensive. With the introduction of Sylvania's Gro-Lux tubes, designed to provide light that more closely reflected the spectrum of light that plants used in photosynthesis, a new race began to produce the "best" plant bulb. The evolution of lamps has gone from Gro-Lux to wide spectrum types and now to the full spectrum bulbs. Reputedly the light cast by the full spectrum lamp most closely resembles natural sunlight. Viewed under these lamps, colors of the flowers are rendered more accurately. I have grown orchids well under all three lamp types. For growers who want flowers to appear most naturally colored under the lights and don't mind paying a premium for the lamps, the full spectrum types are the best choice. The most economical and still satisfactory pick is half warm white and half cool white lamps. A compromise between these two options would be a blend of half warm white and cool white tubes and half wide or full spectrum lamps.

Newer to the artificial light choices are the high intensity discharge (HID) lights. They are very efficient in their production of light and are especially useful for growing orchids that require higher light intensities than fluorescent lamps can provide and/or where greater working distance between the lights and plants are desired. For much more detail on this topic I recommend Charles Marden Fitch's excellent guide *Growing Orchid Under Lights* (2002) and Patti Lee's chapter in *The Gardener's Guide to Growing Orchids* (Fitch 2004b).

Some Like It Hot, Some Like It Cold

Orchids are frequently placed in three difference categories based on their night temperature preferences:

Cool	45–50°F (7–10°C)
Intermediate	55–60°F (12–15°C)
Warm	65°F (18°C) and above

The assumption is that the daytime temperature will be 15 degrees Fahrenheit (8 degrees Celsius) or more warmer than this night temperature. These numbers are not absolutes, but rather guidelines. Most orchids are quite adaptable and tolerant of varying temperatures, short of freezing, but for optimum growth these temperature ranges are good targets. If orchids are exposed to cooler than recommended ranges, their growth will be slowed down and in extreme cases can lead to buds falling off before they open. Also, cooler temperatures can reduce the plant's disease resistance. A short bout of higher-than-desired temperatures will not prove that harmful as long as the humidity stays high. If daytime temperatures routinely run much above those recommended, the plant will also be stressed and growth will be retarded or will stop altogether.

One critically important factor with orchids is their temperature differential requirement of at least 10 to 15 degrees Fahrenheit (5–8 degrees Celsius) between the warmer day temperature and the cooler evening temperature. If this differential is not met, the orchids will not grow vigorously, and probably most importantly, will not set flower buds. Not meeting this requirement is one of the most common reasons that home grown orchids don't bloom.

Humidity Is the Moisture in the Air

Humidity is something you can't see, but can feel on a muggy summer day or in a steamy greenhouse. Most plants, except those from arid areas, relish it. The vast majority of orchids are from the tropics where high rainfall and humidity predominate.

When plants receive ample humidity they grow lushly and their leaves have a healthy shine. Insufficient humidity can cause stunting of the growth and, in severe cases, brown tips on leaves. It can also contribute to buds falling off (bud blast), leaves wrinkling, and drying of the sheaths that can trap the buds resulting in twisted or malformed flowers.

During the winter, homes, especially those in cold climates with forced-air heating systems, have a relative humidity of about 15 percent. Since this is the average humidity found in most desert areas, something has to be done to raise the indoor humidity to 50 percent or more—the level that makes orchids and other houseplants happy. For greenhouses, this process is a relatively simple matter. Either the walkways can be regularly hosed down or foggers and commercial humidifiers can be hooked up to a humidistat so that the entire operation is automatic.

High humidity levels that are no problem in a greenhouse would peel the paint, plaster, and wallpaper off walls in a house, so home growers require a different approach. Several steps can be taken to get to the desirable humidity range without damaging results. First, it is a good idea to locate the growing area for your orchids in a naturally damp area, like the basement. Second whether or not a naturally damp area is available, the home grower will need a room humidifier. I find the best type is an evaporative-type humidifier. These units have a pad that is dampened by water in a reservoir and then a fan draws air across this pad and expels cool, humid air. Evaporative humidifiers are superior to mist type humidifiers because they don't result in a white film from the minerals in the water being deposited on leaves or furniture.

To further increase the humidity level, it is commonly recommended to grow the plants on top of a waterproof tray filled with pebbles. Water is added to the tray so that the level is just below the surface of the pebbles, then the plants are put on top of this bed of damp gravel. I don't recommend this system because I find that the pots, especially the heavy clay ones, unless they are

placed on inverted saucers, quickly sink into the pebbles resulting in the media in the pots getting soggy and, after repeated waterings, the pebbles become clogged with algae and are a repository for insects and various disease organisms. An approach that works much better in my experience is to add sections of egg crate louvers, sold in home supply stores for diffusing fluorescent lights, to the trays. This material can be cut with a hack saw to whatever size you need, is rigid so will support the plants above the water, exposes more water to air so more humidity results, and is simply cleaned by removing and spraying the grating with warm water. To prevent algae or disease buildup, you can add a disinfectant like Physan to the water in the trays.

Misting is another frequently suggested method for increasing humidity. This works OK, but must be done several times a day to be effective, since the water usually evaporates very quickly. A problem with misting is that if your water source is mineral laden, your orchid's leaves may become encrusted in white to the degree that they are unsightly and light is prevented from penetrating the leaves. A side benefit to misting is that it can clean the dust from the leaves and keep down populations of pests like mites that thrive when it is hot and dry.

Orchids Need Constant Air Movement

In most tropical lands where orchids reside, they luxuriate in incessant trade winds. Air movement in a growing environment assures a more uniform air temperature and dramatically reduces disease problems by preventing the leaves from staying wet too long. It also evenly distributes the carbon dioxide that is produced by the plants in the dark and used in photosynthesis during the daylight hours.

The intention is not to create gale force winds, but to produce enough air-flow to cause the leaves of the orchids to very gently sway in the breeze. I have found that two of the most effective methods to provide such an air flow for both a hobby greenhouse and an indoor growing area are the use of ceiling and oscillating fans. Ceiling fans move a huge volume of air at a low velocity in a circular pattern (from floor to ceiling or vice-versa), so they effectively prevent severe temperature stratification. They are also inexpensive, easy to install, and, if you purchase outdoor types, stand up well in moist conditions.

Oscillating fans are also a good choice, since they effectively cover large areas with a constantly changing airflow pattern without excessively drying off the plants. If you decide to go with oscillating fans, splurge for the better grade ones. Inexpensive oscillating fans have plastic gears that strip easily, so the oscillating feature won't last long.

For small hot or cold spots in the greenhouse, windowsill, or light cart,

the small muffin fans frequently sold for electronic devices are efficient, quiet, and very inexpensive to operate.

The Art of Watering Orchids

Probably more orchids are killed by improper watering, usually by over watering, than by any other cultural practice. Learning how to properly water orchids is one of the most challenging aspects of orchid culture.

When I give talks about orchids, one of the first questions asked by those attending is, "How often should I water my orchids?" I really wish there was an easy answer to this question, but there is not. There are so many variables involved! Here are just a few of them:

- Are you growing in plastic or clay pots? The media in plastic pots dries off much slower than it does in clay. With plastic, the media dries out from the top down, so although it may be dry on top, it may still be damp 1 inch (2.5 cm) below the surface. With clay pots, the media dries out more uniformly because the pot is porous.
- What type of media are you using? Media vary dramatically on how much water they retain. For instance, sphagnum moss usually stays wet much longer than bark.
- Is the orchid pot bound or not? An overgrown orchid will dry off much more quickly than one that has plenty of space in the pot.
- What is your growing environment? Is it high humidity or low? Plants and media in low humidity dry off quicker. What temperature are your plants growing in? Warmer temperatures increase water evaporation. How much ventilation do you plant have? The more ventilation, especially if air is vented to the outside, the quicker water in the media evaporates.
- Are the orchids actively growing or dormant? When species of certain orchids like some of the dendrobiums and catasetums are going through their winter rest period, they need and should only be given very little water, but when they start active growth in the spring and summer they require copious amounts of water.
- What type of orchid are you growing? Some, like cattleyas, like to get dry between waterings; others like paphiopedilums, phalaenopsis, and miltonias prefer to always be damp.
- How old is the orchid growing medium? Anyone who has repotted an orchid in fresh fir bark knows that the plant has to be watered much more frequently the first few weeks until the medium gets properly wetted. As this bark gets older it retains water longer. That's true for most media.

You can now see why this is not an easy question to answer without considering many different factors.

Watering Techniques

Taking all of the above in consideration, you need to make the decision when and how much to water. I find the pot weighing method one of the easiest to learn. This first involves very thoroughly watering the orchid in its pot. Then “weigh” it by picking it up. Now you know what it feels like when it is saturated with water. Wait a day or so and weigh it again by picking it up. Feel the difference in the weight as the medium becomes drier. Keep doing this each day until you judge, by looking at the surface and sticking your finger into the top 1 inch (2.5 cm) or so of the media and knowing whether this orchid prefers to be on the damp or dry side, that it is time to water. Note what the weight is now. Then water thoroughly. This entire process sounds tedious, but you will be amazed how quickly you catch on. Once you master it, you will always know the right time to water. Just lift the pot and you will get your answer.

Here are some other watering tips:

- Grow plants of similar type, media, pot type, and sizes in the same area. This will make watering them easier, since they will have very similar moisture requirements.
- Water with warm water. Very cold water can cause root and bud shock.
- Always use a water breaker, or for only a few plants, a sprinkling can with a long spout and a water diffusing rose. These instruments water plants thoroughly without washing out the media. A huge selection of watering wands is offered now. I really like the ones with multiple settings on the head that allow you to drench or mist without changing attachments, and I find that those equipped with a finger trigger make it easier to regulate the flow of water than those with an on-and-off valve.
- Never let the water breaker or the end of hose touch the ground. This was a commandment given to me by my first horticulture professor, D. C. Kiplinger. He preached that floors and soil are where the pathogens hang out and a hose can be an all too effective way of spreading them.
- When you water, water thoroughly. The water should pour out from the bottom of the pot. This method of watering ensures that the media is saturated and flushes out any excessive fertilizer salts.
- Never let an orchid pot sit in water for any length of time. If the pot has a saucer, make sure to keep the saucer free of water. Excess standing water will prematurely rot the media and roots and will be a source of accumulating fertilizer salts and pathogens.
- Water the plants early in the day or afternoon when there is adequate time for the foliage to dry off before nightfall. Wet foliage in the evening is an invitation for disease.

Signs of Improper Watering—Roots Tell the Story

Unfortunately, over and under watering show many of the same symptoms because the net effect of both practices is the same, damaged or destroyed root systems, which results in dehydration of the plant. The signs of this problem can be pleated leaves on miltonias, excessively shriveled pseudobulbs on cattleyas, yellow and wilted bottom leaves on phalaenopsis, and bud blast (buds fall off instead of opening) on all orchids.

To better evaluate whether over or under watering has caused these symptoms, you must remove the plant from its pot. Many beginner growers are reluctant to do this, but if done carefully it will not harm plants and it is an absolutely necessary procedure to see what is going on with the root system. When the plant is removed from the pot, check out the medium. Is it soggy? Does it have a bad (rotting) smell? Are the roots dark and mushy? These are all signs of over watering. If the roots are dry rather than succulent, and have no or few growing root tips, the orchid probably has not received enough water. This can be because the media is too coarse and thus makes poor contact with the roots or the water was not applied frequently enough.

The remedy to this situation depends on how dire the root condition of the plant is. If there are still healthy, firm roots, then cut off all the soft ones with a sterile tool like a single-edged razor, and repot in new mix. Water lightly for a few weeks to encourage new root development. Mist the plants a few times a day to prevent the leaves from drying out.

If the roots are almost all gone, emergency measures are called for and recovery is not definite. Cut off all the dead or damaged roots, then drench the roots with a liquid rooting hormone like Dip 'n Grow. Allow this liquid hormone to dry on the roots for about an hour, then repot the orchid in fresh media that has been pre-dampened.

Don't water for a day, then water once and place the potted orchid in an enclosed terrarium (like a High Top Propagator or an empty aquarium) with damp sphagnum moss or pebbles on the bottom. Close the top and put the terrarium in a location with diffused light. In a greenhouse, this would be a shady spot with no direct sunlight; under lights, this would be at the ends of the tubes where there is less illumination. If the terrarium is in the cool part of the greenhouse or growing area, put the entire terrarium on



Enclosed containers like this High Top Propagator provide an atmosphere of 100-percent humidity in which plants with damaged roots can reroot themselves.

a heating mat set for 70°F (21°C) to provide bottom heat to stimulate rooting. If disease is a concern, spray the orchid leaves with a disinfectant solution like Physan. In this environment of 100% humidity the leaves will not dehydrate, so there will be no stress on the orchid while it reroots itself. Water the media only when it gets dry, keep the gravel or moss in the bottom of the terrarium damp, and leave the plant enclosed until new roots growth is very apparent. This may take a few months. There are no guarantees with this method, but it has brought back several orchids for me that were in the “hopeless” category.

Fertilizing Is Not a Cure-All

Many people put much too much faith in fertilizers. They think fertilizer is some type of elixir that will save the day. Actually, if the plant is in poor health, fertilizers are rarely the answer. In fact, if the roots are damaged, as is frequently the case, applying fertilizers worsens the problem. If roots are not functioning well, they cannot absorb the fertilizer, and the fertilizer that is not used by the plant can accumulate in the orchid media. This buildup of fertilizer salts can further dehydrate and damage the remaining roots. Fertilizers are most useful as a boost to help an already healthy plant grow better.

The number and types of fertilizers on the market can make your head spin! There is much mumbo-jumbo about why one fertilizer is better than another. Fortunately, the choice is not near as complicated as some manufacturers seem to make it. The most enlightening and cogent explanation of orchid fertilization that I have read appeared in *Orchids* in an article titled “Without High Phosphorous, A New Fertilizer Proves Itself with Orchids” by Jan Szyren (2003) and the accompanying sidebar by Bill Argo from the Horticulture Department at Michigan State University. According to Szyren, orchids, like all plants, need a balanced fertilizer, but they do have some special requirements. A good water-soluble fertilizer, the kind most recommended and used by orchid growers, should have various qualities. From this article and my own experience, I believe the following criteria apply to fertilizers for most orchid growing situations:

- Nitrogen should be provided as nitrate and ammonia. Both forms are more immediately available to orchids in warm and cool temperatures and do not have to be broken down by soil organisms before they become available, which is what is required with urea-based products.
- High amounts of nitrogen, much more than 20 percent, are not necessary to grow the best plants no matter what media they are grown in. Too much of any nutrient cannot be used by the orchid plant and, as a result, merely ends up as a pollutant.

- A high-phosphorous fertilizer (sometimes called “bloom booster”) is not necessary to trigger better blooming.
- For most water sources a fertilizer with supplementary calcium (up to 15 percent) and magnesium (up to 8 percent) is a real plus. Get a water test to find out if you happen to have sufficient quantities of either of these so that they don’t need to be included in the fertilizer that you use.
- For most water sources, trace amounts of sodium, manganese, copper, zinc, boron, iron, and molybdenum are beneficial.

The article mostly discusses two special orchid fertilizers developed for orchids, one formulated for the well water at Michigan State University and another for “pure” water. Although I have tried and am still using the “pure” water formulation with good results, other fertilizers on the market also have these qualities.

Other pointers to keep in mind are that it is better to fertilize more frequently at a more dilute rate than less often at a higher concentration. Follow the recommendations on the fertilizer container regarding how much to use. When in doubt apply less, not more fertilizer. If you apply fertilizer at higher-than-recommended dosage, root burn can occur. Remember fertilizers are a form of salt and salts were some of the earliest weed killers, so they will damage plants at high concentrations. Also, to be on the safe side, be sure your media is damp before applying fertilizer. It is a good practice to drench the media every few weeks or so with fresh water that contains no nutrients to wash out any excess fertilizer salts. This is called “leaching.”

Pots, Potting, and Potting Media

Plastic pots have replaced clay as the standard. They are lightweight, inexpensive, available in a vast range of sizes and types, and do not break easily. For orchids that prefer constant moisture, they are almost always the choice. Clay pots do still have a place, though. Their advantages include that they dry off very thoroughly; are heavier, which can be a bonus for top-heavy orchids; and are easier to use with clamp-on supports and clips, since clay pots are more rigid than plastic. All of these features make them favored by some growers. The truth is, you can grow most orchids in either type of pot, as long as you learn the watering characteristics of each.

Orchids can also be mounted on wood or cork, a growing method often recommended for plants that resent frequent potting and grow naturally as epiphytes in situations where their roots accustomed to being exposed to the air. Orchids that require excellent drainage and those with downward-growing flower spikes, like stanhopeas, do well in slatted wooden baskets.

The range of choices in potting media is overwhelming and the ratios of

When an epiphytic orchid like this cattleya runs out of room, new roots and leads form outside of the pot. It would have been best to repot this orchid just as new roots are forming rather than after they have already fully developed. In this case the roots will need to be trimmed before placing into a new pot.



what materials are combined to give just the right potting media are just as varied as everyone's favorite recipe for brownies. Most all of them will work OK, but each has its good and bad features. Here are some considerations and generalizations regarding orchid potting and potting media:

- Determine whether your orchid is a terrestrial or epiphyte. Terrestrials do better in a heavy, moisture-retaining mix, while epiphytes require excellent drainage.
- Know your watering habits. If you water frequently, use a more free draining mix, one that contains larger grades of bark, coco chunks, charcoal, or Aliflor. If you water less often, choose a media that retains more water, such as sphagnum moss or a finer grade of bark, coco chunks, or charcoal.
- Use fine media for orchids with smaller roots, larger media for orchids with larger roots.
- Remember that the frequency of repotting varies from eight months to two years depending on how often you water, how quickly the orchid outgrows its space, and the type of media used.
- Keep in mind that the best time to repot orchids is when they are putting out new roots. This is usually immediately after they bloom.
- When repotting, remove all dead or shriveled growths and roots with a sterile knife. A disposable single-edged razor blade is perfect for this. Use one blade per plant to prevent disease spread.

Insect and Disease Control—Think Least-Toxic Solution

Fortunately, orchids have relatively few pest problems. Prevention is the key, so isolate new orchids purchased for at least three weeks. Routinely examine the young developing leaves, especially their undersides, and the flower buds because insects are always attracted to succulent new growth. When you find any insect pests, eliminate them immediately. This can be done most simply

by washing them off with warm water. I frequently follow this up with a spray of insecticidal soap, light horticultural oil, or neem. One of my newest favorite general insect controls is OrangeGuard, which is basically orange oil. It's food-safe; effective on all soft-bodied insects like aphids, scale, and mealy bugs; and smells great. If you stay on top of insect control in the early stages, you will rarely have to resort to the more toxic petrochemical choices.

It is basically the same story for diseases. Keep your growing operation clean and you will greatly reduce your disease problems. Again isolate new plants, water only during the day and afternoon so the foliage dries by the evening, be sure you have good air circulation, and use sterile tools when performing any cutting. If you discover a portion of a leaf with a suspicious spot, remove the affected portion with a new single-edged razor or sharp shears that have been flame sterilized. Cut the leaf back to at least $\frac{1}{2}$ inch (1.5 cm) of healthy tissue, and then spray the plant with a general disinfectant like Physan. Some growers have successfully treated cuts with cinnamon.

For much more detail on this subject, I highly recommend the superb American Orchid Society booklet titled *Orchid Pests and Diseases* (Watson 2002).

Summer Care

Some orchid growers continue growing their plants indoors under lights, in windowsills, or in the greenhouse throughout the summer. The challenge during this time is to reduce the light intensity and control the high heat, both



Vandas can easily be summered over outdoors by hanging them from a free-standing support or suspended rod against the garage.



The author's shade house is an 8-foot (2.4-meter) square simply constructed structure using wood lath and 4- x 4-inch (10- x 10-cm) pressure treated wood posts.



Inside the shade house plants are arranged on stepped wire benches to allow easy watering, good air circulation, and adequate water drainage.

of which can be damaging. For these reasons, summering the orchids outdoors is an attractive option. For growers who rely on lights, moving plants outdoors means a welcome relief from high electric bills and for greenhouse and windowsill growers it provides an opportunity to clean up the growing area. Also, most orchids are not in bloom during the summer so they are not at their best visually and they respond very favorably to a summer vacation outdoors. I summer my orchids in a lath house constructed of pressure-treated wood supports and lath.

Shading, usually 50–60 percent or more depending on the location of the shade house and the types of orchids grown, is very necessary and is provided by lath or shading fabrics. I also installed in this shade house a watering system consisting of multiple small sprayers or misters controlled by a timer that has a manual override. I grow the plants on stepped wire frame benches that ensure even lighting and easy watering.

I covered the roof of the lath house with 6-mil clear plastic, which is stretched over a peaked wooden frame. I used to leave the roof of the lath house open to receive natural rainfall, but found that it sometimes rained when I didn't want it to, at night, when it was too cool or when it was already wet. The covered roof gives me control to water when it is needed. Besides providing an opportunity to clean up your indoor growing area, having a space outdoors allows you to apply heavier duty pest controls, if necessary, without smelling up your house. Finally, the natural temperature differential between day and night, especially in the early fall, is very effective in setting flower buds for the upcoming late fall and winter blooming.

Chapter 4

The Cattleya Alliance



To many people, especially those from the older generation, the words *orchid* and *cattleya* were synonymous. The first prom or Mother's Day corsage that they gave or received was likely purple. In fact the color "orchid" is this purple hue.

The Cattleya Alliance has long been a favorite of both professional and amateur orchid growers worldwide because it has one of the widest spectrums of rich colors and is found with growth habits ranging from miniature to 3 feet (90 cm) or more. Sweet, heavy fragrance has also frequently been a trademark of some of the species and many of the hybrids in this group.

Most genera within this illustrious group, including *Brassavola*, *Encyclia*, *Epidendrum*, and *Rhyncholaelia*, can be interbred to produce a seemingly endless array of color and fragrance combinations.

Since the first cattleya hybrids were made in the mid 1800s by the famous English company, Veitch Nurseries, breeders have kept up a furious pace of new introductions with no end in sight. Before cloning made award-quality plants affordable, the best forms and hybrids commanded sky-high prices. Today's hobbyist growers are treated to the finest quality hybrids and clones at very reasonable prices, and these plants are easier to grow.

Earlier hybridizing efforts, as was case with many other garden flowers, particularly roses, were primarily focused on producing bigger and more numerous flowers per stem in a broader range of colors with more vigorous plants. Little or no effort was made to retain fragrance in these hybrids. Since fragrance can be a recessive characteristic, the result was that fewer hybrids retained this most desirable quality. Fortunately, orchid buyers have been clamoring for the sweet scent of many of the species, and so breeders are responding with efforts to bring back fragrance in many of today's hybrids.

In this chapter I present profiles of some of key members of the Cattleya Alliance, starting with the species, followed by the hybrids. Standard-sized

cattleya hybrids grow 12–18 inches (30–45 cm) on average, but can get larger. Minicatts (dwarf and miniature cattleya hybrids) range from less than 6 inches (15 cm) to more than 12 inches (30 cm).

Species

Brassavola flagellaris

PRONUNCIATION: bra-SAH-vo-la

ORIGIN: Brazil

DESCRIPTION AND QUALITIES: Produces one of the most pleasing fragrances of all the orchids.

INTENSITY OF FRAGRANCE: Very strong

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Hot-chocolate

FLOWER DESCRIPTION: Creamy green petals and sepals with white heart-shaped lip and a green-yellow throat. Flowers less than 3 inches (7.5 cm) wide. Inflorescence 3–5 inches (7.5–12.5 cm) tall, bearing three to five flowers.

SEASON OF BLOOM: Fall

MATURE PLANT: Skinny, fleshy, semi-pendulous, terete leaves up to 18 inches (45 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: High to full sun



Brassavola flagellaris is very fragrant yet not commonly grown. PHOTO BY ALLEN BLACK.

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: A clay pot or wooden basket supplemented with chunks of cork

Brassavola nodosa

PRONUNCIATION: bra-SAH-vo-la

AKA: *Epidendrum nodosum*, *Brassavola venosa*

ORIGIN: Mexico, Central America, Columbia, Venezuela

COMMON NAME: Lady of the night

FRAGRANT OFFSPRING: *Brassavola* Moonlight Perfume (*B. nodosa* × *B. glauca*)

DESCRIPTION AND QUALITIES: This very popular native of Mexico and South America is very easy to grow and bloom.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Freesia, lily-of-the-valley

FLOWER DESCRIPTION: Pale green to creamy white flowers with lips sometimes marked purple. Flowers 3–6 inches (7.5–15 cm) across. Inflorescence erect, 8 inches (20 cm) tall, bearing one to six flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Clump forming, to 18 inches (45 cm) tall but usually much shorter. Stems and leaves are subterete.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium to high



A wonderful beginner's orchid, *Brassavola nodosa* fills up the evening air with its enchanting scent.

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Fine- to medium-textured, well-drained mix.

SPECIAL CULTURAL TIP: Don't divide unnecessarily as this orchid flowers and looks best when grown into a large specimen plant.

COMMENT: This species frequently passes on its ease of blooming, compact habit, and fragrance to its offspring.

OTHER FRAGRANT BRASSAVOLAS: *B. cucullata*—musty-soapy; *B. Little Stars*—soapy-sweet; *B. martiana*—soapy-sweet; *B. tuberculata*—nicotiana, gar-denia; *B. Yaki 'Black's Best'*—musty-soapy.

Cattleya bicolor var. *grossii*

PRONUNCIATION: KAT-lee-a

AKA: *Cattleya grossii*, *Epidendrum iridee*, *Epidendrum bicolor*

ORIGIN: Brazil

COMMON NAME: Bi-colored cattleya

DESCRIPTION AND QUALITIES: A handsome, scented variety that is not common in today's collections.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Spicy, aromatic floral, rose

FLOWER DESCRIPTION: Coppery to pinkish brown flowers with striking dark pink lips. Flowers 3 inches (7.5 cm) wide. Inflorescence terminal, 8–10 inches (20–35 cm) long, bearing up to 10 flowers.

SEASON OF BLOOM: Fall

MATURE PLANT: Slender pseudobulbs grow to 20 to 36 inches (50–85 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Medium-textured, well-drained mix

SPECIAL CULTURAL TIP: Repot only when new roots are starting to develop.

COMMENT: Introduced by Messrs. Loddi-ges of England in 1838 after it was col-lected from Brazil.



A waxy dark flower with a contrasting bright pink lip makes *Cattleya bicolor* var. *grossii* a stunner.

Cattleya guttata

PRONUNCIATION: KAT-lee-a

AKA: *Epidendrum elegans*, *Cattleya elatior*

ORIGIN: Brazil

COMMON NAME: Spotted cattleya

DESCRIPTION AND QUALITIES: A spectacular addition to any collection.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: Waxy green flowers with purple spots. The top portion of the lip is white while the bottom is purple. Flowers 2–3 inches (5–7.5 cm) wide. Inflorescence up to 18 inches (45 cm) tall, bearing five to six flowers.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: Medium-sized grower to 24 to 40 inches (60–100 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Medium-textured cattleya mix

SPECIAL CULTURAL TIP: Repot only when new roots are forming.

COMMENT: First collected by Portuguese botanist José Vellozo in Brazil in 1790.



Nature has a way of being dramatic, as *Cattleya guttata* with its flamboyant flowers illustrates.

Cattleya intermedia

PRONUNCIATION: KAT-lee-a

AKA: *Cattleya ovata*, *Cattleya maritima*

ORIGIN: Brazil

COMMON NAME: Intermediate cattleya

DESCRIPTION AND QUALITIES: This species, which is easy to grow and bloom, has many color forms, including 'Carlos', a selected cultivar with a floral fragrance.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: White to pale purple flowers up to 6 inches (15 cm) wide. Inflorescence 10 in. (25 cm) long, with few to several flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Stems can reach about 15 inches (40 cm) and leaves about 6 inches (15 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured orchid mix

COMMENT: Introduced in 1824 by Captain Graham and first grown at the Glasgow Botanic Garden in Scotland.

Cattleya maxima

PRONUNCIATION: KAT-lee-a

AKA: *Epidendrum maximum*

ORIGIN: Ecuador, Colombia, Peru

DESCRIPTION AND QUALITIES: Considered one of Ecuador's most beautiful orchids.

INTENSITY OF FRAGRANCE: Strong



Cattleya intermedia var. *orlata* has an arresting purple lip that contrasts with its light pink petals and sepals.



An exceptional selection of the species, *Cattleya maxima* 'Mountainside' is from the Vermont orchid growing establishment, Mountain Orchids.

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Heliotrope, sweet pea

FLOWER DESCRIPTION: Lavender-pink flowers with dark purple veins in the lips and yellow throats. Flowers 5 inches (12.7 cm) wide. Inflorescence up to 12 inches (30 cm) tall, bearing flowers in groups of three or more.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: Reaches 5 to 15 inches (12.5–45 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured bark or coco chunk mix

COMMENT: Discovered by Hipólito Ruiz López and José A. Pavon, Spanish botanists in 1777 in the Peruvian Andes.

Cattleya walkeriana* var. *alba

PRONUNCIATION: KAT-lee-a

AKA: *Cattleya bulbosa*

ORIGIN: Brazil

COMMON NAME: Walker's cattleya

FRAGRANT OFFSPRING: *Laeliocattleya* Mini Purple (*Cattleya walkeriana* × *Laelia pumila*)



A white form of the species, *Cattleya walkeriana* var. *alba* has fine shape and super fragrance. It is used extensively in breeding because of both characteristics.

DESCRIPTION AND QUALITIES: The species is found in various color forms with the white-flowering ones usually having the best shape.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Vanilla, cinnamon

FLOWER DESCRIPTION: White, flat flowers of a waxy, thick substance. Flower 3 inches (7.5 cm) across. Inflorescence 8 inches (20 cm) long, bearing one to a few flowers. The typical species has rose-purple flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: A miniature grower, up to about 6 inches (15 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium orchid mix

COMMENT: An easy-to-grow and popular species. The compact habit and fragrance of this species have made it a cornerstone in miniature cattleya breeding. Discovered by Mr. Gander in Brazil in 1839.

Encyclia cordigera

PRONUNCIATION: en-SIK-lee-a

AKA: *Encyclia atropurpurea*

ORIGIN: Central America, Columbia, Venezuela, Mexico

DESCRIPTION AND QUALITIES: Considered by many to be the handsomest Mexican encyclia. Has many color forms. Produces its strongest fragrance in full sunlight.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Honey and vanilla

FLOWER DESCRIPTION: Deep maroon-red flowers with bright pink lips. Flowers about 3 inches (7.5 cm) wide. Inflorescence 24 inches (60 cm) tall, bearing 2 to 10 flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Clusters of fat, oblong pseudobulbs grow 12–15 inches (30–37 cm) tall.



Vanilla fragrance and easy culture make *Encyclia cordigera* a favorite with beginners and veteran orchid growers.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Standard cattleya mix

COMMENT: Described by F. H. A. von Humboldt in 1815 as *Cymbidium cordigerum*.

Encyclia fragrans

PRONUNCIATION: en-SIK-lee-a

AKA: *Epidendrum fragrans*

ORIGIN: Mexico, Central America, northern South America

COMMON NAME: Clamshell orchid

DESCRIPTION AND QUALITIES: A cockle-shell orchid that is simple to grow.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Honey, vanilla, gardenia, magnolia, lilac

FLOWER DESCRIPTION: Greenish white sepals and petals with purple stripes in the lip. Flowers 2 inches (5 cm) across. Inflorescence to 5 inches (13 cm) long, bearing two to eight flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Reaches up to 16 inches (40 cm) tall.

EASE OF CULTURE: Easy



The flower of *Encyclia fragrans* may not be that impressive, but its heavy gardenia fragrance is.

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Standard cattleya mix

COMMENT: A great beginner's orchid because of its undemanding culture.

One of the earliest orchids in cultivation, it flowered at the Royal Botanic Gardens, Kew, in England in 1782.

OTHER FRAGRANT ENCYCLIAS: *Encycl. adenocaula*—floral; *Encycl. citrina*—lemon; *Encycl. lancifolia*—spicy; *Encycl. phoenicea*—chocolate; *Encycl. polybulbon*—sandalwood, cloves; *Encycl. radiata*—spicy floral, coconut cream pie, lilac, carnation, hyacinth; *Encycl. tampensis*—honey; *Encycl. trulla*—spice.

Laelia anceps

PRONUNCIATION: LAY-lee-a

AKA: *Laelia barkeriana*

ORIGIN: Mexico

COMMON NAME: El Toro

DESCRIPTION AND QUALITIES: This species comes in many color forms.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Primrose, vanilla

FLOWER DESCRIPTION: Light lavender flowers with darker purple lips and

throats. Flowers 2.5–3 inches (6–8 cm) wide. Inflorescence a tall spike up to 3 feet (1 m) long, bearing flowers in clusters of two to six.

SEASON OF BLOOM: Fall

MATURE PLANT: A compact plant about 1 foot (30 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Greenhouse, windowsill

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Well-drained cattleya mix or mounted

COMMENT: A hardy orchid to 20°F (−6°C) that is sometimes planted outdoors in parts of Florida and California. First introduced by Messrs. Loddiges in 1835.



Laelia anceps comes in many color forms. This especially fine selection in the photo comes from J & L Orchids in Connecticut.

Laelia perrinii

PRONUNCIATION: LAY-lee-a

AKA: *Cattleya perrinii*, *Cattleya intermedia* var. *angustifolia*

ORIGIN: Central Brazil

COMMON NAME: Perrin's laelia

DESCRIPTION AND QUALITIES: A compact grower not yet commonly grown.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Spicy floral

FLOWER DESCRIPTION: Lavender flowers with deep violet-edged trumpet-shaped lips and with white throats. Flowers up to 6 inches (15 cm) wide. Inflorescence 3–6 inches (7–15 cm), bearing one to four flowers. The species has several color forms including a white (*alba*) and a blue (*coerulea*).

SEASON OF BLOOM: Fall

MATURE PLANT: Reaches about 6 inches (15 cm) high.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured epiphytic mix

SPECIAL CULTURAL TIP: Prefers warm, wet summers and cooler, drier winters.

COMMENT: Described by botanist James Bateman in 1847, who named it after a Mr. Perrin, gardener for R. Harrison.



A compact grower and not yet commonly grown, *Laelia perrinii* has a light, spicy, pleasant scent.

Laelia tenebrosa

PRONUNCIATION: LAY-lee-a

AKA: *Laelia grandis* var. *tenebrosa*

ORIGIN: Brazil

COMMON NAME: Dark laelia

DESCRIPTION AND QUALITIES: This laelia species displays a very wide range of rich, bright colors in its flowers, from yellow to orange and shades of red. The lip is also variable in color, but always striking.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Spicy

FLOWER DESCRIPTION: Bronze- or copper-colored flowers, lips trumpet-like and flaring, white with a purple ring. Flowers up to about 7 inches (18 cm) wide. Inflorescence about 12 inches (30 cm) long, bearing two or three flowers that last about two weeks.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: Reaches about 18 inches (45 cm) tall. Leaves sometimes have a purplish tint.

EASE OF CULTURE: Challenging

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Coarse-textured, fast-draining mix



Laelia tenebrosa displays a dazzling color combination that only nature could have imagined.

SPECIAL CULTURAL TIP: Water heavily during the growing season, but keep on the dry side for about three months during the winter. Increase light intensity to initiate flowering.

COMMENT: Described in *Orchid Review* in 1893 by Robert A. Rolfe.

OTHER FRAGRANT LAELIAS: *L. albida*—primrose; *L. lundii*—floral scent; *L. pumila* var. *coerulea*—light floral; *L. purpurata* var. *werckhauseri*—spice, anise; *L. rubescens*—wintergreen.

Rhyncholaelia digbyana

PRONUNCIATION: rink-oh-LAY-lee-a

AKA: *Brassavola digbyana*, *Laelia digbyana*

ORIGIN: Mexico, Belize, Guatemala, Honduras

FRAGRANT OFFSPRING: *Brassolaeliocattleya* Ports of Paradise (*Brassolaeliocattleya* Fortune × *Rhyncholaelia digbyana*)

DESCRIPTION AND QUALITIES: Very important as a parent to impart its wonderful fragrance, fringed lip, and large flower size. Ernest Hetherington (1986a) of Fred E. Stewart Orchids stated, “The delightful fragrance blends with other species, such as *Cattleya dowiana*, into a multitude of pleasing fragrances.”

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Lily-of-the-valley, lemon

FLOWER DESCRIPTION: Apple green flowers with spectacular, unique, fringed lips. Flowers usually 4–5 inches (10–13 cm) across, but can be



Rhyncholaelia digbyana has passed on its unique fringed lip, lime-colored flower, and sumptuous fragrance to many modern hybrids.

up to 7 inches (18 cm). Inflorescence 3–6 inches (7.5–15 cm) tall, bearing one flower.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: Compact habit, up to 14 inches (40 cm) tall.

EASE OF CULTURE: Challenging

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Mounted on a slab or in very loose, well-draining medium in a clay pot

SPECIAL CULTURAL TIP: Keep dry and on the very bright side. Allow plants to dry out well between waterings.

COMMENT: Named after Vincent Digby of Minterne in Dorsetshire, England, who flowered it for the first time in 1845.

Rhyncholaelia glauca

PRONUNCIATION: rink-oh-LAY-lee-a

AKA: *Brassavola glauca*

ORIGIN: Mexico, Guatemala, Honduras

DESCRIPTION AND QUALITIES: Another fragrant beauty that is easier to grow than its revered cousin, *Rhyncholaelia digbyana*.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Rose, lily-of-the-valley, cyclamen, raspberry

FLOWER DESCRIPTION: Pale green flowers with white lips. Flowers about 2½ inches (6.5 cm) wide. Inflorescence 3–6 inches long, with a single flower.

SEASON OF BLOOM: Spring

MATURE PLANT: Compact habit. Leaves grow to about 5 inches (12.5 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium-textured epiphytic mix

COMMENT: Originally found by J. Henchman in the 1800s in Mexico.



Rhyncholaelia glauca is a popular species because of its sweet fragrance and showy flower.

Hybrids

Brassocattleya Binosa 'Kirk' AM/AOS

PRONUNCIATION: brass-oh-KAT-lee-a

ORIGIN: *Brassavola nodosa* × *Cattleya bicolor*

FRAGRANT PARENTS: Both parents

DESCRIPTION AND QUALITIES: Binosa is a popular grex because it usually results in very compact, colorful plants that are also fragrant.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Spicy

FLOWER DESCRIPTION: Bright green sepals and petals, white lips flared and sprinkled with purple spots. Flowers 3 inches (7.5 cm) wide. Inflorescence 4 inches (10 cm) long, with one or two flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: A compact grower, reaching 8–10 inches (20–30 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Medium-textured, well-drained mix

OTHER FRAGRANT BRASSOCATTLEYAS: *Bc. Mount Hood*—vanilla



Brassocattleya Binosa 'Kirk' AM/AOS combines a sweet scent with striking colors.

***Brassolaeliocattleya* Formosan Gold**

PRONUNCIATION: brass-oh-lay-lee-oh-KAT-lee-a

ORIGIN: *Laeliocattleya* Lorraine Shirai × *Brassolaeliocattleya* Spun Gold

DESCRIPTION AND QUALITIES: An extremely attractive bicolored orchid.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Vanilla

FLOWER DESCRIPTION: Golden yellow petals and sepals with dark red ruffled

lips. Flowers about 4½ inches (11 cm)

wide. Inflorescence 6 inches (15 cm)

tall, with one flower.

SEASON OF BLOOM: Winter

MATURE PLANT: Standard cattleya size.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill,

greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Medium-textured bark or coco

chunk mix



The dramatic contrast of the rich red lip against gold petals makes *Brassolaeliocattleya* Formosan Gold stand out.

***Brassolaeliocattleya* Goldenzelle**

'Lemon Chiffon' AM/AOS

PRONUNCIATION: brass-oh-lay-lee-oh-

KAT-lee-a

ORIGIN: *Brassolaeliocattleya* Fortune × *Cattleya* Horace

DESCRIPTION AND QUALITIES: The soft yellow flower of this cattleya makes it distinct and in demand.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: Lemon yellow flowers with a splash of deep red on the lips. Flowers 6 inches (15 cm) across. Inflorescence 6 inches (15 cm), bearing one or two flowers.

SEASON OF BLOOM: Winter

MATURE PLANT: Standard cattleya size.



The cultivar name of *Brassolaeliocattleya* Goldenzelle 'Lemon Chiffon' AM/AOS says it all.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured bark or coco chunk mix

COMMENT: A plant frequently displayed and awarded at orchid shows.

Brassolaeliocattleya Hawaiian Avalanche

PRONUNCIATION: brass-oh-lay-lee-oh-KAT-lee-a

ORIGIN: *Brassolaeliocattleya* Oconee × *Brassolaeliocattleya* George King

FRAGRANT PARENTS: *Brassolaeliocattleya* George King

DESCRIPTION AND QUALITIES: A popular hybrid with a prizewinning parent, *Brassolaeliocattleya* George King.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral, vanilla

FLOWER DESCRIPTION: Apricot pink flowers with golden-orange fringed lips and a purple flare down the center of the lip. Flower 6 inches (15 cm) wide. Inflorescence 6 inches (15 cm) tall, bearing one or two flowers.

SEASON OF BLOOM: Winter

MATURE PLANT: Standard cattleya size.



Brassolaeliocattleya Hawaiian Avalanche shows off a delightful display of tropical color.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured, well-drained mix

***Brassolaeliocattleya Pamela Hetherington 'Coronation'* FCC/AOS**

PRONUNCIATION: brass-oh-lay-lee-oh-KAT-lee-a

ORIGIN: *Laeliocattleya* Paradisio × *Brassocattleya* Mount Anderson

DESCRIPTION AND QUALITIES: This cattleya hybrid is among the very few to be awarded a First Class Certificate (FCC), the American Orchid Society's highest accolade.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: Lavender-pink flowers with pink ruffled lips and orange-yellow throats. Flowers 6 inches (15 cm) wide. Inflorescence 6 inches (15 cm) tall, bearing one to three flowers.

SEASON OF BLOOM: Winter

MATURE PLANT: Standard cattleya size.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured bark or coco chunk mix

COMMENTS: Named for a family member of the illustrious orchid breeder, Ernest Hetherington.

OTHER FRAGRANT BRASSO-

LAELIOCATTLEYAS: *Blc.* Arthur Bossin 'Rapture'—sweet floral; *Blc.* George King 'Serendipity' AM/AOS—vanilla; *Blc.* Haw Yuan Beauty 'Orchis'—vanilla; *Blc.* Momilani Rainbow—sweet floral; *Blc.* Ports of Paradise 'Emerald Isle' HCC/AOS—citrus; *Blc.* Rio's Green Magic—citrus.



Brassolaeliocattleya Pamela Hetherington 'Coronation' FCC/AOS has a sweet floral scent.

Cattleya Chocolate Drop 'Kodama' AM/AOS

PRONUNCIATION: KAT-lee-a

ORIGIN: *Cattleya guttata* × *Cattleya aurantiaca*

DESCRIPTION AND QUALITIES: Valued for its many glossy red flowers and ease of culture.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Lily-of-the-valley, citrus, rose, lily

FLOWER DESCRIPTION: Glossy, dark red flowers with yellow on the side lobes of the lip. Flowers $2\frac{1}{2}$ inches (6 cm) wide. Inflorescence 8 inches (20 cm), bearing clusters of up to 20 flowers.

SEASON OF BLOOM: Fall

MATURE PLANT: Standard cattleya size.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured, well-drained mix

COMMENT: Chocolate Drop, a primary hybrid registered in 1965, has been very popular as a parent.



PLATE 42. *Cattleya Chocolate Drop 'Kodama' AM/AOS* is a fine clone of a very popular hybrid.

Epicattleya Dora Tinschert 'Springdale'* HCC/AOS*PRONUNCIATION:** eh-pi-KAT-lee-a**ORIGIN:** *Cattleya aurantiaca* × *Epidendrum selligerum***DESCRIPTION AND QUALITIES:** Two popular parents combine in this cross to produce a fragrant, easy-to-grow hybrid.**INTENSITY OF FRAGRANCE:** Strong**WHEN FRAGRANT:** Day**DESCRIPTION OF FRAGRANCE:** Sweet floral**FLOWER DESCRIPTION:** Rusty red-orange flowers with pink-tinged lips.

Flowers 3 inches (7.5 cm) wide. Inflorescence 8 inches (20 cm) tall, bearing six or more flowers.

SEASON OF BLOOM: Spring**MATURE PLANT:** Reaches 12–18 inches (30–45 cm) tall.**EASE OF CULTURE:** Easy**SUITABLE GROWING AREA:** Windowsill, greenhouse**LIGHT:** Medium**TEMPERATURE:** Intermediate**RECOMMENDED POTTING MEDIUM:** Medium-textured epiphytic mix

Epicattleya Dora Tinschert 'Springdale' HCC/AOS was one of the sweet-scented favorites in the 2004 New York International Orchid Show fragrance competition.



The color, shape, and heady citrus scent of the flower of *Laeliocattleya Angel Love* owe much to one of the grandparents, *Cattleya walkeriana*.

Laeliocattleya Angel Love

PRONUNCIATION: lay-lee-oh-KAT-lee-a

ORIGIN: *Laeliocattleya* Puppy Love ×

Laeliocattleya Angelwalker

FRAGRANT PARENTS: *Cattleya walkeriana* (grandparent)

DESCRIPTION AND QUALITIES: This hybrid has the same wonderful fragrance as *Cattleya walkeriana*, but is easier to grow.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Citrus

FLOWER DESCRIPTION: Pink flowers

with frilled lips and golden to yellow throats. Flowers 4 inches (10 cm) across. Inflorescence 3 inches (7.5 cm) tall, bearing one or two flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Compact hybrid. Gets small habit from *Cattleya walkeriana*.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured epiphytic mix

Laeliocattleya Mari's Song 'CTM 217' HCC/AOS

PRONUNCIATION: lay-lee-oh-KAT-lee-a

ORIGIN: *Laeliocattleya* Irene Finney × *Cattleya* Cherry Chip

DESCRIPTION AND QUALITIES: A popular compact, fragrant, splash-petaled cattleya.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: White flowers with bright magenta flares and lips, pink sepals, and yellow throats. Flowers 4½ inches (11 cm) wide. Inflorescence 6 inches (15 cm) tall, bearing two to four flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Very compact grower, less than 12 inches (30 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium to high



Laeliocattleya Mari's Song 'CTM 217' HCC/AOS is a favorite among windowsill and light growers because of its compact habit and colorful show. Photo by Bill Norton.

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Cattleya mix

COMMENT: One of the more recent fragrant minicatts.

***Potinara Burana Beauty 'Burana'* HCC/AOS**

PRONUNCIATION: pot-tin-AH-rah

ORIGIN: *Potinara Netrasiri Starbright* × *Cattleya Netrasiri Beauty #4*



The citrus fragrance of the compact-growing *Potinara Burana Beauty 'Burana'* HCC/AOS can fill up an entire room.

DESCRIPTION AND QUALITIES: The genus *Potinara* has parents from four different genera—*Brassavola*, *Cattleya*, *Laelia*, and *Sophronitis*.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Citrus

FLOWER DESCRIPTION: Yellow-green sepals and petals, both with red flares.

Flowers 3½ inches (9-cm) across. Inflorescence 8 inches (20 cm) tall, three to six flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: A compact grower, about 12 inches (30 cm) high.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse, lights

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured cattleya mix

Potinara Twentyfour Carat 'Lea' AM/AOS

PRONUNCIATION: pot-tin-AH-rah

ORIGIN: *Potinara* Lemon Tree × *Brassolaeliocattleya* Yellow Imp

DESCRIPTION AND QUALITIES: A scented, cheerful variety for a windowsill.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Vanilla

FLOWER DESCRIPTION: Clear golden-yellow flowers with flared lips.

Flowers 4 inches (10 cm) across. Inflorescence 6 inches (15 cm) tall, bearing one or two flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Slightly smaller than standard cattleya size.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse, lights

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured epiphytic mix



The sunny golden-yellow flowers make *Potinara Twentyfour Carat 'Lea' AM/AOS* stand out.

Chapter 5

The Dendrobium Tribe



This group of orchids is immense. With more than 1000 species, the dendrobiums are one of the largest groups in the orchid family. They hail from the Old World tropics—China, India, Malaysia, Borneo, New Guinea, New Zealand, and Australia—and are just now starting to receive the attention from orchid growers that they deserve. The following is just a sampling of these impressive orchids.

Species

Bulbophyllum rothschildianum

PRONUNCIATION: bulb-oh-FILL-um

AKA: *Cirrhopetalum rothschildianum*

ORIGIN: India

DESCRIPTION AND QUALITIES: One of the most spectacular *Bulbophyllum* species.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Peach, fruity

FLOWER DESCRIPTION: Rusty red flowers about 1 inch (2.5 cm) wide and up to 7 inches (17.5 cm) long. Inflorescence is an umbel, 10–12 inches (26–30 cm) tall, with five or six flowers.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: Reaches about 12 inches (30 cm) high.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate to warm



Bulbophyllum rothschildianum 'Red Chimney', awarded as *Cirrhopetalum rothschildianum* 'Red Chimney' FCC/AOS, is considered one of the finest forms of the species.



Dendrobium chrysotoxum shows off bright yellow fragrant flowers with fringed lips.

RECOMMENDED POTTING MEDIUM:

Mounted on a slab of tree fern or in a well-drained mix in a shallow container

COMMENT: First described as a *Cirrhopetalum* by James O'Brien in 1895.

OTHER FRAGRANT BULBOPHYLLUMS:

Bulb. ambrosia—honey, bitter almonds; *Bulb. cocominum*—coconut; *Bulb. comosum*—hay scented; *Bulb. hamatipes*—musky; *Bulb. laxiflorum*—musky; *Bulb. lobbii*—jasmine, orange blossoms; *Bulb. maximum*—musky; *Bulb. odoratissimum*—pleasant fragrance; *Bulb. suavissimum*—musky.

Dendrobium chrysotoxum

PRONUNCIATION: den-DROH-bee-um

ORIGIN: India, Thailand

DESCRIPTION AND QUALITIES: A brilliant and cheery orchid.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Pineapple, melon, mango

FLOWER DESCRIPTION: Butter yellow flowers with fringed lips and darker orange throats. Flowers 1 inch (2.5 cm) across, short-lived, no more than 10 days. Inflorescence a spike 12 inches (30 cm) long, bearing 6 to 12 or more flowers, depending on the size of the plant.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: A compact, evergreen plant.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Well-drained, medium-textured epiphytic mix or mounted

SPECIAL CULTURAL TIP: Keep on the dry side during winter.

COMMENT: First described by John Lindley in 1847.

Dendrobium heterocarpum

PRONUNCIATION: den-DROH-bee-um

AKA: *Dendrobium aureum*, *Dendrobium rhombeum*

ORIGIN: India to China, Malaysia, Philippines

DESCRIPTION AND QUALITIES: One of the most widely distributed *Dendrobium* species.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Honeysuckle, primrose

FLOWER DESCRIPTION: Creamy yellow flowers with darker yellow lips streaked with red. Flowers $1\frac{1}{2}$ – $2\frac{3}{4}$ inches (4–7 cm) across. Inflorescence short, 2 inches (5 cm), bearing two to three flowers.

SEASON OF BLOOM: Winter

MATURE PLANT: Erect canes range 8–16 inches (20–50 cm) high.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high



Dendrobium heterocarpum is a highly valuable species, ranging from 6 to 50 inches (15–120 cm) in height. Flower color also varies from cream to amber.

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured, well-drained epiphytic mix

SPECIAL CULTURAL TIP: Give a dry resting period in the winter and early spring.

COMMENT: First described by John Lindley in 1830.

Dendrobium jenkinsii

PRONUNCIATION: den-DROH-bee-um

AKA: *Dendrobium lindleyi* var. *jenkinsii*

ORIGIN: India



Dendrobium jenkinsii is a bright, fragrant, and welcomed addition to any orchid collection.

DESCRIPTION AND QUALITIES: Similar to *Dendrobium lindleyi* but smaller in habit.

INTENSITY OF FRAGRANCE: Mild

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Honey

FLOWER DESCRIPTION: Golden yellow flowers with wide, almost heart-shaped lips. Flowers about 1 inch (2.5 cm) across, lasting 7 to 10 days. Inflorescence about 3 inches (7.5 cm) tall, with flowers in groups of two or three.

SEASON OF BLOOM: Winter to spring

MATURE PLANT: A miniature grower. Pseudobulbs only reach slightly over 1 inch (2.5 cm) tall. The plant can spread to 4 or more inches (10 cm) wide.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Mounted on a slab of tree fern or cork, or in a well-drained mix in a pot

SPECIAL CULTURAL TIP: Transplant very infrequently so as not to disturb roots.

COMMENT: Develops as a superb specimen plant. Discovered in 1836 in India by a military man named Jenkins.

Dendrobium kingianum

PRONUNCIATION: den-DROH-bee-um

ORIGIN: Australia

DESCRIPTION AND QUALITIES: One of the easiest Australian orchids to grow. Adapts well to a variety of growing situations.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Floral, hyacinth, lilac, honey

FLOWER DESCRIPTION: Flowers display a huge range of colors including purple, red, white, and striped. They average about 1-1/2 inches (2.5-4 cm) across and last about two weeks. The flowers of some clones or selections are more fragrant than others. Inflorescence up to 8 inches (20 cm) long, bearing two to nine flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: A variable species, from a dwarf growth habit under 6 inches (15 cm) to 20 inches (50 cm). The foliage is attractive and dark green.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium to high



This select form of *Dendrobium kingianum* is called 'Baby Blue'.

TEMPERATURE: Cool to intermediate

RECOMMENDED POTTING MEDIUM: Mounted on a slab or in a shallow pot in a very well drained mix

SPECIAL CULTURAL TIP: Keep cool in the fall and winter to set buds. Reduce watering in the winter until buds are showing. These plants can tolerate down to 35°F(1.6°C) or below. During the growing season, water and fertilize heavily with a low-nitrogen fertilizer.

COMMENT: First discovered in mountainous areas of Australia in 1844.

Dendrobium lawesii

PRONUNCIATION: den-DROH-bee-um

AKA: *Dendrobium warburgianum*

ORIGIN: Irian Jaya, Papua New Guinea

DESCRIPTION AND QUALITIES: The florescent bright flowers make this orchid stand out in the windowsill or greenhouse.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Floral

FLOWER DESCRIPTION: Red-orange, waxy, tubular flowers tipped in yellow.

Flowers about 1 inch (2.5 cm) long, lasting for a few months. Inflorescence is a leafless stem, with two to eight flowers. The species has many color forms.

SEASON OF BLOOM: Winter to spring

MATURE PLANT: Stems or canes up to 24 inches (60 cm) long. Leaves $2\frac{1}{4}$ inches (6 cm) long by $\frac{3}{8}$ inch (1 cm) wide and deciduous.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Mounted on a slab or planted in a basket

SPECIAL CULTURAL TIP: Provide a dry rest period in winter to encourage blooming.

COMMENT: Discovered in New Guinea by Rev. W. G. Lawes of the London Missionary Society.



Dendrobium lawesii comes from New Guinea and is in high demand because of its bright flowers and fragrance.

Dendrobium macrophyllum

PRONUNCIATION: den-DROH-bee-um

AKA: *Dendrobium veitchianum*

ORIGIN: Java to Philippines to Samoa

DESCRIPTION AND QUALITIES: The flowers have an out-of-this-world look that always creates attention.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: Variably colored flowers 2 inches (5 cm) across and long-lasting. Inflorescence a spike 6–15 inches (15–40 cm) tall and bearing up to 10 flowers.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: Pseudobulbs up to 24 inches (60 cm) long. Leaves up to 12 inches (30 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured, well-drained mix

SPECIAL CULTURAL TIP: Keep damp year-round.

COMMENT: First described in 1834 by French botanist Achille Richard.



The exotic coloration, lip markings, and fragrance make *Dendrobium macrophyllum* an Old World orchid that most orchid growers would love to have in their collection.

Hybrids

Dendrobium Chrystaline

PRONUNCIATION: den-DROH-bee-um

ORIGIN: *Dendrobium Kathryn Banks* × *Dendrobium Bicentennial Blush*

DESCRIPTION AND QUALITIES: A hybrid with *Dendrobium kingianum* in its background.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Hyacinth

FLOWER DESCRIPTION: White flowers with purple markings in the lips.

Flowers 1 $\frac{1}{4}$ inches (3 cm) across. Inflorescence 10 inches (25 cm) tall, bearing six to eight flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Compact growing.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Cool to intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured epiphytic mix



The cultivar name describes well the glistening flowers of *Dendrobium Chrystaline*.



Dendrobium Comet King 'Akatsuki' can be depended on for profuse production of brightly colored, perfumed blossoms.

***Dendrobium* Comet King 'Akatsuki'**

PRONUNCIATION: den-DROH-bee-um

ORIGIN: *Dendrobium* New Comet ×

Dendrobium Wave King

DESCRIPTION AND QUALITIES: One of more than 100 nobile-type hybrids that are popular because of their many flowers, bright colors, and ease of flowering.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: Purple flowers with golden centers, flowers $2\frac{1}{2}$ inches (6 cm) across and long-lasting. Inflorescence short and bearing flowers in such abundance that they present a "bouquet" effect.

SEASON OF BLOOM: Variable

MATURE PLANT: Reaches 12–18 inches (30–45 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured epiphytic mix

SPECIAL CULTURAL TIP: Keep cool (45–50°F/7–10°C) and dry in the fall or winter to set buds for spring flowering.

COMMENT: This dendrobium does not lose its leaves until the second year.

***Dendrobium* Jesmond Gem**

PRONUNCIATION: den-DROH-bee-um

ORIGIN: *Dendrobium* Yondi × *Dendrobium speciosum*

FRAGRANT PARENTS: *Dendrobium speciosum*

DESCRIPTION AND QUALITIES: A tough Australian hybrid that can tolerate temperatures close to freezing with little damage.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral



The pristine white, sweet-smelling flowers of *Dendrobium* Jesmond Gem make this hybrid a standout.

FLOWER DESCRIPTION: White flowers with purple specks on lips and yellow stripes down center of the lips. Flowers 2 inches (5 cm) across. Inflorescence 6–8 inches (15–20 cm) tall, bearing 8 to 10 flowers.

SEASON OF BLOOM: Winter to spring

MATURE PLANT: Reaches about 18 inches (45 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Cool to intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured bark mix

SPECIAL CULTURAL TIP: Cool off in the fall to 40 to 49°F (4–9°C) to set buds.

Dendrobium Light River

PRONUNCIATION: den-DROH-bee-um

ORIGIN: *Dendrobium* Red River × *Dendrobium speciosum*

FRAGRANT PARENTS: *Dendrobium speciosum*



Australian hybrids like *Dendrobium* Light River are quickly gaining popularity because of their low temperature requirements, long blooming period, and fragrance.

DESCRIPTION AND QUALITIES: Another

Australian hybrid that is stunning and dependable.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: Creamy flowers with purple markings. Lip brightly marked in purple with yellow in the center. Flowers 2 inches (5 cm) across. Inflorescence 6–8 inches (15–20 cm) tall, bearing 8 to 10 flowers.

SEASON OF BLOOM: Winter

MATURE PLANT: Reaches about 18 inches (45 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Cool to intermediate

RECOMMENDED POTTING MEDIUM:

Medium-textured cattleya mix

SPECIAL CULTURAL TIP: Cool off in the fall to 40 to 49°F (4–9°C) to set buds.

Chapter 6

The Oncidium Alliance



There is something particularly joyful about the members of the Oncidium Alliance. They sport some of the brightest and wildest color combinations in the orchid family. Many of them are easy to grow and have a broad range of pleasing fragrances.

Species

Brassia longissima

PRONUNCIATION: BRASS-ee-ah

AKA: *Brassia lawrenceana*

ORIGIN: Costa Rica, Panama, Peru

DESCRIPTION AND QUALITIES: The spider-like flower makes a dramatic statement.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Light, sweet candy

FLOWER DESCRIPTION: Large, spidery flowers open greenish and turn orange over several days. Petals, sepals, and lip are spotted maroon. Flowers 7–8 inches (18–20 cm) long. Inflorescence to 18 inches (45 cm) tall, bearing six to eight flowers.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: Reaches about 30 inches (75 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium-textured, well drained mix



The spidery flowers of *Brassia longissima* 'Pumpkin Patch' line up to parade themselves.

COMMENT: First flowered in cultivation by W. Butler in England in 1868.

OTHER FRAGRANT BRASSIAS: *Brs. gireoudiana*—musky; *Brs. ochroleuca*—spicy, spiced apple pie; *Brs. verrucosa*—musky.

Miltonia spectabilis

PRONUNCIATION: mil-TONE-ee-ah

AKA: *Macrochilus frysianus*

ORIGIN: Brazil

DESCRIPTION AND QUALITIES: This is the largest flowering species in this genus.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose, spicy

FLOWER DESCRIPTION: White flowers tinged pink with rose-pink lips and purple columns. Flowers 4 inches (10 cm) wide. Inflorescence 8 inches (20 cm) tall, bearing a single flower.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: Reaches 10 inches (25 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse, lights

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Fine-textured, well-drained mix

SPECIAL CULTURAL TIP: As is true for other miltonias, keep the growing medium damp.

COMMENT: The species was first described in 1839 by John Lindley from a specimen collected in Brazil by Hugh Weddell.

OTHER FRAGRANT MILTONIAS: *Milt.*

regnellii—oranges, coriander;

Milt. schroederiana—spice floral, carnation.

Miltonia spectabilis var. *moreliana*

PRONUNCIATION: mil-TONE-ee-ah

ORIGIN: Brazil

DESCRIPTION AND QUALITIES: Has long-lasting flowers.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose, spicy

FLOWER DESCRIPTION: Dark plum red petals and sepals contrast with a large bright rose-pink lip with darker veins. Flowers 4 inches (10 cm) wide. Inflorescence 8 inches (20 cm) tall, with a single flower.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: Reaches 10 inches (25 cm) high.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Window-sill, greenhouse, lights

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Fine-textured, well-drained mix



Miltonia spectabilis presents an elegant picture.



Miltonia spectabilis var. *moreliana* is a spectacular variant of the species.

SPECIAL CULTURAL TIP: As is true for other miltonias, keep the growing medium damp.

COMMENT: *Miltonia spectabilis* var. *moreliana* was first sent by M. Porte from Brazil to G. M. Morel in Paris in 1846.

Miltoniopsis phalaenopsis

PRONUNCIATION: mil-tone-ee-OP-sis

AKA: *Odontoglossum roezlii*, *Miltonia roezlii*

ORIGIN: Colombia

DESCRIPTION AND QUALITIES: The striking markings on the flower lip separate this species from the others in the genus.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose, lily-of-the-valley, cyclamen

FLOWER DESCRIPTION: White pansy-shaped flowers with purple waterfall pattern on the lip. Flowers $1\frac{3}{4}$ inches (4-cm) wide. Inflorescence 10 inches (25 cm) tall, bearing three to five flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Reaches 6–12 inches (15–30 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Fine-textured mix, or mounted on tree fern, or in basket

SPECIAL CULTURAL TIP: Provide warm winters and cold summers. Reduce water during the winter.

COMMENT: Discovered in Colombia in 1850 by Louis Schlim, cousin to Belgium plant explorer Jean Linden, and sent to Messrs. Linden in Brussels.

Miltoniopsis santanae

PRONUNCIATION: mil-tone-ee-OP-sis

AKA: *Miltonia roezlii* var. *alba*

ORIGIN: Venezuela, Colombia, Ecuador



Miltoniopsis phalaenopsis is responsible for the wonderful “waterfall” patterns in the lips of some of today’s hybrids.

FRAGRANT OFFSPRING: *Miltoniopsis*

Angel Falls (*Mtps. santanaei* × *Mtps. phalaenopsis*); *Miltoniopsis* Mary Catherine Messina (*Mtps. santanaei* × *Oncidium warscewiczii*)

DESCRIPTION AND QUALITIES: One of the most heat-tolerant species in the genus and thus one of the easiest to grow.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose

FLOWER DESCRIPTION: Flat, white

pansy-shaped flowers with a bright yellow flare on the top of the lip. Flowers 2 inches (5 cm) wide. Inflorescence about 20 inches (25 cm) tall, bearing two to five flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Compact growing, 6–8 inches (15–20 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low to medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured, moisture-retentive mix

COMMENT: This species continues to be used extensively as a parent for today's *Miltoniopsis* hybrids. It usually imparts its warmth tolerance and fragrance to its offspring.

OTHER FRAGRANT MILTONIOPSIS: *Mtps. Celle 'Wasserfall'* AM/AOS—rosy-flora; *Mtps. Hamburg 'Red Velvet'*—rosy-flora; *Mtps. roezlii*—fruity, rose.

Oncidium cheiroporum

PRONUNCIATION: on-SID-ee-um

ORIGIN: Colombia

FRAGRANT OFFSPRING: *Oncidium* Tsiku Marguerite (*Onc. ornithorhynchum* × *Onc. Twinkle*); *Oncidium* Twinkle (*Onc. cheiroporum* × *Onc. ornithorhynchum*)

DESCRIPTION AND QUALITIES: Closely related to *Oncidium ornithorhynchum* and frequently used as a parent to lend its fragrance and dwarf habit.

INTENSITY OF FRAGRANCE: Very strong

WHEN FRAGRANT: Day



A very compact, warm-tolerant plant, *Miltoniopsis santanaei* is a perfect choice for a windowsill or under lights. PHOTO BY MARC HERZOG.



Oncidium cheiophorum is a bright and cheery dwarf, fragrant orchid.

DESCRIPTION OF FRAGRANCE:

Citrus, lemon

FLOWER DESCRIPTION: Bright yellow flowers on a branched arching spray. Many flowers, $\frac{1}{2}$ inch (1.3 cm) wide. Inflorescence to 12 inches (30 cm) long.

SEASON OF BLOOM: Winter to spring

MATURE PLANT: Reaches only 3 inches (7.5 cm) high.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING

MEDIUM: Fine- to medium-textured orchid mix

COMMENT: Very easy to grow and bloom. Described by H. G. Reichenbach in 1852 and discovered by the famous Lithuanian plant collector, Józef Ritter von Rawicz Warszewicz.

Oncidium maculatum

PRONUNCIATION: on-SID-ee-um

ORIGIN: Mexico

DESCRIPTION AND QUALITIES: An attractive and easy-to-grow species.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Honey

FLOWER DESCRIPTION: Yellow flowers with mahogany spots. Flowers 3 inches (8 cm) wide. Inflorescence an arching spike 20 inches (50 cm) long, with many flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Medium-large, dark green leaves.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse



Oncidium maculatum
has well-marked honey-scented flowers.

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Very well drained potting material in a pot or basket

SPECIAL CULTURAL TIP: Provide a dry resting period in winter.

Oncidium ornithorhynchum

PRONUNCIATION: on-SID-ee-um

ORIGIN: Mexico, Guatemala, El Salvador, Costa Rica

COMMON NAME: Vanilla-scented dancing lady, lavender and old lace

DESCRIPTION AND QUALITIES: 'Lilac Blossom' is a select form highly recommended to beginning growers because of its ease of culture, dependable blooming, and sweet fragrance.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Vanilla, "like a fresh morning," baby powder, grape, spicy, cinnamon, cocoa, sweet candy

FLOWER DESCRIPTION: Lavender-pink flowers produced by the hundreds on a mature plant. Flowers about 1 inch (2.5 cm) across. Inflorescence 24 inches (60 cm) long, with many flowers.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: Reaches 6–8 inches (15–20 cm) high.

EASE OF CULTURE: Easy



Oncidium ornithorhynchum 'Lilac Blossom' comes from Ha'iku Maui Orchids in Hawaii. PHOTO BY MARC HERZOG.

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine- to medium-textured orchid mix

COMMENT: First described by German botanist and explorer Alexander von Humboldt in 1815.

Sigmatostalix radicans

PRONUNCIATION: sig-mat-oh-STAY-licks

ORIGIN: Brazil

DESCRIPTION AND QUALITIES: A delicate-looking but easy-to-grow, sweet-scented miniature.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Honey

FLOWER DESCRIPTION: Small white flowers with greenish sepals and petals, a brown column, and white lip. Flowers $\frac{3}{4}$ inch (1 cm) wide. Inflorescence 6–8 inches (15–20 cm) tall, bearing many flowers.

SEASON OF BLOOM: Fall

MATURE PLANT: Thin grassy foliage about 6 inches (15 cm) long.

EASE OF CULTURE: Easy



Sigmatostalix radicans 'HMO's Petite Prince', a dainty, charming miniature with grass-like foliage and a honey scent, comes from Ha'iku Maui Orchids in Hawaii. PHOTO BY MARC HERZOG.

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured mix

COMMENT: The genus comprises about 20 species in the American tropics.

Trichopilia suavis

PRONUNCIATION: trik-oh-PILL-ee-ah

AKA: *Trichopilia kienastiana*

ORIGIN: Costa Rica, Panama, Colombia

DESCRIPTION AND QUALITIES: The flowers are borne at the bottom of the plant.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Floral; intoxicating

FLOWER DESCRIPTION: Flowers usually white spotted with red. The lip is tubular and has pink and orange spots. Flowers 4 inches (10 cm) wide. Inflorescence pendant, 4 inches (10 cm) long, bearing two to five flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Oblong pseudobulbs with leaves about 16 inches (40 cm) long.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA:

Windowsill, light, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING

MEDIUM: Medium-textured, well-drained mix

SPECIAL CULTURAL TIP: Frequently grown in baskets.

COMMENT: Discovered by Józef Ritter von Rawicz Warscewicz in Costa Rica in 1848.

OTHER FRAGRANT

TRICHOPILIAS: *Trpl. fragrans*—narcissus



Trichopilia suavis is considered one of the most attractive species in the genus.

Hybrids

***Beallara* Marfitch 'Howard's Dream'**

AM/AOS

PRONUNCIATION: bee-al-ARE-ah

ORIGIN: *Miltassia* Charles M. Fitch × *Odontoglossum* Fremar

DESCRIPTION AND QUALITIES: This complex hybrid has parents from four different genera—*Brassia*, *Cochlioda*, *Miltonia*, and *Odontoglossum*.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose

FLOWER DESCRIPTION: Star-shaped flowers burgundy, magenta, and white, 4–5 inches (10–13 cm) across, and lasting a few months. Inflorescence 24–36 inches (60–90 cm) long, bearing up to 20 or more flowers.

Can flower twice a year.

SEASON OF BLOOM: Variable

MATURE PLANT: Reaches 18–24 inches (45–60 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Medium-textured mix with coco chunks

***Miltoniopsis* Bert Field**

PRONUNCIATION: mil-tone-ee-OP-sis

ORIGIN: *Miltoniopsis* Mulatto Queen × *Miltoniopsis* Woodlands

DESCRIPTION AND QUALITIES: A gorgeous orchid with pansy-shaped flowers.



The color combination of *Beallara* Marfitch 'Howard's Dream' AM/AOS sparkles.



Miltoniopsis Bert Field has pure red velvet-textured flowers.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Light floral

FLOWER DESCRIPTION: Large, variable flowers that may be solid red or have waterfall patterns in the lips. Flowers 3 inches (7.5 cm) wide. Inflorescence 12 inches (30 cm) tall, bearing three to five flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Reaches 12–16 inches (30–40 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse, lights

LIGHT: Low to medium

TEMPERATURE: Cool to intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured, well-drained mix

SPECIAL CULTURAL TIP: Keep the growing medium damp to avoid pleating of the foliage.

Miltoniopsis Hajime Ono

PRONUNCIATION: mil-tone-ee-OP-sis

ORIGIN: *Miltoniopsis* Martin Orenstein
× *Miltoniopsis* Pearl Ono

DESCRIPTION AND QUALITIES: The huge flowers are a testament to the progress made by today's orchid breeders.

INTENSITY OF FRAGRANCE: Mild

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Light rose

FLOWER DESCRIPTION: Dark red velvety flowers with a lip fantastically marked with a waterfall pattern. Flowers 3½ inches (9 cm) wide. Inflorescence 12 inches (30 cm) tall, bearing four to six flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Reaches 12–14 inches (30–35 cm) high.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse, lights

LIGHT: Low to medium



Miltoniopsis Hajime Ono is a spectacular grex, the result of modern breeding efforts to make the waterfall pattern in the lip more prominent.

TEMPERATURE: Cool to intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured mix

COMMENT: This glorious hybrid was named after the noted Hawaiian miltoniopsis breeder, Hajime Ono.

Odontioda Vesta 'Charm'

PRONUNCIATION: oh-don-TEA-oh-da

ORIGIN: *Odontioda Charlesworthii* × *Odontoglossum Prince Albert*

DESCRIPTION AND QUALITIES: A compact orchid that is perfectly suited for windowsill or under lights culture.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Citrus

FLOWER DESCRIPTION: White flowers with distinct purple and red markings on petals and sepals and with yellow on the throat. Flowers 2½ inches (6.5-cm) in diameter.

SEASON OF BLOOM: Variable

MATURE PLANT: Compact growing, 6–8 inches (15–20 cm) tall. Foliage light green, about 1 inch (2.5 cm) wide.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low to medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured epiphytic mix



Odontioda Vesta 'Charm' is a charming plant with a sweet citrus scent.



Odontobrassia Fangtastic Bob Henley is a spidery, dramatic beauty.



Oncidium Issaku Nagata 'Volcano Queen' HCC/AOS displays a spectacular spire of blooms on a long spike.

Odontobrassia Fangtastic Bob Henley

PRONUNCIATION: oh-don-toh-BRASS-ee-ah

ORIGIN: *Brassia Rex* × *Odontobrassia* Kenneth Bivin

FRAGRANT PARENTS: *Brassia longissima*

DESCRIPTION AND QUALITIES: *Odontobrassia* is a complex hybrid consisting of *Brassia gireoudiana*, *Brassia longissima*, *Brassia verrucosa* and *Odontoglossum cariniferum*.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Floral

FLOWER DESCRIPTION: Spidery yellow flowers with maroon markings and yellow lip. Flowers 4–5 inches (10–13 cm) across. Inflorescence an arching spike, 24–36 inches (60–90 cm) tall, with many flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Reaches 18 inches (45 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine- to medium-textured mix

***Oncidium Issaku Nagata 'Volcano Queen'* HCC/AOS**

PRONUNCIATION: mil-tone-ID-ee-um

ORIGIN: *Oncidium leucochilum* × *Oncidium warscewiczii*

DESCRIPTION AND QUALITIES: A heavy flowerer that is undemanding in its culture.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Light floral

FLOWER DESCRIPTION: Yellow petals and sepals overlaid with mahogany.

The flared lip is white at the bottom and red-purple at the top. Flowers 1½ inches (4-cm) across. Inflorescence a tall multibranched spike, bearing many flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Foliage 18–24 inches (45-60 cm) long.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured orchid mix for mature plants

COMMENT: An easy-to-grow orchid.

Oncidium Sharry Baby 'Misaki'

PRONUNCIATION: on-SID-ee-um

ORIGIN: *Oncidium Jamie Sutton* × *Oncidium Honolulu*

DESCRIPTION AND QUALITIES: Sharry Baby is a very popular grex.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Chocolate, vanilla

FLOWER DESCRIPTION: Yellow flowers

overlaid with mahogany. Flared white lip has purple markings in center. Flowers ½ inch (1.5 cm) wide. Inflorescence a spike, bearing many flowers. Frequently blooms twice a year

SEASON OF BLOOM: Variable

MATURE PLANT: Very fast growing to more than 30 inches tall (75 cm).

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Medium-textured orchid mix

COMMENT: Very easy to grow and bloom. Frequently flowers around Christmas time.



'Misaki' is one of the many select forms of *Oncidium Sharry Baby*.



A sweetly scented miniature plant, *Oncidium* Tsiku Marguerite is an ideal beginner's orchid.

***Oncidium* Tsiku Marguerite**

PRONUNCIATION: on-SID-ee-um

ORIGIN: *Oncidium ornithorhynchum* × *Oncidium* Twinkle

FRAGRANT PARENTS: Both parents

DESCRIPTION AND QUALITIES: A very popular hybrid because of its frequent blooming and ease of culture.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet, soapy

FLOWER DESCRIPTION: Densely branched sprays of $\frac{3}{4}$ -inch (2-cm) cream to pink flowers with gold lips. Inflorescence 12 inches (30 cm) tall.

SEASON OF BLOOM: Variable

MATURE PLANT: Miniature habit with leaves about 6 inches (15 cm) long.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Fine-textured mix

COMMENT: One of several crosses using *Oncidium ornithorhynchum* for its dwarf habit and fragrance.

***Oncidium* Twinkle 'Red Fantasy'**

PRONUNCIATION: on-SID-ee-um

ORIGIN: *Oncidium cheiroporum* × *Oncidium* ornithorhynchum

FRAGRANT PARENTS: Both parents

DESCRIPTION AND QUALITIES: Highly recommended as a beginner's orchid because it is so easy to grow and bloom.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet

FLOWER DESCRIPTION: Rose-colored flowers with darker lips. Flowers 1 inch (2.5 cm) wide. Inflorescence 12 inches (30 cm) tall, with a profusion of flowers. The grex produces many color forms.

SEASON OF BLOOM: Variable

MATURE PLANT: Dwarf, to 6 to 8 inches (15–20 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse, lights

LIGHT: Medium

TEMPERATURE: Intermediate to warm



Combining two outstanding dwarf species resulted in this winning hybrid, *Oncidium Twinkle 'Red Fantasy'*.

RECOMMENDED POTTING MEDIUM: Fine-textured mix

COMMENT: The original Twinkle was registered by famous Hawaiian orchid hybridizer Goodale Moir in 1958.

OTHER FRAGRANT ONCIDIUMS: *Onc.* Twinkle 'Fragrance Fantasy'—sweet.

Trichocentrum Nathakhun

PRONUNCIATION: trik-oh-CEN-trum

ORIGIN: *Trichocentrum lanceanum* × *Trichocentrum Maui Gold*

FRAGRANT PARENTS: *Trichocentrum lanceanum*

DESCRIPTION AND QUALITIES: Called a mule-eared orchid because of the shape of its leaves.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Honey

FLOWER DESCRIPTION: Flat, long-lasting flowers of contrasting brown and yellow with yellow lip. Flowers 2½ inches (6 cm) in diameter. Inflorescence bears 12 or more flowers.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: Mule ear foliage about 12 inches (30 cm) or more.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Medium-textured bark or coco chunk mix



Trichocentrum Nathakhun inherited the striking color combination and honey fragrance from its *Trichocentrum lanceanum* parent.

Chapter 7

The Vanda/Phalaenopsis Alliance



Vandas are probably best known by orchid growers in the American South, particularly, Florida, since the plants thrive in this bright, hot climate, while phalaenopsis are undoubtedly the most widely grown orchid in the world. Neither genera is known for fragrance, but individuals within each genus are sweet scented. Other orchid species and hybrids of this large alliance also contain a good number of fragrant members.

Species

Since all of the orchids in this alliance grow vertically, they can get very tall. So, for these orchids, I have given their approximate spread and height of plants after a few years of mature growth.

Aerangis citrata

PRONUNCIATION: ay-er-RANG-giss

AKA: *Angraecum citratum*

ORIGIN: Africa

DESCRIPTION AND QUALITIES: An easy, choice, and adaptable plant that thrives in lower light conditions and is a very compact grower. It blooms several times a year.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Lemon

FLOWER DESCRIPTION: Small, white flowers with long spurs. Inflorescence a spike 6–10 inches (15–25 cm) long, with up to 15 or more flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Dwarf

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Fine-textured, well-drained mix

SPECIAL CULTURAL TIP: Keep in small pots, 3 inches (7.5 cm) in diameter on average, 4 inches (10 cm) maximum. Does best with good air circulation.

COMMENT: Placed in the genus *Aerangis* in 1822.



Once established, *Aerangis citrata* is an easy orchid to grow. It produces a flurry of flowers with a lemon scent.

OTHER FRAGRANT AERANGIS: *Aergs. appendiculata*—gardenia; *Aergs. articulata*—jasmine; *Aergs. biloba*—gardenia, lily; *Aergs. brachycarpa*—vanilla, jasmine; *Aergs. confusa*—tuberose, gardenia; *Aergs. fastuosa*—tuberose, lily; *Aergs. kirkii*—tuberose, gardenia; *Aergs. kotschyana*—gardenia; *Aergs. modesta*—minty spice; *Aergs. mooreana*—jasmine; *Aergs. mystacidii*—lily of the valley; *Aergs. somalensis*—gardenia.

Aerides fieldingii

PRONUNCIATION: ay-AIR-ee-deez

AKA: *Aerides rosea*, *Aerides williamsii*

ORIGIN: India

FRAGRANT OFFSPRING: *Aerides Dominyanum* (*Aer. affine* × *Aer. fieldingii*);

Aerides Dottie's Delight (*Aer. crassifolia* × *Aer. fieldingii*)

DESCRIPTION AND QUALITIES: A specimen plant of this species puts on quite a show.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Lily-of-the-valley, cyclamen

FLOWER DESCRIPTION: Pink flowers, sometimes spotted. Flowers $\frac{3}{4}$ inch (2 cm) wide. Inflorescence a long raceme, 12 inches (60 cm), with up to 30 flowers.

SEASON OF BLOOM: Summer

MATURE PLANT: Leaves 8 inches (25 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM:

Medium-textured, very well drained mix

SPECIAL CULTURAL TIP: Keep dry during cooler winters.

COMMENT: First cultivated by

Thomas Lobb, plant collector for the famous English orchid firm, Veitch & Sons.



The genus *Aerides* comprises many species that are sweetly scented including this one, *Aerides fieldingii*.

OTHER FRAGRANT AERIDES: *Aer. crassifolia*—aromatic floral; *Aer. falcata* var. *houletteana*—citrus, fruity; *Aer. falcata*—citrus, fruity; *Aer. lawrenceae*—lemon-spice, honey, anise; *Aer. lawrenceae* var. *sanderiana*—lemon-spice; *Aer. odorata*—spicy; ribbon candy, cloves, lilac; *Aer. quinquevulnera*—cinnamon.

Angraecum leonis

PRONUNCIATION: an-GRYE-kum

AKA: *Aeranthes leonis*

ORIGIN: Madagascar, Comoro Islands

FRAGRANT OFFSPRING: *Angraecum* Hillerman's Last (*Angcm. leonis* × *Angc. superbum*)

DESCRIPTION AND QUALITIES: The species has two different forms: the Madagascan form is smaller vegetatively than the Comoro Island form.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Jasmine

FLOWER DESCRIPTION: White flowers 1½ inches (3 cm) wide. Inflorescence a spike, 3–5 inches (7.5–13 cm), with three to five flowers.

SEASON OF BLOOM: Winter to spring

MATURE PLANT: Reaches 6–10 inches (15–25 cm) tall. Handsome foliage.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Mounted on a slab or potted in a loose epiphytic mix

COMMENT: A popular species because of its compact habit and relatively large flower. Named by Veitch in 1894.



For those who adore the jasmine scent of most angraecums but have limited space, the compact *Angraecum leonis* is the answer.

Angraecum sesquipedale

PRONUNCIATION: an-GRYE-kum

ORIGIN: Madagascar

COMMON NAME: Star of Bethlehem, king of angraecums

FRAGRANT OFFSPRING: *Angraecum* Appalachian Star (*Angcm. sesqui-*

pedale × *Angcm. praestans*); *Angraecum* Dianne's Darling (*Angcm. sesquipedale* × *Angcm. Alabaster*)

DESCRIPTION AND QUALITIES: The largest and showiest of the angraecums.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Jasmine

FLOWER DESCRIPTION: Huge waxy white blossoms with a spur up to 15 inches (60 cm) long. Flowers are the largest in the genus, up to 4½ inches (11 cm) across. Inflorescence 12 inches (30 cm) long, bearing two to four flowers.

SEASON OF BLOOM: Winter

MATURE PLANT: Reaches 24 inches (60 cm) or more high and wide.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Greenhouse

LIGHT: Medium to high

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium- to coarse-textured fir bark mix

SPECIAL CULTURAL TIP: Do not re-pot younger plants.

COMMENT: This species was made famous by Charles Darwin who postulated the existence of a night-flying moth with an 11-inch (28-cm) proboscis to be able to harvest the nectar located at the end of this flower's long spur. Thirty-five years after Darwin's death, he was proven right when a hawk moth with this proboscis length was found to pollinate this orchid.

OTHER FRAGRANT ANGRAECUMS: *Angcm. aporooides*—gardenia; *Angcm. birrinense*—orange blossom; *Angcm. boissierianum*—jasmine; *Angcm. bosseri*—spicy floral; *Angcm. compactum*—spicy, citrusy; *Angcm. didieri*—sweet, spicy; *Angcm. distichum*—jasmine; *Angcm. eburneum*—gardenia; *Angcm. eichlerianum*—jasmine, lily; *Angcm. germinyanum*—jasmine; *Angcm. Lemforde White Beauty*—jasmine; *Angcm. Longiscott 'Lea'*—jasmine; *Angcm. magdalena*—jasmine; *Angcm. Veitchii*—jasmine; *Angcm. White Emblem*—jasmine.



Angraecum sesquipedale can grow into a spectacular specimen but requires plenty of room in a bright greenhouse.

Neofinetia falcata

PRONUNCIATION: nee-oh-fin-EE-tha

AKA: *Angraecum falcatum*

ORIGIN: Japan

COMMON NAME: Fu-ran, Japanese wind orchid

FRAGRANT OFFSPRING: *Ascofinetia* Cherry Blossom (*Neofinetia falcata* × *Asco-centrum ampullaceum*); *Darwinara* Charm (*Neofinetia falcata* × *Vascostylis Tham Yuen Hae*)

DESCRIPTION AND QUALITIES: These small plants are easy to bloom in a bright windowsill. Has produced many intergeneric vandaceous hybrids noted for compact growth habit and fragrance.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Jasmine, vanilla



For all fragrant plant lovers, the diminutive *Neofinetia falcata* is a must.

FLOWER DESCRIPTION: Elegant, snow-white waxy flowers about 1 inch (2.5 cm) wide with a 2-inch (5-cm) spur. Inflorescence 2 inches (5 cm) tall, with up to a dozen or more flowers. The species produces forms with other flower colors and forms with variegated foliage. Flowers last a month or two.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: A dwarf plant from 3 to 6 inches (7.5–15 cm) tall. Forms multiple clumps. Foliage is keel shaped and 4–6 inches (10–15 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Mounted, in a basket in sphagnum moss, or in a cattleya mix in a pot

SPECIAL CULTURAL TIP: Reduce water in the winter.

COMMENT: Once the exclusive property of the royal family of Japan. Its cultivation dates many centuries back to the Edo Period in Japan. It was first described in 1784.

Phalaenopsis bellina

PRONUNCIATION: fal-en-OP-sis

AKA: *Phalaenopsis violacea* 'Borneo', *Phalaenopsis violacea* var. *bellina*

ORIGIN: Malaysia, East Malaysia

DESCRIPTION AND QUALITIES: A compact sweetly scented phalaenopsis that has both a beautiful flower and very attractive, glossy green foliage.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Freesia, lily of the valley, rose, touch of velvet, lemon

FLOWER DESCRIPTION: Waxy, greenish flowers with purple markings, 2 inches (5 cm) across, borne sequentially. Inflorescence 4–6 inches (10–15 cm) tall, bearing three to four flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: A compact grower with glossy green leaves 8–10 inches (20–25 cm) long.



Phalaenopsis bellina is used extensively as a parent to impart its waxy substance, color, and fragrance to its progeny.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Sphagnum moss, medium-textured bark, or coco chunk mix

SPECIAL CULTURAL TIP: Smaller seedling plants can be very susceptible to crown rot. Ensure that the growing point of the plant is dry going into the evening.

COMMENT: Discovered by Dutch botanist Johannes E. Teijsmann in 1859.

Phalaenopsis schilleriana

PRONUNCIATION: fal-en-OP-sis

AKA: Sometimes spelled *Phalaenopsis schillerana*

ORIGIN: Philippines

DESCRIPTION AND QUALITIES: Along with handsome silver-marked foliage, this species produces branching inflorescences of long-lasting pink flowers.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose

FLOWER DESCRIPTION: Bright pink flowers 3–3½ inches (8–9 cm) wide.

Inflorescence up to 3 feet (91 cm) long, with many flowers. It is reported that one plant had 733 blossoms! The flowers open at one time and therefore are not very long lasting.

SEASON OF BLOOM: Winter to spring

MATURE PLANT: Leaves are 6–18 inches (15–46 cm) long, mottled dark green above, entirely purple below.



Even when *Phalaenopsis schilleriana* is not in bloom, its magnificent foliage alone makes it a stunner.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Low

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM:

Medium-textured orchid mix, mounted on a slab or tree fern, or in a basket of sphagnum moss

SPECIAL CULTURAL TIP: Provide even moisture. Do not allow to dry out.

COMMENT: Named for the first grower of this species, Consul Schiller of Hamburg, Germany.

Rhynchostylis gigantea

PRONUNCIATION: rink-oh-STYE-liss

ORIGIN: Myanmar, Thailand, Vietnam

COMMON NAME: Foxtail orchid

FRAGRANT OFFSPRING: *Rhynchostylis* Winona Jordan (*Phalaenopsis* Doris × *Rhy. gigantea*); *Vandachostylis* Azure (*Rhy. gigantea* × *Vanda* coerulea)



When *Rhynchostylis gigantea* is in bloom, its heady citrus fragrance can fill a house.

DESCRIPTION AND QUALITIES: This species also produces solid red and pure white forms.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Citrus

FLOWER DESCRIPTION: Flowers white with purple speckles, about 1 inch (2.5 cm) across. Inflorescence 15 inches (37.5 cm) long, bearing a multitude of flowers.

SEASON OF BLOOM: Fall to winter

MATURE PLANT: Slow growing, usually no taller than 12 inches (30 cm).

Leaves can grow more than 12 inches (30 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse, lights

LIGHT: Medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Course-textured, well-drained mix

SPECIAL CULTURAL TIP: Resents frequent repotting. Often grown in slatted baskets.

COMMENT: Discovered in the 1830s in Myanmar by Danish physician and botanist Nathaniel Wallich.

OTHER FRAGRANT RHYNCHOSTYLIS:

Rhy. coelestis—citrus; *Rhy. illustre*—citrus; *Rhy. retusa*—citrus.

Sedirea japonica

PRONUNCIATION: se-DEER-ee-ah

ORIGIN: Japan, Korea

COMMON NAME: Yabukouji (Japanese)

FRAGRANT OFFSPRING: *Rhynchodirea*

Dragon Charmy (*Sedirea japonica* × *Rhynchostylis gigantea*); *Vandirea* Newberry Jasmine (*Sedirea japonica* × *Vanda amesiana*)

DESCRIPTION AND QUALITIES: A delightful miniature from Asia that is finally receiving the attention and appreciation it deserves.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Fresh lemon

FLOWER DESCRIPTION: Cream to green



Sedirea japonica is a delightful plant long highly admired by Asian orchid lovers for its delicate fragrance.

flowers with purple bars and spots on the lips and sepals. Flowers 1 inch (2.5 cm) across. Inflorescence 3–6 inches (8–15 cm) tall, with 3 to 12 flowers.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: Miniature plant habit. Leaves about 6 inches (15 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Sphagnum moss or a fine-textured phalaenopsis mix

SPECIAL CULTURAL TIP: Grow much like a phalaenopsis with slightly more light.

COMMENT: An orchid enjoyed and revered by the Japanese for hundreds of years is now starting to become more available to Western countries.

Trichoglottis philippinensis

PRONUNCIATION: trik-oh-GLOTT-iss

AKA: *Stauropsis philippinensis*

ORIGIN: Philippines

DESCRIPTION AND QUALITIES: A striking plant with attractive, unique flowers.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Ripe apples

FLOWER DESCRIPTION: Dark burgundy flowers with a bright pink lip. Flowers are 1–1½ inches (2.5–4 cm) wide, borne singly from the axils of the leaves. The species produces color forms ranging from brown to dark burgundy.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: A slow grower up to 48 inches (90 cm) high. Can be topped to keep it short. Leaves tightly arranged on the stem.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse



Trichoglottis philippinensis 'Pololei' is a curious plant with the delicious scent of ripe fruit.

PHOTO BY MARC HERZOG.

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured orchid mix

COMMENT: Described in 1845 by John Lindley.

OTHER FRAGRANT TRICHOGLOTTIS: *Trgl. wenzellii*—sweet

Tuberolabium kotoense

PRONUNCIATION: too-burr-oh-LAY-bee-um

AKA: *Saccolabium quisumbingii*

ORIGIN: Southeast Asia including Taiwan and Philippines

DESCRIPTION AND QUALITIES: An easy-to-grow species commonly found on *Ficus* trees in mountainous areas of Taiwan and the Philippines.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Floral

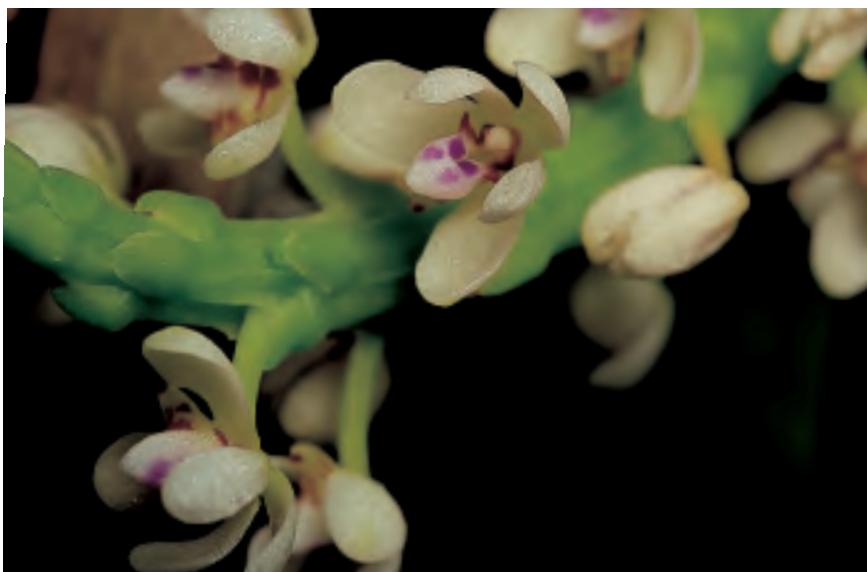
FLOWER DESCRIPTION: Small, white, long-lasting, waxy flowers with purple-tipped lips. Flowers $\frac{1}{2}$ inch (1 cm) across. Inflorescence 2–3 inches (5–7.5 cm) tall, with 50 or more flowers per spike as the plant matures.

SEASON OF BLOOM: Fall to winter

MATURE PLANT: Dwarf grower.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse



The diminutive *Tuberolabium kotoense* can display up to 50 small, sweetly scented flowers on a single plant.

LIGHT: Medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Mounted on a slab, in medium-textured bark, or in coco chunks mix in a pot

OTHER FRAGRANT TUBEROLABIUMS: *Tblm. odoratissimum*—sweet

Vanda denisoniana

PRONUNCIATION: VAN-da

ORIGIN: Myanmar

FRAGRANT OFFSPRING: *Aeridovanda Kinnaree* (*Vanda denisoniana* × *Aerides lawrenceae*)

DESCRIPTION AND QUALITIES: A compact grower with many color forms.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Sweet

FLOWER DESCRIPTION: Flower 2 inches (5 cm) across. Yellow petals and sepals with light spotting. Center of flower is white. Inflorescence 6 inches (15 cm) tall, bearing four to six flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Spreads about 12 inches (30 cm) but takes several years to reach 12 inches (30 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Coarse-textured mix

SPECIAL CULTURAL TIP: Fre-

quently grown in wooden baskets with or without media.

COMMENT: Often used in breeding vandas for its yellow color and erect flower spike.

OTHER FRAGRANT VANDAS:

V. coerulescens—grape bubble-gum, concord grapes; *V. cristata*—floral; *V. dearei*—vanilla, cinnamon; *V. roebelingiana*—sweet; *V. tessellata*—grapes, lilac; *V. tricolor* var. *suavis*—vanilla; *V. tricolor*—vanilla.



Several species of vandas, including *Vanda denisoniana*, are pleasantly fragrant.

Hybrids

Angranthes Grandalena

PRONUNCIATION: an-GRAN-theez

ORIGIN: *Angraecum magdalena* × *Aeranthes grandiflora*

FRAGRANT PARENTS: Both parents

DESCRIPTION AND QUALITIES: As this plant matures, it produces multiple growths with recurring, almost constant, blooming.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Evening

DESCRIPTION OF FRAGRANCE: Jasmine

FLOWER DESCRIPTION: Greenish white spurred flowers 3 inches (7.5 cm) across. Inflorescence 10–12 inches (25–30 cm) tall, with one flower.

SEASON OF BLOOM: Variable

MATURE PLANT: A compact plant, 8–10 inches (20–24 cm) tall. Forms additional plants at base. Foliage dark green and glossy.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured orchid bark or coco chunk mix

SPECIAL CULTURAL TIP: Like most angraecoids, this plant resents repotting.

COMMENT: Hybridized by orchid grower and author Fred Hillerman in 1979.

Neostylis Lou Sneary 'Pinky'

AM/AOS

PRONUNCIATION: nee-oh-STYE-liss

ORIGIN: *Neofinetia falcata* × *Rhynchostylis coelestis*

FRAGRANT PARENTS: Both parents

DESCRIPTION AND QUALITIES: A very compact growing orchid perfect for windowsills and under lights.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day



Because of its ease of culture and frequency of blooming, *Angranthes Grandalena* has become one of my favorite angraecoids.

DESCRIPTION OF FRAGRANCE: Vanilla, candy

FLOWER DESCRIPTION: Clouds of 1-inch (2.5-cm) wide, deliciously fragrant, creamy white flowers richly marked in pink, with bright fuchsia pink lips. Inflorescence 6–8 inches (15–20 cm) tall, bearing many flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Very compact growing.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: Fine-textured mix

SPECIAL CULTURAL TIP: Grow in pots or baskets.

COMMENT: Orchid suppliers are beginning to provide *Neostylis* crosses, of which the Lou Sneary grex is one of the most popular.

OTHER FRAGRANT NEOSTYLIS: *Neost.* Lou Sneary 'Blue Moon'—jasmine; *Neost.* Lou Sneary—vanilla, candy.



Neostylis Lou Sneary is a floriferous prize-winning grex.



Phalaenopsis Caribbean Sunset 'Sweet Fragrance' is a delightful, dwarf, red phalaenopsis hybrid with a delicate, roselike scent.

***Phalaenopsis Caribbean Sunset
'Sweet Fragrance'***

PRONUNCIATION: fal-en-OP-sis

ORIGIN: *Phalaenopsis Cassandra* ×
Phalaenopsis Mambo

FRAGRANT PARENTS: Both parents

DESCRIPTION AND QUALITIES: A sweet-smelling, charming miniature phalaenopsis.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose floral

FLOWER DESCRIPTION: Rose-red flowers 2 inches (5 cm) across. Inflorescence 6 inches (15 cm) tall, with many flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Dwarf. Leaves 6 inches (15 cm) long.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium-textured mix

COMMENT: Part of a series of fragrant phalaenopsis bred by Norman's Orchids.

***Phalaenopsis Ember 'Blumen Insel'* AM/AOS**

PRONUNCIATION: fal-en-OP-sis

ORIGIN: *Phalaenopsis Mahalo 'Carmella'* FCC/AOS × *Phalaenopsis George Vasquez 'Eureka'* FCC/AOS

FRAGRANT PARENTS: Both parents

DESCRIPTION AND QUALITIES: Gorgeous foliage and flowers distinguish this orchid.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose floral

FLOWER DESCRIPTION: Glossy, waxy solid dark red flowers 2½ inches (6.5 cm) wide. Inflorescence thick and stiff, 12 inches (30 cm) tall, with five to six flowers. Blooms more than one time per year.

SEASON OF BLOOM: Variable

MATURE PLANT: Leaves broad and long, 10–12 inches (26–30 cm).

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium-textured orchid mix



Phalaenopsis Ember 'Blumen Insel' AM/AOS makes a perfect houseplant with its waxy, dark red, lightly rose scented flowers and dark green, glossy leaves.

Phalaenopsis Kilby Cassviola 'Sweet Fragrance'

PRONUNCIATION: fal-en-OP-sis

ORIGIN: *Phalaenopsis* Cassandra × *Phalaenopsis violacea*

FRAGRANT PARENTS: *Phalaenopsis violacea*

DESCRIPTION AND QUALITIES: A superb combination of a flurry of white flowers on a compact plant with beautifully marbled foliage.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Spicy

FLOWER DESCRIPTION: Clear white flowers with a yellow flush and light brown barring on the lower sepals and throat. Flowers 2½ inches (6 cm) wide. Inflorescence 12 inches (30 cm) tall, bearing 5–10 flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: A very compact grower.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium-textured mix

COMMENT: Part of a series of fragrant phalaenopsis bred by Norman's Orchids.



Phalaenopsis Kilby Cassviola 'Sweet Fragrance' produces glistening white, spicy scented flowers.



Phalaenopsis Mini Mark is a darling miniature orchid that some growers claim has a delicate floral scent while others cannot detect it.

PHOTO BY MARC HERZOG.

Phalaenopsis Mini Mark 'Maria Teresa'

PRONUNCIATION: fal-en-OP-sis

ORIGIN: *Phalaenopsis* Micro Nova × *Phalaenopsis philippinensis*

DESCRIPTION AND QUALITIES: A delightful phalaenopsis that everyone has space for. Some clones of the grex Mini Mark are fragrant, others are not.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: White flowers with dark red speckles and orange and yellow lips. Flowers 1 1/4 inches (3 cm) wide. Inflorescence 3–4 inches (7.5–10 cm) tall, bearing four to six flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: A miniature habit.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low to medium

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium-textured epiphytic orchid mix

Phalaenopsis Orchid World 'Roman Holiday' AM/AOS

PRONUNCIATION: fal-en-OP-sis

ORIGIN: *Phalaenopsis* Malibu Imp × *Phalaenopsis* Deventeriana

FRAGRANT PARENTS: *Phalaenopsis* Deventeriana

DESCRIPTION AND QUALITIES: All cultivars in the grex Orchid World are noted for their fabulous fragrance.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Spicy

FLOWER DESCRIPTION: Impressive, yellow flowers with red bars. Flowers 2 1/2 inches (6 cm) across and of a heavy substance. Inflorescence 12 inches (30 cm) tall, bearing five to six flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Average phalaenopsis size, that is, with a leaf spread of 12 inches (30 cm).

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse, lights

LIGHT: Low to medium

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium-textured bark or coco chunk mix in northern climates. High quality sphagnum moss in warmer, drier growing areas.

OTHER FRAGRANT PHALAENOPSIS:

Phal. Orchid World 'Bonnie Vasquez' AM/AOS—spicy

***Phalaenopsis* Perfection Is 'Chen'**

FCC/AOS

PRONUNCIATION: fal-en-OP-sis

ORIGIN: *Phalaenopsis* Golden Peoker
× *Phalaenopsis* Black Eagle

DESCRIPTION AND QUALITIES: One of my favorite small-growing, fragrant phalaenopsis.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Spicy, cloves, carnation

FLOWER DESCRIPTION: Flat yellow flowers of heavy substance covered with burgundy red spots. Flowers 2½ inches (6.5 cm) wide.

SEASON OF BLOOM: Variable

MATURE PLANT: A compact phalaenopsis.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse, lights

LIGHT: Low

TEMPERATURE: Warm

RECOMMENDED POTTING

MEDIUM: Medium-textured orchid mix or sphagnum moss



Phalaenopsis Orchid World 'Roman Holiday' AM/AOS is one of many fine-colored and sweet-scented cultivars in its grex.



Phalaenopsis Perfection Is 'Chen' FCC/AOS is a gorgeous, flat, waxy, bright flower with a strong, spicy scent. PHOTO BY MARC HERZOG.

Phalaenopsis Sweet Memory 'Amy Dawn' AM/AOS

PRONUNCIATION: fal-en-OP-sis

ORIGIN: *Phalaenopsis Deventeriana* × *Phalaenopsis violacea*

FRAGRANT PARENTS: Both parents

DESCRIPTION AND QUALITIES: Makes a spectacular specimen plant and has long-lasting flowers.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Freesia



Phalaenopsis Sweet Memory 'Amy Dawn' AM/AOS, like all members of its grex, has delightful fragrance. PHOTO BY ERIC GOO FROM BUD TERRELL'S COLLECTION.

FLOWER DESCRIPTION: Rich pink flowers strongly resembling *Phalaenopsis violacea* in shape but with broader petals and sepals. Flowers 3 inches (7.6 cm) wide. Inflorescence 12–14 inches (30–40 cm) tall, bearing six to eight flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Forms *keikis* (baby plants) at its base, providing the potential to become a large specimen plant. Standard phalaenopsis size, that is, with a leaf spread of 12 inches (30 cm).

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium-textured orchid mix or sphagnum moss

Phalaenopsis Valentinii

PRONUNCIATION: fal-en-OP-sis

ORIGIN: *Phalaenopsis violacea* × *Phalaenopsis cornu-cervi*

FRAGRANT PARENTS: *Phalaenopsis violacea*

DESCRIPTION AND QUALITIES: Another

phalaenopsis noted for its fine foliage and fragrant, colorful flowers.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Freesia

FLOWER DESCRIPTION: Glossy, waxy,

violet over brown flowers with purple lips and yellow in the throats.

Flowers 2½ inches (6 cm) wide.

Inflorescence 6 inches (15 cm) tall, bearing three to four flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: A compact grower.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill,

lights, greenhouse

LIGHT: Low

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM:

Medium-textured orchid mix or sphagnum moss



The primary hybrid *Phalaenopsis Valentinii* has varnished flat flowers with the freesia scent from its *Phalaenopsis violacea* parent.



Vanda Pat Delight is a huge luscious hybrid that smells like ripe grapes.

Vanda Pat Delight

PRONUNCIATION: VAN-da

ORIGIN: *Vanda Kasem's Delight* ×

Vanda Fuch's Delight

DESCRIPTION AND QUALITIES: One of the best blue-purple vandas.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Ripe grapes

FLOWER DESCRIPTION: Impressive deep purple blooms 5 inches (12 cm) across. Inflorescence 24 inches (60 cm) tall, bearing 6 to 10 flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Standard vanda size, that is, with a leaf spread of 12 inches (30 cm).

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: In a basket. Will grow in a course-textured mix in a pot

Vascostylis Crownfox Red Gem

PRONUNCIATION: vass-coh-STYE-liss

ORIGIN: *Rhynchostylis gigantea* 'Red' × *Ascocenda* Red Gem

FRAGRANT PARENTS: *Rhynchostylis gigantea*

DESCRIPTION AND QUALITIES: Combines fragrance from its *rhynchostylis* parent with the compact growth habit of its *ascocenda* parent.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Citrus

FLOWER DESCRIPTION: Cranberry red, long-lasting flowers 1 $\frac{3}{4}$ inches (4 cm) across. Inflorescence 12 inches (30 cm) tall, bearing 10–12 flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Average *ascocenda* size, that is, about 10 inches (25 cm) across.

EASE OF CULTURE: Intermediate



Vascostylis Crownfox Red Gem produces an alluring citrus scent.

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM: In a basket or in a medium-textured, well-drained mix

OTHER FRAGRANT VASCOSTYLIS: *Vasco*. Tham Yuen Hae 'Blue Queen'

HCC/RSPC, JC/AOS, HCC/AOS—jasmine

Chapter 8

Other Orchids



Some orchid genera are comprised of only a smattering of fragrant species and hybrids. They include members of the subfamily Epidendrum, tribe Maxillaria, the slipper orchids (*Paphiopedilum* and *Phragmipedium*), the Pleurothallid Alliance, and a group that I am calling the “Stinkers”. As I have mentioned earlier, the focus of this book is pleasant-smelling orchids, not malodorous ones, but I feel it is necessary to mention at least a few of these. For those so inclined, here are a few other plants, not profiled, that fit in this group: *Bulbophyllum beccarii*, *Bulb. echinolabium*, *Bulb. maximum*, *Bulb. phalaenopsis*, *Cirrhopetalum graveolens*, *Cirr. ornatissimum*, *Eria hyacinthoides*, *Gongora grossa*, *Masdevallia triangularis*, *Oncidium crispum*, and *Pleurothallis cocornaensis*. You can check out details about them in the various appendices.

Subfamily Epidendrum Species

Ansellia africana

PRONUNCIATION: an-SELL-ee-a

AKA: *Ansellia gigantea*

ORIGIN: Africa

COMMON NAME: Leopard orchid

DESCRIPTION AND QUALITIES: Has best fragrance under very high light conditions.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Light floral

FLOWER DESCRIPTION: Yellowish flowers with brown spots. Flowers 1½–2 inches (3–5 cm) across. Inflorescence a branched spike, up to 3 feet (90 cm) tall, bearing up to 100 flowers.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: Very large plant with pseudobulbs up to 2 feet (60 cm) long and leaves about 5 inches (12.5 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Greenhouse

LIGHT: High

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM:

Medium-textured mix

SPECIAL CULTURAL TIP: Keep damp during the growing season. Reduce water slightly when not actively growing.

COMMENT: Named for English gardener John Ansell who discovered this plant on an expedition to Niger in 1840.

Arundina graminifolia

PRONUNCIATION: a-run-DEE-na

AKA: *Bletia graminifolia*, *Arundina bambusifolia*

ORIGIN: Southeast Asia

COMMON NAME: Bamboo orchid

DESCRIPTION AND QUALITIES: An orchid that requires a lot of space.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Floral

FLOWER DESCRIPTION: Flower 3 inches (7.5 cm) across, usually rosy mauve but color is variable, short lived (usually three to four days). Inflorescence 4–6 feet (120–180 cm) tall, bearing two to six flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: The slender, upright stems grow in clusters.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Greenhouse

LIGHT: High



The prominently marked flowers of *Ansellia africana* explain its common name, the leopard orchid.



Arundina graminifolia is commonly grown as a "garden orchid" in the tropics.

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Terrestrial mix in a large pot or directly in ground

SPECIAL CULTURAL TIP: Grow in beds or large pots.

COMMENT: Originally described in 1825 by David Don as *Bletia graminifolia*.

Coelogyne lawrenceana

PRONUNCIATION: see-LOJ-in-ee

ORIGIN: Vietnam

DESCRIPTION AND QUALITIES: A very vigorous-growing species.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: Waxy, tan flowers with white lips. Flowers 3 $\frac{1}{2}$ inches (9 cm) across. Inflorescence 10 inches (25 cm), bearing one to three flowers.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: Soft, pleated foliage about 12 inches (30 cm) high.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Greenhouse, windowsill, lights

LIGHT: Medium

TEMPERATURE: Warm

RECOMMENDED POTTING MEDIUM: Medium-textured mix

SPECIAL CULTURAL TIP: Repot before new growth begins.



Coelogyne lawrenceana is an uncommon and sought-after species from Vietnam.

Coelogyne ochracea

PRONUNCIATION: see-LOJ-in-ee

ORIGIN: India

DESCRIPTION AND QUALITIES: The most popular species in this genus because it is easy to grow, very fragrant, and compact in habit.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Musk

FLOWER DESCRIPTION: Pure white flowers with striking yellow and orange markings on the lip. Flowers $1\frac{1}{4}$ inches (4 cm) wide. Inflorescence 8 inches (20 cm) tall, bearing 6 to 10 flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Reaches 8 inches (20 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Cool

RECOMMENDED POTTING MEDIUM: Medium-textured mix

COMMENT: This species does not lose its leaves during the winter.

OTHER FRAGRANT COELOGYNES: *Coel. cristata*—banana, candy sweet; *Coel. fimbriata*—yeasty; *Coel. Intermedia*—sweet, fruity; *Coel. pandurata*—cinnamon; *Coel. zurowetzii*—spicy floral.



Coelogyne ochracea sports crisp white flowers with bright yellow and orange markings on the lip and in the throat.

Hybrids

***Catasetum* Orchidglade 'Davie Ranches' AM/AOS**

PRONUNCIATION: kat-a-SEE-tum

ORIGIN: *Catasetum pileatum* × *Catasetum expansum*

DESCRIPTION AND QUALITIES: As is the case with most *catasetums*, the male flowers have a stronger scent than the female flowers. The fragrance of the blossoms remains, to some degree, even after the flowers dry, making them useful for potpourri. Flowers are most fragrant in warm sunlight.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Spicy, medicinal

FLOWER DESCRIPTION: Creamy, thick, waxy flowers covered with red freckles. Flowers 2 inches (5 cm) across. Inflorescence 6–8 inches (15–20 cm) tall, with up to 15 flowers.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: Leaves deciduous, 12–16 inches (30–40 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: In a basket so plants will have rapid drainage.

SPECIAL CULTURAL TIP: Water and fertilize heavily during the growing season. Stop water for four to six weeks during the winter.

COMMENT: The first commercial *Catasetum* hybrid. Created by Jones and Scully, commercial orchid growers in Miami.

OTHER FRAGRANT CATASETUMS: *Ctsm. candida*—wintergreen; *Ctsm. collare*—wintergreen; *Ctsm. discolor*—rye bread; *Ctsm. expansum*—turpentine in morning; rye bread in afternoon; *Ctsm. fimbriatum*—spice; *Ctsm. gnomus*—wintergreen; *Ctsm. integerrimum*—spice; *Ctsm. maculatum*—rye bread; *Ctsm. roseum*—



Catasetum Orchidglade 'Davie Ranches' AM/AOS has rich color and fragrance.

Vicks VapoRub in the morning, cinnamon at night; Ctsm. *tenebrosum*—citrus; Ctsm. *warscewiczii*—lemon.

***Cymbidium Golden Elf 'Sundust'* HCC/AOS**

PRONUNCIATION: sim-BID-ee-um

ORIGIN: *Cymbidium ensifolium* × *Cymbidium* Enid Haupt

FRAGRANT PARENTS: *Cymbidium ensifolium*

DESCRIPTION AND QUALITIES: The clear golden yellow, sweetly fragrant flowers on a compact plant make this miniature cymbidium a favorite.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose

FLOWER DESCRIPTION: Clear bright yellow flowers $2\frac{1}{2}$ inches (6 cm) across.

Inflorescence a spike, with four to six flowers. Can bloom several times a year. Flowers last about two weeks.

SEASON OF BLOOM: Summer to fall

MATURE PLANT: Considered a miniature cymbidium.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: High

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Terrestrial mix.

SPECIAL CULTURAL TIP: Requires less cooling than most other cymbidiums to initiate buds. This makes it easier to bloom than many other cymbidiums. More heat tolerant than most cymbidiums so it is suited for warmer climates.

OTHER FRAGRANT CYMBIDIUMS: *Cym. cyperifolium*—sweet; *Cym. eburneum*—sweet, like paperwhite narcissus; *Cym. goeringii*—jasmine, lily-of-the valley, lemons; *Cym. kanran*—lemon peel; *Cym. mastersii*—almonds; *Cym. sinensis*—light, sweet floral; *Cym. suave*—sweet; *Cym. virescens*—the sweet, delicate fragrance earned it the moniker of “the scent of the king.”



Cymbidium Golden Elf 'Sundust' HCC/AOS is a compact, warm-tolerant, fragrant hybrid.

Tribe Maxillaria Species

Bifrenaria harrisoniae

PRONUNCIATION: bye-fren-AIR-ee-a

AKA: *Dendrobium harrisoniae*

ORIGIN: Brazil

DESCRIPTION AND QUALITIES: The long-lasting very fragrant flower is the prime feature of this orchid.

INTENSITY OF FRAGRANCE: Strong



Bifrenaria harrisoniae features waxy white flowers with a sweet scent.



The exotic flower of *Cochleanthes amazonica* is made more exciting with dark purple veins on the impressive lip and in the throat.

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Fruity

FLOWER DESCRIPTION: Waxy, fleshy, usually white flowers that last up to six weeks. Flowers 2–3 inches (5–7 cm) across. Inflorescence 2 inches (5 cm) tall, with one to two flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: Pseudobulbs 2–3 inches (5–7.5 cm) long. Leaves 8–10 inches (20–30 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Medium-textured epiphytic mix

SPECIAL CULTURAL TIP: Needs no rest period. Reduce water during winter to improve bud set. Divide sparingly.

COMMENT: Sent to England from Rio de Janeiro by W. Harrison in the 1820s.

Cochleanthes amazonica

PRONUNCIATION: kok-lee-AN-theez

ORIGIN: Costa Rica, Panama

FRAGRANT OFFSPRING: *Cochleanthes*

Moliere (*Cnths. discolor* × *Cnths. amazonica*); *Cochleanthes Amazing* (*Cnths. flabelliformis* × *Cnths. amazonica*)

DESCRIPTION AND QUALITIES: The large dramatically marked lip makes this orchid stand out.

INTENSITY OF FRAGRANCE: Very strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Candy, rose, narcissus, verbena

FLOWER DESCRIPTION: White flowers with contrasting dark purple veins on very prominent lips and in the throats. Flowers 2 inches (5 cm) across.

Inflorescence 3 inches (7.5 cm) tall, bearing one flower.

SEASON OF BLOOM: Winter to spring

MATURE PLANT: Reaches 8 inches (20 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low to medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured, well-drained mix

SPECIAL CULTURAL TIP: Keep the growing medium damp to avoid pleating of the foliage. Make sure potting mix is fresh and not broken down as this plant does not tolerate a soggy medium.

OTHER FRAGRANT COCHLEANTHES: *Cnths. discolor*—candy, cedar, pepper, camphoraceous

Lycaste aromatica

PRONUNCIATION: lye-KASS-tee

AKA: *Colax aromaticus*, *Lycaste suaveolens*

ORIGIN: Mexico

DESCRIPTION AND QUALITIES: This is a deciduous orchid that drops its leaves in the winter. It blooms before the plant grows new foliage in the early spring.

INTENSITY OF FRAGRANCE: Very strong

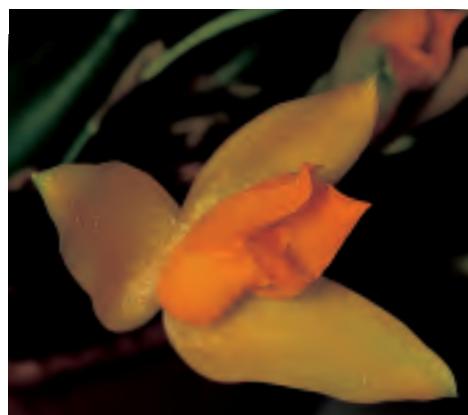
WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Cinnamon, spicy, like Big Red chewing gum

FLOWER DESCRIPTION: Bright yellow-orange flowers 2½ inches (6 cm) wide. Inflorescence 6 inches (15 cm) tall, bearing flowers in groups of 30 to 40 from previous year's growth or on new growth.

SEASON OF BLOOM: Spring

MATURE PLANT: Leaves 12–16 inches (30-40 cm) long, soft and pleated.



Lycaste aromatica has a compact plant habit with cheery, bright cinnamon-scented yellow-orange flowers. Photo by Allen Black.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium to high

TEMPERATURE: Cool to intermediate

RECOMMENDED POTTING MEDIUM: In a clay pot with a mix of rock wool and perlite, or in bark

SPECIAL CULTURAL TIP: Reduce water during the winter. Mist occasionally to keep the pseudobulbs from shriveling. More intense light results in richer flower color.

COMMENT: One of the easier to grow and rewarding lycastes. First collected by Lord Napier in Mexico and sent to the Royal Botanic Garden in Edinburgh, where it flowered in 1826.

OTHER FRAGRANT LYCASTES: *Lyc. Alan Salzman*—spicy; *Lyc. bradeorum*—lemon; *Lyc. brevispatha*—fresh apples; *Lyc. ciliata*—ripe apples; *Lyc. coeruleata*—oranges; *Lyc. cruenta*—spicy, cinnamon, lemon, cloves; *Lyc. deppei*—peppermint, eucalyptus; *Lyc. lanipes*—heady, honey perfume; *Lyc. leucantha*—sweet, heady perfume; *Lyc. locusta*—Granny Smith apples; *Lyc. powellii*—sweet floral; *Lyc. Walnut Valley 'Black's Glow'*—spicy.

Maxillaria tenuifolia

PRONUNCIATION: mak-si-LAIR-ee-a

AKA: *Maxillaria gracilifolia*

ORIGIN: Mexico to Costa Rica

COMMON NAME: Coconut orchid

DESCRIPTION AND QUALITIES: Found in semi-deciduous forests at low elevations. One of the most popular of the 200 or so *Maxillaria* species.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Coconut; box of crayons

FLOWER DESCRIPTION: Brick red flowers 1½–2 inches (4–5 cm) across. Inflorescence 4–5 inches (10–12.5 cm) tall, with one flower.

SEASON OF BLOOM: Summer

MATURE PLANT: Reaches 10 inches (25 cm) high.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Mounted on a raft or slab. Can be grown in pots with a mixture of well-draining media like shredded tree fern.

SPECIAL CULTURAL TIP: Keep moist.

COMMENT: Discovered in Veracruz, Mexico, by German orchid collector Karl Theodor Hartweg in 1837.

OTHER FRAGRANT MAXILLARIAS: *Max. ochroleuca*—tutti-frutti; *Max. picta*—sweet floral; *Max. rufescens*—vanilla, egg crème; *Max. sanderiana*—sweet floral; *Max. seymouriana*—lemony.



No one can resist the mouthwatering coconut fragrance of *Maxillaria tenuifolia*.

Tribe Maxillaria Hybrids



Cochleanthes Moliere is a spectacular result of the marriage of two species.

Cochleanthes Moliere

PRONUNCIATION: kok-lee-AN-theez

ORIGIN: *Cochleanthes amazonica* × *Cochleanthes discolor*

FRAGRANT PARENTS: Both parents

DESCRIPTION AND QUALITIES: The gorgeous, huge royal purple lip and candy sweet fragrance combined with easy phalaenopsis-like culture has made this hybrid a hit.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Candy, rose

FLOWER DESCRIPTION: White petals and sepals tipped with pink contrast with the huge dramatic purple lip. Flowers 2 inches (5 cm) across. Inflorescence 3–5 inches (8–12.5 cm) tall, with a single flower.

SEASON OF BLOOM: Variable

MATURE PLANT: Reaches 8 inches (20 cm) tall.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low to medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured, well-drained mix

SPECIAL CULTURAL TIP: Keep the growing medium damp to avoid pleating of the foliage. Make sure potting mix is fresh and not broken down as this plant does not tolerate a soggy medium.

Lycaste Aquila 'Détente' FCC/AOS

PRONUNCIATION: lye-KASS-tee

ORIGIN: *Lycaste Brugensis* × *Lycaste Jason*

DESCRIPTION AND QUALITIES: This hybrid has in its parentage four *Lycaste* species—*Lyc. longipetala*, *Lyc. skinneri*, *Lyc. lasioglossa*, and *Lyc. macrobulbon*.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet floral

FLOWER DESCRIPTION: Peach-colored flowers 4 inches (10 cm) wide. Inflorescence 6 inches (15 cm) tall, with a single flower.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: Reaches 12–18 inches (30–45 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium to high

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM:

Medium-textured epiphytic mix

SPECIAL CULTURAL TIP: Provide a rest

period during the winter to induce flowering.



This select clone, *Lycaste Aquila* 'Détente' FCC/AOS, was awarded the American Orchid Society's highest award, the First Class Certificate.

Lycaste Imschootiana

PRONUNCIATION: lye-KASS-tee

ORIGIN: *Lycaste cruenta* × *Lycaste skinneri*

DESCRIPTION AND QUALITIES: A lovely softly colored, lightly scented lycaste.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Spicy

FLOWER DESCRIPTION: Beautiful, well-shaped, white to cream-colored flowers with rose-colored specks, each bloom 4 inches (10 cm) across. Inflorescence 6 inches (15 cm) tall, with a single flower.

SEASON OF BLOOM: Winter

MATURE PLANT: Foliage grows to about 12 inches (30 cm).

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium to high

TEMPERATURE: Cool to intermediate

RECOMMENDED POTTING MEDIUM: In a clay pot with a mix of rock wool and perlite or bark and perlite



The delicate creamy flowers and spicy scent make *Lycaste Imschootiana* a favorite. PHOTO BY ALLEN BLACK

SPECIAL CULTURAL TIP: If possible, grow the plant in the cooler area of your growing area. Greatly reduce water from late fall to early winter until buds appear.

Lycaste Lucianii

PRONUNCIATION: lye-KASS-tee

ORIGIN: *Lycaste skinneri* × *Lycaste lasioglossa*

DESCRIPTION AND QUALITIES: A very handsome, hardy, easy-to-grow lycaste.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Sweet and spicy

FLOWER DESCRIPTION: Rose-pink sepals contrast with much smaller white petals, and a fuzzy red lip with yellow in the throat. Flowers 6 inches (15 cm) across. Inflorescence 6–8 inches (15–20 cm) tall, with a single flower.

SEASON OF BLOOM: Variable

MATURE PLANT: Reaches 12–16 inches (30–45 cm) high.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured epiphytic mix



Rosy pink *Lycaste Lucianii* adds a touch of elegance and fragrance to any orchid collection.



Zygopetalum Artur Elle 'Tanzanite' AM/AOS fills the room with its hyacinth fragrance.

Zygopetalum Artur Elle 'Tanzanite' AM/AOS

PRONUNCIATION: zeye-go-PET-a-lum

ORIGIN: *Zygopetalum Blackii* × *Zygopetalum BG White*

DESCRIPTION AND QUALITIES: A tall, dark, and handsome zygopetalum.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE:

Hyacinth, violets, sweet perfume

FLOWER DESCRIPTION: Green flowers overlaid with maroon. Wide white lip covered with purple. Flowers 2 $\frac{3}{4}$ inches (7 cm) across.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: Reaches 18 inches (45 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Medium

TEMPERATURE: Cool to intermediate

RECOMMENDED POTTING MEDIUM: Medium-textured epiphytic mix

OTHER FRAGRANT ZYGOPELALUMS: *Zygotepetalum*—sweet; *Z. BG White*

‘Stonehurst’ HCC/AOS, AM/AOS—hyacinths, violets, sweet perfume;
Z. crinitum—spicy-floral, narcissus; *Z. intermedium*—rose, lilac; *Z. mackayi*—hyacinth, narcissus; *Z. maxillare*—floral; *Z. Redvale ‘Fire Kiss’*—hyacinth.

Paphiopedilum and *Phragmipedium* Species

Paphiopedilum delenatii

PRONUNCIATION: paff-ee-oh-PED-i-lum

AKA: *Cypripedium delenatii*

ORIGIN: Vietnam

DESCRIPTION AND QUALITIES: A form of this species, discovered from Vietnam in the 1990s, is more vigorous and easier growing than the older form, and is the one most often sold today.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day



Paphiopedilum delenatii is one of the few Asian slipper orchids with a fragrance.

DESCRIPTION OF FRAGRANCE: Rose, lemon honey.

FLOWER DESCRIPTION: Pale pink flowers with darker pink pouch. Flowers 3 inches (7.5 cm) across. Inflorescence 8–10 inches (20–25 cm) tall, bearing one to two flowers. **SEASON OF BLOOM:** Variable

MATURE PLANT: Very compact habit with gorgeous mottled, dark green foliage 4 inches (10 cm) long.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured mix

SPECIAL CULTURAL TIP: Easy to grow with other paphiopedilums.

COMMENT: First discovered in northern Vietnam by a French army officer in 1914. Prior to the early 1990s most of the plants of this species available for sale originated from plants raised from seed by the famous French orchid nursery of Messrs. Vacherot and Lecoufle.

Paphiopedilum malipoense

PRONUNCIATION: paff-ee-oh-PED-i-lum

ORIGIN: Southern China, Vietnam

DESCRIPTION AND QUALITIES: A species with various flower forms.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Raspberry, apple

FLOWER DESCRIPTION: Distinctive flower with green petals and sepals. Flowers 3–4 inches (7.5–10 cm) across. Inflorescence tall, at least 12 inches (30 cm), usually bearing one flower.

Slipper orchid *Paphiopedilum malipoense* rewards the grower with an exotic flower and a raspberry scent.



SEASON OF BLOOM: Winter to spring

MATURE PLANT: Leaves beautifully marked and 4–6 inches (10–15 cm) long.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured mix

COMMENT: First described by notable Chinese botanists Sing-Chi Chen and Zhan-Huo Tsi in 1984.

OTHER FRAGRANT PAPHIOPEDILUMS: *Paph. emersonii*—chocolate; *Paph.*

Joyce Hasagawa—raspberry; *Paph. kolopakingii*—honeysuckle; *Paph.*

Lynleigh Koopowitz—raspberry.

***Phragmipedium Wilcox* AM/AOS**

PRONUNCIATION: frag-mi-PEE-dee-um

AKA: *Cypripedium schlimii*

ORIGIN: *Phragmipedium schlimii* × *Phragmipedium Sedenii*

DESCRIPTION AND QUALITIES: A well-grown, mature species of this orchid can be in bloom most of the year.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Rose

FLOWER DESCRIPTION: White flowers with pink pouches borne successively along the inflorescence. Flowers 2 inches (5 cm) wide. Inflorescence up to 12 inches (30 cm) tall, bearing two or three flowers.



Phragmipedium Wilcox AM/AOS is one of the few scented phragmipediums.

SEASON OF BLOOM: Spring

MATURE PLANT: Reaches up to 18 inches (45 cm) tall but frequently smaller.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, greenhouse

LIGHT: Low to medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Light, well-drained mix

SPECIAL CULTURAL TIP: Keep growing medium damp.

COMMENT: Discovered by L. J. Schlim in 1852.

Other Orchid Hybrids

Paphiopedilum Armeni White

PRONUNCIATION: paff-ee-oh-PED-i-lum

ORIGIN: *Paphiopedilum armeniacum* × *Paphiopedilum delenatii*

FRAGRANT PARENTS: *Paphiopedilum delenatii*

DESCRIPTION AND QUALITIES: A vigorous plant with beautifully marked foliage and elegant flowers.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Citrus

FLOWER DESCRIPTION: Creamy white flowers 3½ inches (9 cm) wide.

Inflorescence about 18 inches (45 cm) long, with one or two flowers.

SEASON OF BLOOM: Spring to summer

MATURE PLANT: A compact plant 6 inches (15 cm) high and 8–10 inches (20–25 cm) wide. Foliage a very attractive dark patterned green.

EASE OF CULTURE: Easy

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low

TEMPERATURE: Intermediate

RECOMMENDED POTTING

MEDIUM: Fine- to medium-textured orchid mix



The soft white flowers of slipper orchid *Paphiopedilum Armeni White* emit a delicate citrus fragrance.

The Pleurothallid Alliance Hybrids

Polystachya Darling Star

PRONUNCIATION: pol-lee-STACK-ya

ORIGIN: *Polystachya ottoniana* × *Polystachya virginea*

DESCRIPTION AND QUALITIES: One of the relatively few hybrids found in this genus of miniature plants, Darling Star delivers sweet smelling snowy white, waxy flowers in a compact package.

INTENSITY OF FRAGRANCE: Light

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Floral

FLOWER DESCRIPTION: Clear white flowers borne upside down. Flowers $\frac{3}{4}$ inch (2 cm) wide. Inflorescence 3–4 inches (7.5–10 cm) tall, bearing three to four flowers.

SEASON OF BLOOM: Spring

MATURE PLANT: A dwarf grower, about 6 inches (15 cm) high.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Fine-textured mix



Polystachya Darling Star, a miniature gem from J & L Orchids in Connecticut, has crystalline white flowers that shimmer.

OTHER FRAGRANT POLYSTACHYAS: *Pol. bella*—fruity, “like Lemon Pledge”; *Pol. campyloglossa*—bananas, strawberries; *Pol. cultriformis*—lily-of-the valley, lime blossoms; *Pol. fallax*—jasmine, tropical fruit; *Pol. mazum-baiensis*—rose, gardenia; *Pol. pubescens*—honey.

“Stinkers”

Bulbophyllum echinolabium

PRONUNCIATION: bulb-oh-FILL-um

ORIGIN: Borneo, Sulawesi

DESCRIPTION AND QUALITIES: A star among the bulbophyllums because of its large striking flower.

INTENSITY OF FRAGRANCE: Strong

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Carrion

FLOWER DESCRIPTION: Dark cream-colored flowers with mahogany stripes. Dramatic for their size, 12 inches (30 cm) long or longer, which makes them among the largest flowers in the genus. Inflorescence 12 inches (30 cm) tall, bearing one flower.

SEASON OF BLOOM: Variable

MATURE PLANT: Compact plant, 6–8 inches (10–15 cm) tall.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low to medium

TEMPERATURE: Intermediate to warm

RECOMMENDED POTTING MEDIUM:

Medium-textured, well-drained mix, tree fern, or bark

Bulbophyllum phalaenopsis

PRONUNCIATION: bulb-oh-FILL-um

AKA: *Bulbophyllum giganteum*

ORIGIN: New Guinea

DESCRIPTION AND QUALITIES: *Bulbophyl-lum* species with dark flower colors are frequently “stinkers.”

INTENSITY OF FRAGRANCE: Strong



Stinker *Bulbophyllum echinolabium* puts on quite a show, which makes it a conversation piece when it blooms.

WHEN FRAGRANT: Day

DESCRIPTION OF FRAGRANCE: Carrion

FLOWER DESCRIPTION: Dark red flowers with yellow protuberances that according to Emly Siegerist (2001, p. 127) make them look “(at least to flies) [like] rotting flesh covered with maggots.” Flowers 1½ inches (4 cm) across. Inflorescence 8–10 inches (20–25 cm), bearing many flowers.

SEASON OF BLOOM: Variable

MATURE PLANT: Very large leaves, resembling *Phalaenopsis gigantea*.

EASE OF CULTURE: Intermediate

SUITABLE GROWING AREA: Windowsill, lights, greenhouse

LIGHT: Low to medium

TEMPERATURE: Intermediate

RECOMMENDED POTTING MEDIUM: Mounted because of its long pendulous leaves

COMMENT: A huge specimen of this plant with leaves about 4 feet (1.2 meters) long was awarded a Certificate of Cultural Merit at the 2004 New York International Orchid Show. It was said to be valued at about \$10,000!

OTHER FRAGRANT BULBOPHYLLUMS: *Bulb. beccarii*—said to smell like 100 dead elephants rotting in the sun.



Bulbophyllum phalaenopsis can empty a whole room of people with its foul odor when it is in full bloom.

Oncidium crispum**PRONUNCIATION:** on-SID-ee-um**ORIGIN:** Brazil**DESCRIPTION AND QUALITIES:** The brown flowers with yellow markings make this orchid a favorite with floral artists.

The flower of *Oncidium crispum* is quite attractive, but its musty scent is not one of its assets.

INTENSITY OF FRAGRANCE: Light**WHEN FRAGRANT:** Day**DESCRIPTION OF FRAGRANCE:** Musty, like cockroaches**FLOWER DESCRIPTION:** Rust-red flowers and lip, with yellow and orange markings on the lip. Flowers 3 inches (8 cm) across. Inflorescence long up to 3 feet (90 cm) long, bearing up to 40 to 80 flowers.**SEASON OF BLOOM:** Spring to summer**MATURE PLANT:** Leaves 6–8 inches (15–20 cm) tall.**EASE OF CULTURE:** Intermediate**SUITABLE GROWING AREA:** Windowsill, greenhouse**LIGHT:** Medium to high**TEMPERATURE:** Intermediate to warm**RECOMMENDED POTTING MEDIUM:**

Medium-textured epiphytic mix

COMMENT: Introduced and described by Messrs. Loddiges in 1832.

Appendix A

Orchids by Ease of Culture



Easy Culture

<i>Aerangis biloba</i>	<i>Brassidium</i> Dragon Flight 'Fluff'
<i>Aerangis citrata</i>	<i>Brassocattleya</i> Binosa 'Kirk'
<i>Aerangis fastuosa</i>	AM/AOS
<i>Aeranthes Grandiose</i>	<i>Brassocattleya</i> Mt. Hood
<i>Aerides odorata</i>	<i>Brassolaelia</i> Memoria Bernice
<i>Angraecum compactum</i>	Foster
<i>Angraecum distichum</i>	<i>Brassolaelia</i> Yellow Bird
<i>Angraecum germinyanum</i>	<i>Brassolaeliocattleya</i> Momilani
<i>Angraecum leonis</i>	Rainbow
<i>Angraecum</i> White Emblem	<i>Bulbophyllum beccarii</i>
<i>Angranthes Grandalena</i>	<i>Bulbophyllum hamatipes</i>
<i>Arundina graminifolia</i>	<i>Bulbophyllum laxiflorum</i>
<i>Ascofinetia</i> Cherry Blossom 'Delicado'	<i>Bulbophyllum lobbii</i>
<i>Beallara</i> Marfitch 'Howard's Dream'	<i>Bulbophyllum rothschildianum</i>
AM/AOS	<i>Cattleya</i> Chocolate Drop 'Kodama'
<i>Bothriochilus bellus</i>	AM/AOS
<i>Brassavola</i> Little Stars	<i>Cattleya luteola</i>
<i>Brassavola</i> Yaki 'Black's Best'	<i>Cochleanthes</i> Moliere
<i>Brassavola cordata</i>	<i>Cochleanthes discolor</i>
<i>Brassavola nodosa</i>	<i>Coelogyne</i> Intermedia
<i>Brassavola tuberculata</i>	<i>Coelogyne ochracea</i>
<i>Brassia</i> gireoudiana	<i>Darwinara</i> Charm 'Blue Star'
<i>Brassia longissima</i> 'Pumpkin Patch'	<i>Dendrobium</i> Chrystaline
<i>Brassia verrucosa</i>	<i>Dendrobium</i> Comet King 'Akatsuki'
	<i>Dendrobium</i> Sea Mary 'Snow King'

<i>Dendrobium</i> Sweet Song 'Memory'	<i>Oncidium</i> Sharry Baby
<i>Dendrobium kingianum</i>	<i>Oncidium</i> Sharry Baby 'Misaki'
<i>Dendrobium nobile</i>	<i>Oncidium</i> Tsiku Marguerite
<i>Dendrobium nobile</i> var. <i>virginale</i>	<i>Oncidium</i> Twinkle 'Fragrance Fantasy'
<i>Doritaenopsis</i> Garnet Elf 'Mary'	<i>Oncidium</i> Twinkle 'Red Fantasy'
<i>Doritaenopsis</i> Phoenix Fire 'Cardinal'	<i>Oncidium cheiroporum</i>
<i>Encyclia adenocaula</i>	<i>Oncidium longipes</i>
<i>Encyclia fragrans</i>	<i>Oncidium maculatum</i>
<i>Encyclia phoenicea</i>	<i>Oncidium ornithorhynchum</i> 'Lilac Blossom'
<i>Encyclia radiata</i>	
<i>Epicattleya</i> Dora Tinschert 'Spring-dale' HCC/AOS	<i>Paphiopedilum</i> Armeni White
<i>Epidendrum ciliare</i>	<i>Paphiopedilum</i> delenatii
<i>Epidendrum phoeniceum</i>	<i>Phalaenopsis</i> Caribbean Sunset 'Sweet Fragrance'
<i>Gongora horichiana</i>	<i>Phalaenopsis</i> Desert Red 'Ruby'
<i>Laelia anceps</i>	<i>Phalaenopsis</i> Dotty Woodson 'Claudette' HCC/AOS
<i>Laelia perrinii</i>	<i>Phalaenopsis</i> Ember 'Blumen Insel' AM/AOS
<i>Laeliocattleya</i> Angel Love	<i>Phalaenopsis</i> Mary Lillian Taylor 'Desert Orange' AM/AOS
<i>Laeliocattleya</i> Jungle Festival	<i>Phalaenopsis</i> Mini Mark
<i>Laeliocattleya</i> Mari's Song 'CTM 217' HCC/AOS	<i>Phalaenopsis</i> Orchid World 'Bonnie Vasquez' AM/AOS
<i>Laeliocattleya</i> Mini Purple	<i>Phalaenopsis</i> Orchid World 'Roman Holiday' AM/AOS
<i>Laeliocattleya</i> Nora's Melody	<i>Phalaenopsis</i> Perfection Is 'Chen' FCC/AOS
<i>Lycaste aromatica</i>	<i>Phalaenopsis</i> Samba
<i>Lycaste brevispatha</i>	<i>Phalaenopsis</i> Sweet Memory 'Amy Dawn' AM/AOS
<i>Lycaste cruenta</i>	<i>Phalaenopsis</i> Valentini
<i>Lycaste powellii</i>	<i>Phalaenopsis</i> Wes Addison 'Blood Brother'
<i>Maxillaria seymouriana</i>	<i>Phalaenopsis schilleriana</i>
<i>Maxillaria tenuifolia</i>	<i>Polystachya bella</i>
<i>Milpasia</i> Leslie Garay	<i>Potinara</i> Burana Beauty 'Burana' HCC/AOS
<i>Milpasia</i> Milt's Choice 'Helen of Troy'	<i>Potinara</i> Free Spirit 'Lea' AM/AOS
<i>Miltoniopsis roezlii</i>	<i>Sigmatostalix radicans</i> 'HMO's Petite Prince'
<i>Miltoniopsis santanae</i>	
<i>Neostylis</i> Lou Sneary	
<i>Neostylis</i> Lou Sneary 'Blue Moon'	
<i>Neostylis</i> Lou Sneary 'Pinky' AM/AOS	
<i>Odontioda</i> Vesta 'Charm'	
<i>Oncidium</i> Issaku Nagata 'Volcano Queen' HCC/AOS	
<i>Oncidium</i> Gold Dust	

Spathoglottis deplanche
Stanhopea oculata
Trichopilia suavis

Tuberolabium kotoense
Tuberolabium odoratissimum

Intermediate Culture

<i>Acampe papillosa</i>	<i>Brassolaelia Sarah Black</i>
<i>Acineta superba</i>	<i>Brassolaeliocattleya Arthur Bossin</i>
<i>Aerangis appendiculata</i>	‘Rapture’
<i>Aerangis articulata</i>	<i>Brassolaeliocattleya Formosan Gold</i>
<i>Aerangis brachycarpa</i>	<i>Brassolaeliocattleya George King</i>
<i>Aerangis confusa</i>	‘Serendipity’ AM/AOS
<i>Aerangis kirkii</i>	<i>Brassolaeliocattleya Goldenzelle</i>
<i>Aerangis kotschyana</i>	‘Lemon Chiffon’ AM/AOS
<i>Aerangis modesta</i>	<i>Brassolaeliocattleya Haw Yuan</i>
<i>Aerangis mooreana</i>	Beauty ‘Orchis’
<i>Aerangis mystacidii</i>	<i>Brassolaeliocattleya Hawaiian</i>
<i>Aerangis somalensis</i>	Avalanche
<i>Aerides crassifolia</i>	<i>Brassolaeliocattleya Pamela Hether-</i>
<i>Aerides falcata</i>	ington ‘Coronation’ FCC/AOS
<i>Aerides falcata</i> var. <i>houlletiana</i>	<i>Brassolaeliocattleya Ports of Paradise</i>
<i>Aerides fieldingii</i>	‘Emerald Isle’ HCC/AOS
<i>Aerides quinquevulnera</i>	<i>Brassolaeliocattleya Rio’s Green</i>
<i>Amesiella philippinense</i>	Magic
<i>Angraecum Lemforde</i>	<i>Bulbophyllum ambrosia</i>
<i>Angraecum Veitchii</i>	<i>Bulbophyllum cocoinum</i>
<i>Angraecum aporooides</i>	<i>Bulbophyllum comosum</i>
<i>Angraecum birrinense</i>	<i>Bulbophyllum echinolabium</i>
<i>Angraecum boissierianum</i>	<i>Bulbophyllum maximum</i>
<i>Angraecum bosseri</i>	<i>Bulbophyllum odoratissimum</i>
<i>Angraecum didieri</i>	<i>Bulbophyllum phalaenopsis</i>
<i>Angraecum eburneum</i>	<i>Bulbophyllum suavissimum</i>
<i>Angraecum eichlerianum</i>	<i>Cadetia chionantha</i>
<i>Angraecum magdalena</i>	<i>Cadetia taylori</i>
<i>Angraecum sesquipedale</i>	<i>Catasetum Orchidglade</i> ‘Davie
<i>Anguloa clowesii</i>	Ranches’ AM/AOS
<i>Anselliaria africana</i>	<i>Catasetum candida</i>
<i>Bifrenaria harrisoniae</i>	<i>Catasetum collare</i>
<i>Brassavola cucullata</i>	<i>Catasetum discolor</i>
<i>Brassavola flagellaris</i>	<i>Catasetum expansum</i>
<i>Brassavola martiana</i>	<i>Catasetum fimbriatum</i>
<i>Brassia ochroleuca</i>	<i>Catasetum gnomus</i>

<i>Catasetum integerrimum</i>	<i>Cycnoches warszewiczii</i>
<i>Catasetum maculatum</i>	<i>Cymbidium Golden Elf 'Sundust'</i>
<i>Catasetum roseum</i>	<i>HCC/AOS</i>
<i>Catasetum tenebrosum</i>	<i>Cymbidium cyperifolium</i>
<i>Catasetum warszewiczii</i>	<i>Cymbidium eburneum</i>
<i>Cattleya Brabantiae</i>	<i>Cymbidium ensifolium</i>
<i>Cattleya Fascelis</i>	<i>Cymbidium goeringii</i>
<i>Cattleya Peckhaviensis</i>	<i>Cymbidium kanran</i>
<i>Cattleya Pradit Spot 'Black Prince'</i>	<i>Cymbidium mastersii</i>
<i>Cattleya bicolor</i> var. <i>grossii</i>	<i>Cymbidium sinensis</i>
<i>Cattleya dowiana</i>	<i>Cymbidium suave</i>
<i>Cattleya forbesii</i>	<i>Cymbidium tracyanum</i>
<i>Cattleya granulosa</i>	<i>Cymbidium virescens</i>
<i>Cattleya guttata</i>	<i>Dendrobium Gai Quest</i>
<i>Cattleya harrisoniana</i>	<i>Dendrobium Jesmond Fancy</i>
<i>Cattleya intermedia</i>	<i>Dendrobium Jesmond Gem</i>
<i>Cattleya intermedia</i> 'Carlos'	<i>Dendrobium Light River</i>
<i>Cattleya labiata</i>	<i>Dendrobium Spring Bride</i>
<i>Cattleya loddigesii</i>	<i>Dendrobium Spring Doll</i>
<i>Cattleya lueddemanniana</i> 'Waterfield'	<i>Dendrobium anosmum</i>
<i>Cattleya maxima</i> 'Mountainside'	<i>Dendrobium antennatum</i>
<i>Cattleya mossiae</i>	<i>Dendrobium aureum</i>
<i>Cattleya quadicolor</i>	<i>Dendrobium bellatulum</i>
<i>Cattleya schilleriana</i>	<i>Dendrobium cariniferum</i>
<i>Cattleya schroederae</i>	<i>Dendrobium chrysotoxum</i>
<i>Cattleya walkeriana</i> var. <i>alba</i>	<i>Dendrobium delicatum</i> 'Brechts'
<i>Cattleya warneri</i>	<i>Dendrobium densiflorum</i>
<i>Cattleya warszewiczii</i>	<i>Dendrobium draconis</i>
<i>Caularthron bicornutum</i>	<i>Dendrobium fimbriatum</i> var. <i>oculatum</i>
<i>Cirrhopetalum graveolens</i>	<i>Dendrobium griffithianum</i>
<i>Cirrhopetalum ornatissimum</i>	<i>Dendrobium hainanense</i>
<i>Cochleanthes amazonica</i>	<i>Dendrobium heterocarpum</i>
<i>Coelogyne cristata</i>	<i>Dendrobium jenkinsii</i>
<i>Coelogyne fimbriata</i>	<i>Dendrobium lawesii</i>
<i>Coelogyne lawrenceana</i>	<i>Dendrobium loddigesii</i>
<i>Coelogyne pandurata</i>	<i>Dendrobium macrophyllum</i>
<i>Coelogyne zurowetzii</i>	<i>Dendrobium moniliforme</i>
<i>Coryanthes bruckmuelleri</i>	<i>Dendrobium monophyllum</i>
<i>Coryanthes leucocorys</i>	<i>Dendrobium musciferum</i>
<i>Cycnoches chlorochilon</i>	<i>Dendrobium parishii</i>
<i>Cycnoches loddigesii</i>	<i>Dendrobium primulinum</i> var. <i>giganteum</i>
<i>Cycnoches ventricosum</i>	

<i>Dendrobium pugioniforme</i>	<i>Laelia pumila</i> var. <i>coerulea</i>
<i>Dendrobium rhodopterygium</i> var. <i>semialba</i>	<i>Laelia purpurata</i> var. <i>werckhauseri</i>
<i>Dendrobium speciosum</i>	<i>Laelia rubescens</i>
<i>Dendrobium unicum</i>	<i>Laeliocattleya Angel Love</i>
<i>Dendrobium virgineum</i>	<i>Laeliocattleya Hausermann's Sultan</i>
<i>Dendrobium wardianum</i>	<i>Laeliocattleya Whitiniae</i>
<i>Dendrobium williamsonii</i>	<i>Leptotes bicolor</i>
<i>Dendrochilum cobbianum</i>	<i>Leptotes unicolor</i>
<i>Dendrochilum glumaceum</i>	<i>Lycaste Alan Salzman</i>
<i>Dendrochilum arachnites</i>	<i>Lycaste Aquila 'Détente' FCC/AOS</i>
<i>Dendrochilum magnum</i>	<i>Lycaste Imschootiana</i>
<i>Diaphananthe pellucida</i>	<i>Lycaste Lucianii</i>
<i>Diaphananthe pulchella</i>	<i>Lycaste Walnut Valley 'Black's Glow'</i>
<i>Dracula chestertonii</i>	<i>Lycaste bradeorum</i>
<i>Encyclia cordigera</i>	<i>Lycaste ciliata</i>
<i>Encyclia lancifolia</i>	<i>Lycaste cochleata</i>
<i>Encyclia polybulbon</i>	<i>Lycaste deppei</i>
<i>Encyclia tampensis</i>	<i>Lycaste lanipes</i>
<i>Encyclia trulla</i>	<i>Lycaste leucantha</i>
<i>Epidendrum difforme</i>	<i>Lycaste locusta</i>
<i>Epidendrum falcatum</i>	<i>Masdevallia Confetti</i>
<i>Epidendrum inversum</i>	<i>Masdevallia agaster</i>
<i>Epidendrum nocturnum</i>	<i>Masdevallia attenuata</i>
<i>Epidendrum parkinsonianum</i>	<i>Masdevallia cyclotega</i>
<i>Epilaelia Beverly Shea</i>	<i>Masdevallia glandulosa</i>
<i>Eria gigantea</i> 'Waterfield'	<i>Masdevallia laucheana</i>
<i>Eria hyacinthoides</i>	<i>Masdevallia livingstoneana</i>
<i>Eurychone rothschildianum</i>	<i>Masdevallia mejiana</i>
<i>Gongora galeata</i>	<i>Masdevallia triangularis</i>
<i>Gongora grossa</i>	<i>Maxillaria ochroleuca</i>
<i>Gongora leucochila</i>	<i>Maxillaria picta</i>
<i>Gongora pleiochroma</i>	<i>Maxillaria rufescens</i>
<i>Gongora quinquenervis</i>	<i>Maxillaria sanderiana</i>
<i>Gongora unicolor</i>	<i>Meiracyllium trinasutum</i>
<i>Haraella odorata</i>	<i>Miltonia regnellii</i>
<i>Iwanagaara</i> Appleblossom 'Fantastic'	<i>Miltonia schroederiana</i>
<i>Jumellea confusa</i>	<i>Miltonia spectabilis</i>
<i>Jumellea densifoliata</i>	<i>Miltonia spectabilis</i> var. <i>moreliana</i>
<i>Jumellea sagittata</i>	<i>Miltoniopsis Bert Field</i>
<i>Laelia albida</i>	<i>Miltoniopsis Celle 'Wasserfall'</i>
<i>Laelia lundii</i>	AM/AOS
	<i>Miltoniopsis Hajime Ono</i>

<i>Miltoniopsis</i> Hamburg 'Red Velvet'	<i>Potinara</i> Twentyfour Carat 'Lea'
<i>Miltoniopsis phalaenopsis</i>	AM/AOS
<i>Neofinetia falcata</i>	<i>Rangaeris amaniensis</i>
<i>Odontobrassia</i> Fangtastic Bob	<i>Rhyncholaelia glauca</i>
Henley	<i>Rhynchostylis coelestis</i>
<i>Odontocidium</i> Tiger Crow 'Golden	<i>Rhynchostylis gigantea</i>
Girl' HCC/AOS	<i>Rhynchostylis gigantea</i> Sagarik Strain
<i>Odontoglossum pendulum</i>	<i>Rhynchostylis gigantea</i> var. <i>alba</i>
<i>Odontoglossum pulchellum</i>	<i>Rhynchostylis illustre</i>
<i>Oeniella polystachys</i>	<i>Rhynchostylis retusa</i>
<i>Oncidium concolor</i>	<i>Ronnyara</i> Manuel Ugarte 'H & R'
<i>Oncidium crispum</i>	<i>Schoenorchis fragrans</i>
<i>Oncidium cucullatum</i>	<i>Schoenorchis gemmata</i>
<i>Oncidium microchilum</i>	<i>Sedirea japonica</i>
<i>Oncidium tigrinum</i>	<i>Sobennikoffia humbertiana</i>
<i>Otaara</i> Haw Yuan Bay 'She Shu'	<i>Sophrolaeliocattleya</i> Haw Yuan Star
<i>Paphiopedilum</i> Joyce Hasagawa	'Pink Lady'
<i>Paphiopedilum</i> Lynleigh Koopowitz	<i>Stanhopea candida</i>
<i>Paphiopedilum</i> emersonii	<i>Stanhopea cirrhata</i>
<i>Paphiopedilum</i> kolopakingii	<i>Stanhopea costaricensis</i>
<i>Paphiopedilum</i> malipoense	<i>Stanhopea ecornuta</i>
<i>Peristeria elata</i>	<i>Stanhopea embreei</i>
<i>Phalaenopsis</i> Kilby Cassviola 'Sweet	<i>Stanhopea grandiflora</i>
Fragrance'	<i>Stanhopea jenischiana</i>
<i>Phalaenopsis amboinensis</i>	<i>Stanhopea pulla</i>
<i>Phalaenopsis bellina</i>	<i>Stanhopea reichenbachiana</i>
<i>Phalaenopsis fasciata</i>	<i>Stanhopea saccata</i>
<i>Phalaenopsis gigantea</i>	<i>Stanhopea tigrina</i>
<i>Phalaenopsis hieroglyphica</i>	<i>Stanhopea tricornis</i>
<i>Phalaenopsis lueddemanniana</i>	<i>Stanhopea wardii</i>
<i>Phalaenopsis mannii</i>	<i>Stelis pusilla</i>
<i>Phalaenopsis modesta</i>	<i>Thunia marshalliana</i>
<i>Phalaenopsis violacea</i>	<i>Trichocentrum albococcineum</i>
<i>Phragmipedium</i> Wilcox AM/AOS	<i>Trichocentrum Nathakhun</i>
<i>Pleurothallis</i> cocornaensis	<i>Trichocentrum tigrinum</i>
<i>Pleurothallis</i> ramlulosa	<i>Trichoglottis philippinensis</i> 'Pololei'
<i>Polystachya</i> Darling Star	<i>Trichoglottis wenzellii</i>
<i>Polystachya</i> campyloglossa	<i>Trichopilia fragrans</i>
<i>Polystachya</i> cultriformis	<i>Vanda</i> Pat Delight
<i>Polystachya</i> fallax	<i>Vanda</i> coeruleascens
<i>Polystachya</i> mazumbaiensis	<i>Vanda</i> cristata
<i>Polystachya</i> pubescens	<i>Vanda</i> dearei

<i>Vanda denisoniana</i>	<i>Zygopetalum</i>
<i>Vanda roeblingiana</i>	<i>Zygopetalum Artur Elle 'Tanzanite'</i>
<i>Vanda tessellata</i>	AM/AOS
<i>Vanda tricolor</i>	<i>Zygopetalum BG White 'Stonehurst'</i>
<i>Vanda tricolor</i> var. <i>suavis</i>	HCC/AOS, AM/AOS
<i>Vascostylis</i> Crownfox Red Gem	<i>Zygopetalum Redvale 'Fire Kiss'</i>
<i>Vascostylis</i> Tham Yuen Hae 'Blue Queen'	<i>Zygopetalum crinitum</i>
<i>Vascostylis</i> Queen' HCC/RSPC, JC/AOS, HCC/AOS	<i>Zygopetalum intermedium</i>
<i>Woodwardara</i> Adelaide	<i>Zygopetalum mackayi</i>
<i>Zygoneria</i>	<i>Zygopetalum maxillare</i>

Challenging Culture

<i>Aerides lawrenceae</i>	<i>Encyclia citrina</i>
<i>Aerides lawrenceae</i> var. <i>sanderiana</i>	<i>Laelia tenebrosa</i>
<i>Angraecum</i> Longiscott 'Lea'	<i>Rhyncholaelia digbyana</i>
<i>Cattleya aclandiae</i>	<i>Zygocolax</i>

Appendix B

Orchids by Light Requirements



Low Light (less than 1500 footcandles)

Doritaenopsis Garnet Elf 'Mary'
Doritaenopsis Phoenix Fire 'Cardinal'
Paphiopedilum Armeni White
Paphiopedilum Joyce Hasagawa
Paphiopedilum Lynleigh Koopowitz
Paphiopedilum *delenatii*
Paphiopedilum *emersonii*
Paphiopedilum *kolopakingii*
Paphiopedilum *malipoense*
Phalaenopsis Caribbean Sunset
 'Sweet Fragrance'
Phalaenopsis Desert Red 'Ruby'
Phalaenopsis Dotty Woodson
 'Claudette' HCC/AOS
Phalaenopsis Ember 'Blumen Insel'
 AM/AOS
Phalaenopsis Kilby Cassviola 'Sweet
 Fragrance'
Phalaenopsis Mary Lillian Taylor
 'Desert Orange' AM/AOS
Phalaenopsis Perfection Is 'Chen'
 FCC/AOS
Phalaenopsis Samba
Phalaenopsis Sweet Memory 'Amy
 Dawn' AM/AOS
Phalaenopsis Valentini
Phalaenopsis Wes Addison 'Blood
 Brother'
Phalaenopsis *amboinensis*
Phalaenopsis *bellina*
Phalaenopsis *fasciata*
Phalaenopsis *hieroglyphica*
Phalaenopsis *lueddemanniana*
Phalaenopsis *mannii*
Phalaenopsis *modesta*
Phalaenopsis *schilleriana*

Low to Medium Light

Angraecum *compactum*
Bothriochilus *bellus*
Bulbophyllum *beccarii*
Bulbophyllum *cocoicum*
Bulbophyllum *comosum*
Bulbophyllum *echinolabium*
Bulbophyllum *hamatipes*
Bulbophyllum *laxiflorum*
Bulbophyllum *odoratissimum*
Bulbophyllum *phalaenopsis*

<i>Bulbophyllum suavissimum</i>	<i>Masdevallia triangularis</i>
<i>Cattleya lueddemanniana</i>	<i>Miltonia regnellii</i>
‘Waterfield’	<i>Miltoniopsis Bert Field</i>
<i>Cirrhopetalum graveolens</i>	<i>Miltoniopsis Hajime Ono</i>
<i>Cirrhopetalum ornatissimum</i>	<i>Miltoniopsis santanaei</i>
<i>Cochleanthes Molieri</i>	<i>Odontioda Vesta ‘Charm’</i>
<i>Cochleanthes amazonica</i>	<i>Phalaenopsis Mini Mark</i>
<i>Cochleanthes discolor</i>	<i>Phalaenopsis Orchid World ‘Roman</i>
<i>Dracula chestertonii</i>	‘Holiday’ AM/AOS
<i>Eurychone rothschildianum</i>	<i>Phalaenopsis gigantea</i>
<i>Masdevallia Confetti</i>	<i>Phalaenopsis violacea</i>
<i>Masdevallia agaster</i>	<i>Phragmipedium Wilcox AM/AOS</i>
<i>Masdevallia attenuata</i>	<i>Pleurothallis cocornaensis</i>
<i>Masdevallia glandulosa</i>	<i>Spathoglottis deplanche</i>
<i>Masdevallia mejiana</i>	

Medium Light (1500–2500 footcandles)

<i>Aerangis appendiculata</i>	<i>Ascofinetia Cherry Blossom</i>
<i>Aerangis articulata</i>	‘Delicado’
<i>Aerangis biloba</i>	<i>Beallara Marfitch ‘Howard’s Dream’</i>
<i>Aerangis brachycarpa</i>	AM/AOS
<i>Aerangis citrata</i>	<i>Bifrenaria harrisoniae</i>
<i>Aerangis confusa</i>	<i>Brassavola cordata</i>
<i>Aerangis fastuosa</i>	<i>Brassidium Dragon Flight ‘Fluff’</i>
<i>Aerangis kirkii</i>	<i>Brassolaeliocattleya Arthur Bossin</i>
<i>Aerangis kotschyana</i>	‘Rapture’
<i>Aerangis modesta</i>	<i>Brassolaeliocattleya Momilani</i>
<i>Aerangis mooreana</i>	Rainbow
<i>Aerangis mystacidii</i>	<i>Bulbophyllum ambrosia</i>
<i>Aerangis somalensis</i>	<i>Bulbophyllum lobbii</i>
<i>Aeranthes Grandiose</i>	<i>Bulbophyllum maximum</i>
<i>Aerides crassifolia</i>	<i>Bulbophyllum rothschildianum</i>
<i>Aerides fieldingii</i>	<i>Cadetia chionantha</i>
<i>Amesiella philippinense</i>	<i>Cadetia taylori</i>
<i>Angraecum didieri</i>	<i>Catasetum Orchidglade ‘Davie</i>
<i>Angraecum distichum</i>	Ranches’ AM/AOS
<i>Angraecum germinyanum</i>	<i>Catasetum candida</i>
<i>Angraecum leonis</i>	<i>Catasetum collare</i>
<i>Angraecum magdalenae</i>	<i>Catasetum discolor</i>
<i>Angranthes Grandalena</i>	<i>Catasetum expansum</i>
<i>Anguloa clowesii</i>	<i>Catasetum fimbriatum</i>

<i>Catasetum gnomus</i>	<i>Eria gigantea</i> 'Waterfield'
<i>Catasetum integerrimum</i>	<i>Eria hyacinthoides</i>
<i>Catasetum roseum</i>	<i>Gongora galeata</i>
<i>Catasetum warscewiczii</i>	<i>Gongora grossa</i>
<i>Cattleya Chocolate Drop</i> 'Kodama' AM/AOS	<i>Gongora horichiana</i>
<i>Cattleya Peckhaviensis</i>	<i>Gongora leucohila</i>
<i>Cattleya Pradit Spot</i> 'Black Prince'	<i>Gongora pleiochroma</i>
<i>Cattleya loddigesii</i>	<i>Gongora quinquenervis</i>
<i>Caularhron bicornutum</i>	<i>Gongora unicolor</i>
<i>Coelogynne fimbriata</i>	<i>Haraella odorata</i>
<i>Coelogynne lawrenceana</i>	<i>Jumellea confusa</i>
<i>Coelogynne ochracea</i>	<i>Jumellea densifoliata</i>
<i>Coryanthes bruckmuelleri</i>	<i>Jumellea sagittata</i>
<i>Coryanthes leucocorys</i>	<i>Laeliocattleya Angel Love</i>
<i>Cycnoches chlorochilon</i>	<i>Laeliocattleya Jungle Festival</i>
<i>Cycnoches loddigesii</i>	<i>Laeliocattleya Mini Purple</i>
<i>Cycnoches ventricosum</i>	<i>Laeliocattleya Nora's Melody</i>
<i>Cycnoches warscewiczii</i>	<i>Laeliocattleya Whitiniae</i>
<i>Darwinara Charm</i> 'Blue Star'	<i>Leptotes bicolor</i>
<i>Dendrobium Chrystaline</i>	<i>Leptotes unicolor</i>
<i>Dendrochilum glumaceum</i>	<i>Lycaste Alan Salzman</i>
<i>Dendrochilum arachnites</i>	<i>Lycaste Lucianii</i>
<i>Dendrochilum magnum</i>	<i>Lycaste brevispatha</i>
<i>Diaphananthe pellucida</i>	<i>Lycaste cochleata</i>
<i>Diaphananthe pulchella</i>	<i>Lycaste cruenta</i>
<i>Encyclia adenocaula</i>	<i>Lycaste locusta</i>
<i>Encyclia citrina</i>	<i>Lycaste powellii</i>
<i>Encyclia fragrans</i>	<i>Masdevallia cyclotega</i>
<i>Encyclia lancifolia</i>	<i>Masdevallia laucheana</i>
<i>Encyclia phoenicea</i>	<i>Masdevallia livingstoneana</i>
<i>Encyclia polybulbon</i>	<i>Maxillaria ochroleuca</i>
<i>Encyclia tampensis</i>	<i>Maxillaria picta</i>
<i>Encyclia trulla</i>	<i>Maxillaria rufescens</i>
<i>Epicattleya Dora Tinschert</i> 'Spring-dale' HCC/AOS	<i>Maxillaria sanderiana</i>
<i>Epidendrum ciliare</i>	<i>Maxillaria seymouriana</i>
<i>Epidendrum difforme</i>	<i>Maxillaria tenuifolia</i>
<i>Epidendrum falcatum</i>	<i>Meiracyllium trinasutum</i>
<i>Epidendrum parkinsonianum</i>	<i>Milpasia Leslie Garay</i>
<i>Epidendrum phoeniceum</i>	<i>Milpasia Milt's Choice</i> 'Helen of Troy'
	<i>Miltonia schroederiana</i>

<i>Miltonia spectabilis</i>	<i>Polystachya campyloglossa</i>
<i>Miltonia spectabilis</i> var. <i>moreliana</i>	<i>Polystachya cultriformis</i>
<i>Miltoniopsis</i> Celle 'Wasserfall'	<i>Polystachya fallax</i>
AM/AOS	<i>Polystachya mazumbaiensis</i>
<i>Miltoniopsis</i> Hamburg 'Red Velvet'	<i>Polystachya pubescens</i>
<i>Miltoniopsis phalaenopsis</i>	<i>Potinara</i> Burana Beauty 'Burana'
<i>Miltoniopsis roezlii</i>	HCC/AOS
<i>Neofinetia falcata</i>	<i>Potinara</i> Twentyfour Carat 'Lea'
<i>Neostylis</i> Lou Sneary	AM/AOS
<i>Neostylis</i> Lou Sneary 'Blue Moon'	<i>Rhyncholaelia glauca</i>
<i>Neostylis</i> Lou Sneary 'Pinky' AM/AOS	<i>Rhynchostylis coelestis</i>
<i>Odontobrassia</i> Fangtastic Bob Henley	<i>Rhynchostylis gigantea</i>
<i>Odontocidium</i> Tiger Crow 'Golden Girl' HCC/AOS	<i>Rhynchostylis gigantea</i> Sagarik Strain
<i>Odontoglossum pendulum</i>	<i>Rhynchostylis gigantea</i> var. <i>alba</i>
<i>Odontoglossum pulchellum</i>	<i>Rhynchostylis illustre</i>
<i>Oeniella polystachys</i>	<i>Rhynchostylis retusa</i>
<i>Oncidium longipes</i>	<i>Schoenorchis fragrans</i>
<i>Oncidium</i> Gold Dust	<i>Schoenorchis gemmata</i>
<i>Oncidium</i> Issaku Nagata 'Volcano Queen' HCC/AOS	<i>Sedirea japonica</i>
<i>Oncidium</i> Sharry Baby	<i>Sigmatostalix radicans</i> 'HMO's Petite Prince'
<i>Oncidium</i> Sharry Baby 'Misaki'	<i>Sobennikoffia humbertiana</i>
<i>Oncidium</i> Tsiku Marguerite	<i>Stanhopea candida</i>
<i>Oncidium</i> Twinkle 'Fragrance Fantasy'	<i>Stanhopea cirrhata</i>
<i>Oncidium</i> Twinkle 'Red Fantasy'	<i>Stanhopea costaricensis</i>
<i>Oncidium cheiophorum</i>	<i>Stanhopea embreei</i>
<i>Oncidium concolor</i>	<i>Stanhopea grandiflora</i>
<i>Oncidium cucullatum</i>	<i>Stanhopea jenischiana</i>
<i>Oncidium maculatum</i>	<i>Stanhopea oculata</i>
<i>Oncidium microchilum</i>	<i>Stanhopea pulla</i>
<i>Oncidium ornithorhynchum</i> 'Lilac Blossom'	<i>Stanhopea reichenbachiana</i>
<i>Oncidium tigrinum</i>	<i>Stanhopea saccata</i>
<i>Peristeria elata</i>	<i>Stanhopea tigrina</i>
<i>Phalaenopsis</i> Orchid World 'Bonnie Vasquez' AM/AOS	<i>Stanhopea tricornis</i>
<i>Pleurothallis</i> <i>ramulosa</i>	<i>Stanhopea wardii</i>
<i>Polystachya</i> Darling Star	<i>Stelis pusilla</i>
<i>Polystachya bella</i>	<i>Thunia marshalliana</i>
	<i>Trichocentrum albococcineum</i>
	<i>Trichoglottis philippinensis</i> 'Pololei'
	<i>Trichoglottis wenzellii</i>
	<i>Trichopilia fragrans</i>

<i>Trichopilia suavis</i>	<i>Zygopetalum Artur Elle</i> 'Tanzanite'
<i>Tuberolabium kotoense</i>	AM/AOS
<i>Tuberolabium odoratissimum</i>	<i>Zygopetalum BG White</i> 'Stonehurst'
<i>Vascostylis</i> Crownfox Red Gem	HCC/AOS, AM/AOS
<i>Vascostylis</i> Tham Yuen Hae 'Blue Queen' HCC/RSPC, JC/AOS, HCC/AOS	<i>Zygopetalum Redvale</i> 'Fire Kiss'
<i>Zygocolax</i>	<i>Zygopetalum intermedium</i>
	<i>Zygopetalum mackayi</i>
	<i>Zygopetalum maxillare</i>

Medium to High Light

<i>Acampe papillosa</i>	<i>Brassolaelia Memoria</i> Bernice
<i>Acineta superba</i>	Foster
<i>Aerides falcata</i>	<i>Brassolaelia Yellow Bird</i>
<i>Aerides falcata</i> var. <i>houlletiana</i>	<i>Brassolaeliocattleya Formosan Gold</i>
<i>Aerides lawrenceae</i>	<i>Brassolaeliocattleya George King</i>
<i>Aerides lawrenceae</i> var. <i>sanderiana</i>	'Serendipity' AM/AOS
<i>Aerides odorata</i>	<i>Brassolaeliocattleya Goldenzelle</i>
<i>Aerides quinquevulnera</i>	'Lemon Chiffon' AM/AOS
<i>Angraecum aporooides</i>	<i>Brassolaeliocattleya Haw Yuan</i>
<i>Angraecum birrinense</i>	Beauty 'Orchis'
<i>Angraecum bosseri</i>	<i>Brassolaeliocattleya Hawaiian Avalanche</i>
<i>Angraecum boissierianum</i>	<i>Brassolaeliocattleya Pamela Hetherington</i> 'Coronation' FCC/AOS
<i>Angraecum eburneum</i>	<i>Brassolaeliocattleya Ports of Paradise</i>
<i>Angraecum eichlerianum</i>	'Emerald Isle' HCC/AOS
<i>Angraecum Lemforde White</i>	<i>Brassolaeliocattleya Rio's Green</i>
Beauty	Magic
<i>Angraecum Longiscott</i> 'Lea'	<i>Catasetum maculatum</i>
<i>Angraecum sesquipedale</i>	<i>Catasetum tenebrosum</i>
<i>Angraecum</i> White Emblem	<i>Cattleya Brabantiae</i>
<i>Brassavola</i> Yaki 'Black's Best'	<i>Cattleya Fascelis</i>
<i>Brassavola</i> cucullata	<i>Cattleya bicolor</i> var. <i>grossii</i>
<i>Brassavola</i> martiana	<i>Cattleya dowiana</i>
<i>Brassavola</i> nodosa	<i>Cattleya granulosa</i>
<i>Brassavola</i> tuberculata	<i>Cattleya guttata</i>
<i>Brassia</i> gireoudiana	<i>Cattleya harrisoniana</i>
<i>Brassia</i> longissima 'Pumpkin Patch'	<i>Cattleya intermedia</i>
<i>Brassia</i> ochroleuca	<i>Cattleya intermedia</i> 'Carlos'
<i>Brassia</i> verrucosa	<i>Cattleya labiata</i>
<i>Brassocattleya</i> Binosa 'Kirk'	<i>Cattleya luteola</i>
AM/AOS	
<i>Brassocattleya</i> Mt. Hood	

<i>Cattleya maxima</i> 'Mountainside'	<i>Dendrobium kingianum</i>
<i>Cattleya mossiae</i>	<i>Dendrobium lawesii</i>
<i>Cattleya quadicolor</i>	<i>Dendrobium loddigesii</i>
<i>Cattleya schilleriana</i>	<i>Dendrobium macrophyllum</i>
<i>Cattleya schroederae</i>	<i>Dendrobium moniliforme</i>
<i>Cattleya walkeriana</i> var. <i>alba</i>	<i>Dendrobium monophyllum</i>
<i>Cattleya warneri</i>	<i>Dendrobium musciferum</i>
<i>Cattleya warscewiczii</i>	<i>Dendrobium nobile</i>
<i>Coelogyne Intermedia</i>	<i>Dendrobium nobile</i> var. <i>virginale</i>
<i>Coelogyne cristata</i>	<i>Dendrobium parishii</i>
<i>Coelogyne pandurata</i>	<i>Dendrobium primulinum</i> var. <i>giganteum</i>
<i>Coelogyne zurowetzii</i>	<i>Dendrobium pugioniforme</i>
<i>Cymbidium ensifolium</i>	<i>Dendrobium rhodopterygium</i> var. <i>semialba</i>
<i>Cymbidium mastersii</i>	<i>Dendrobium speciosum</i>
<i>Cymbidium sinensis</i>	<i>Dendrobium unicum</i>
<i>Cymbidium suave</i>	<i>Dendrobium virgineum</i>
<i>Cymbidium tracyanum</i>	<i>Dendrobium wardianum</i>
<i>Cymbidium virescens</i>	<i>Dendrobium williamsonii</i>
<i>Dendrobium</i> Comet King 'Akatsuki'	<i>Dendrochilum cobbianum</i>
<i>Dendrobium</i> Gai Quest	<i>Encyclia cordigera</i>
<i>Dendrobium</i> Jesmond Fancy	<i>Encyclia radiata</i>
<i>Dendrobium</i> Jesmond Gem	<i>Epidendrum inversum</i>
<i>Dendrobium</i> Light River	<i>Epidendrum nocturnum</i>
<i>Dendrobium</i> Sea Mary 'Snow King'	<i>Epilaelia</i> Beverly Shea
<i>Dendrobium</i> Spring Bride	<i>Iwanagaara</i> Appleblossom
<i>Dendrobium</i> Spring Doll	'Fantastic'
<i>Dendrobium</i> Sweet Song 'Memory'	<i>Laelia albida</i>
<i>Dendrobium</i> <i>anosmum</i>	<i>Laelia anceps</i>
<i>Dendrobium</i> <i>antennatum</i>	<i>Laelia perrinii</i>
<i>Dendrobium</i> <i>aureum</i>	<i>Laelia pumila</i> var. <i>coerulea</i>
<i>Dendrobium</i> <i>bellatulum</i>	<i>Laelia purpurata</i> var. <i>werckhauseri</i>
<i>Dendrobium</i> <i>cariniferum</i>	<i>Laelia tenebrosa</i>
<i>Dendrobium</i> <i>chrysotoxum</i>	<i>Laeliocattleya</i> Hausermann's Sultan
<i>Dendrobium</i> <i>delicatum</i> 'Brechts'	<i>Laeliocattleya</i> Mari's Song 'CTM 217'
<i>Dendrobium</i> <i>densiflorum</i>	HCC/AOS
<i>Dendrobium</i> <i>draconis</i>	<i>Lycaste</i> Aquila 'Détente' FCC/AOS
<i>Dendrobium</i> <i>fimbriatum</i> var. <i>oculatum</i>	<i>Lycaste</i> Imschootiana
<i>Dendrobium</i> <i>griffithianum</i>	<i>Lycaste</i> Walnut Valley 'Black's Glow'
<i>Dendrobium</i> <i>hainanense</i>	<i>Lycaste</i> <i>aromatica</i>
<i>Dendrobium</i> <i>heterocarpum</i>	<i>Lycaste</i> <i>bradeorum</i>
<i>Dendrobium</i> <i>jenkinsii</i>	

<i>Lycaste ciliata</i>	<i>Stanhopea costaricensis</i>
<i>Lycaste deppei</i>	<i>Stanhopea ecornuta</i>
<i>Lycaste lanipes</i>	<i>Trichocentrum Nathakhun</i>
<i>Lycaste leucantha</i>	<i>Trichocentrum tigrinum</i>
<i>Oncidium crispum</i>	<i>Vanda Pat Delight</i>
Otaara Haw Yuan Bay 'She Shu'	<i>Vanda dearei</i>
Potinara Free Spirit 'Lea' AM/AOS	<i>Vanda denisoniana</i>
<i>Rangaeris amaniensis</i>	<i>Vanda tesselata</i>
<i>Rhyncholaelia digbyana</i>	<i>Woodwardara Adelaide</i>
Ronnyara Manuel Ugarte 'H & R'	<i>Zygoneria</i>
<i>Sophrolaeliocattleya</i> Haw Yuan Star 'Pink Lady'	<i>Zygopetalum crinitum</i>

High Light (2500 footcandles or higher)

<i>Angraecum Veitchii</i>	<i>Cymbidium eburneum</i>
<i>Ansellia africana</i>	<i>Cymbidium goeringii</i>
<i>Arundina graminifolia</i>	<i>Cymbidium kanran</i>
<i>Brassavola Little Stars</i>	<i>Laelia lundii</i>
<i>Brassavola flagellaris</i>	<i>Laelia rubescens</i>
<i>Brassolaelia Sarah Black</i>	<i>Vanda coerulescens</i>
<i>Cattleya aclandiae</i>	<i>Vanda cristata</i>
<i>Cattleya forbesii</i>	<i>Vanda roeblingiana</i>
<i>Cymbidium</i> Golden Elf 'Sundust' HCC/AOS	<i>Vanda tricolor</i>
<i>Cymbidium cyperifolium</i>	<i>Vanda tricolor</i> var. <i>suavis</i>

Appendix C

Orchids by Nighttime Temperature Preferences

It is assumed that day temperatures will be 15 degrees Fahrenheit (8 degrees Celsius) or warmer than the nighttime temperatures cited here.

Cool Temperature (45–50°F/7–10°C)

<i>Coelogyne ochracea</i>	<i>Cymbidium sinensis</i>
<i>Cymbidium cyperifolium</i>	<i>Cymbidium suave</i>
<i>Cymbidium eburneum</i>	<i>Cymbidium tracyanum</i>
<i>Cymbidium goeringii</i>	<i>Cymbidium virescens</i>
<i>Cymbidium kanran</i>	<i>Dendrobium Gai Quest</i>
<i>Cymbidium mastersii</i>	

Cool to Intermediate Temperature

<i>Cadetia chionantha</i>	<i>Lycaste Walnut Valley 'Black's Glow'</i>
<i>Cymbidium ensifolium</i>	<i>Lycaste aromatica</i>
<i>Dendrobium Chrystaline</i>	<i>Lycaste bradeorum</i>
<i>Dendrobium Jesmond Fancy</i>	<i>Lycaste locusta</i>
<i>Dendrobium Jesmond Gem</i>	<i>Masdevallia Confetti</i>
<i>Dendrobium Light River</i>	<i>Masdevallia agaster</i>
<i>Dendrobium bellatulum</i>	<i>Masdevallia attenuata</i>
<i>Dendrobium hainanense</i>	<i>Masdevallia cyclotega</i>
<i>Dendrobium kingianum</i>	<i>Masdevallia glandulosa</i>
<i>Dendrobium primulinum</i> var. <i>giganteum</i>	<i>Masdevallia laucheana</i>
<i>Encyclia citrina</i>	<i>Masdevallia livingstoneana</i>
<i>Eria hyacinthoides</i>	<i>Masdevallia mejiana</i>
<i>Lycaste Imschootiana</i>	<i>Masdevallia triangularis</i>
	<i>Maxillaria sanderiana</i>

<i>Miltoniopsis</i> Bert Field	<i>Zygopetalum</i> Artur Elle 'Tanzanite'
<i>Miltoniopsis</i> Celle 'Wasserfall'	AM/AOS
AM/AOS	
<i>Miltoniopsis</i> Hajime Ono	<i>Zygopetalum</i> BG White 'Stonehurst'
<i>Miltoniopsis</i> Hamburg 'Red Velvet'	HCC/AOS, AM/AOS
<i>Odontoglossum pulchellum</i>	<i>Zygopetalum</i> Redvale 'Fire Kiss'
<i>Thunia marshalliana</i>	<i>Zygopetalum</i> crinitum
<i>Vanda cristata</i>	<i>Zygopetalum</i> intermedium
<i>Zygocolax</i>	<i>Zygopetalum</i> mackayi
	<i>Zygopetalum</i> maxillare

Intermediate Temperature (55–66°F/12–15°C)

<i>Acampe papillosa</i>	<i>Brassolaeliocattleya</i> Ports of Paradise
<i>Acineta superba</i>	'Emerald Isle' HCC/AOS
<i>Aerangis confusa</i>	<i>Brassolaeliocattleya</i> Rio's Green
<i>Aerangis fastuosa</i>	Magic
<i>Aerangis kirkii</i>	<i>Bulbophyllum ambrosia</i>
<i>Aerangis kotschyana</i>	<i>Bulbophyllum beccarii</i>
<i>Aerangis somalensis</i>	<i>Bulbophyllum cocoinum</i>
<i>Angranthes Grandalena</i>	<i>Bulbophyllum maximum</i>
<i>Anguloa clowesii</i> Beallara Marfitch	<i>Bulbophyllum phalaenopsis</i>
'Howard's Dream' AM/AOS	<i>Bulbophyllum suavissimum</i>
<i>Bifrenaria harrisoniae</i>	<i>Cadetia taylori</i>
<i>Brassia ochroleuca</i>	<i>Catasetum</i> Orchidglade 'Davie Ranches' AM/AOS
<i>Brassolaelia Memoria</i> Bernice Foster	<i>Catasetum candida</i>
<i>Brassolaelia</i> Yellow Bird	<i>Catasetum collare</i>
<i>Brassolaeliocattleya</i> Arthur Bossin	<i>Catasetum discolor</i>
'Rapture'	<i>Catasetum expansum</i>
<i>Brassolaeliocattleya</i> Formosan Gold	<i>Catasetum fimbriatum</i>
<i>Brassolaeliocattleya</i> George King	<i>Catasetum gnomus</i>
'Serendipity' AM/AOS	<i>Catasetum integerrimum</i>
<i>Brassolaeliocattleya</i> Goldenzelle	<i>Catasetum maculatum</i>
'Lemon Chiffon' AM/AOS	<i>Catasetum roseum</i>
<i>Brassolaeliocattleya</i> Haw Yuan	<i>Catasetum tenebrosum</i>
Beauty 'Orchis'	<i>Catasetum warscewiczii</i>
<i>Brassolaeliocattleya</i> Hawaiian	<i>Cattleya</i> Brabantiae
Avalanche	<i>Cattleya</i> Chocolate Drop 'Kodama'
<i>Brassolaeliocattleya</i> Momilani	AM/AOS
Rainbow	<i>Cattleya</i> Fascelis
<i>Brassolaeliocattleya</i> Pamela Hetherington 'Coronation' FCC/AOS	<i>Cattleya</i> Peckhaviensis

<i>Cattleya</i> Prudit Spot 'Black Prince'	<i>Dendrobium delicatum</i> 'Brecht's'
<i>Cattleya</i> ayclandiae	<i>Dendrobium densiflorum</i>
<i>Cattleya</i> bicolor var. <i>grossii</i>	<i>Dendrobium draconis</i>
<i>Cattleya</i> dowiana	<i>Dendrobium fimbriatum</i> var. oculatum
<i>Cattleya</i> granulosa	<i>Dendrobium griffithianum</i>
<i>Cattleya</i> harrisoniana	<i>Dendrobium heterocarpum</i>
<i>Cattleya</i> intermedia	<i>Dendrobium jenkinsii</i>
<i>Cattleya</i> intermedia 'Carlos'	<i>Dendrobium lawesii</i>
<i>Cattleya</i> labiata	<i>Dendrobium macrophyllum</i>
<i>Cattleya</i> loddigesii	<i>Dendrobium moniliforme</i>
<i>Cattleya</i> maxima 'Mountainside'	<i>Dendrobium monophyllum</i>
<i>Cattleya</i> mossiae	<i>Dendrobium musciferum</i>
<i>Cattleya</i> quadicolor	<i>Dendrobium nobile</i>
<i>Cattleya</i> schilleriana	<i>Dendrobium nobile</i> var. <i>virginale</i>
<i>Cattleya</i> schroederae	<i>Dendrobium parishii</i>
<i>Cattleya</i> walkeriana var. <i>alba</i>	<i>Dendrobium pugioniforme</i>
<i>Cattleya</i> warneri	<i>Dendrobium rhodopterygium</i> var. semialba
<i>Cattleya</i> warscewiczii	<i>Dendrobium speciosum</i>
<i>Caularathron</i> bicornutum	<i>Dendrobium unicum</i>
<i>Cirrhopetalum</i> graveolens	<i>Dendrobium virgineum</i>
<i>Cirrhopetalum</i> ornatissimum	<i>Dendrobium wardianum</i>
<i>Cochleanthes</i> Moliere	<i>Dendrobium williamsonii</i>
<i>Cochleanthes</i> amazonica	<i>Dendrochilum glumaceum</i>
<i>Cochleanthes</i> discolor	<i>Dendrochilum arachnites</i>
<i>Coelogyne</i> Intermedia	<i>Diaphananthe pellucida</i>
<i>Coelogyne</i> fimbriata	<i>Diaphananthe pulchella</i>
<i>Coelogyne</i> pandurata	<i>Dracula chestertonii</i>
<i>Coelogyne</i> zurowetzii	<i>Encyclia adenocaula</i>
<i>Cycnoches</i>	<i>Encyclia fragrans</i>
<i>Cymbidium</i> Golden Elf 'Sundust'	<i>Encyclia lancifolia</i>
HCC/AOS	<i>Encyclia phoenicea</i>
<i>Darwinara</i> Charm 'Blue Star'	<i>Encyclia polybulbon</i>
<i>Dendrobium</i> Comet King 'Akatsuki'	<i>Encyclia radiata</i>
<i>Dendrobium</i> Sea Mary 'Snow King'	<i>Encyclia tampensis</i>
<i>Dendrobium</i> Spring Bride	<i>Encyclia trulla</i>
<i>Dendrobium</i> Spring Doll	<i>Epicattleya</i> Dora Tinschert 'Spring- dale' HCC/AOS
<i>Dendrobium</i> Sweet Song 'Memory'	<i>Epidendrum ciliare</i>
<i>Dendrobium</i> antennatum	<i>Epidendrum falcatum</i>
<i>Dendrobium</i> aureum	
<i>Dendrobium</i> cariniferum	
<i>Dendrobium</i> chrysotoxum	

<i>Epidendrum inversum</i>	<i>Miltonia regnellii</i>
<i>Epidendrum nocturnum</i>	<i>Miltonia schroederiana</i>
<i>Epidendrum parkinsonianum</i>	<i>Miltonia spectabilis</i>
<i>Epidendrum phoeniceum</i>	<i>Miltonia spectabilis</i> var. <i>moreliana</i>
<i>Haraella odorata</i>	<i>Miltoniopsis phalaenopsis</i>
<i>Iwanagaara</i> Appleblossom 'Fantastic'	<i>Miltoniopsis roezlii</i>
<i>Jumellea confusa</i>	<i>Miltoniopsis santanaei</i>
<i>Jumellea densifoliata</i>	<i>Odontioda Vesta</i> 'Charm'
<i>Jumellea sagittata</i>	<i>Odontobrassia</i> Fangtastic Bob
<i>Laelia albida</i>	Henley
<i>Laelia anceps</i>	<i>Odontocidium</i> Tiger Crow 'Golden Girl' HCC/AOS
<i>Laelia lundii</i>	<i>Odontoglossum pendulum</i>
<i>Laelia perrinii</i>	<i>Oncidium</i> Issaku Nagata 'Volcano Queen' HCC/AOS
<i>Laelia pumila</i> var. <i>coerulea</i>	<i>Oncidium longipes</i>
<i>Laelia purpurata</i> var. <i>werckhauseri</i>	<i>Oncidium Sharry Baby</i>
<i>Laelia rubescens</i>	<i>Oncidium Sharry Baby</i> 'Misaki'
<i>Laelia tenebrosa</i>	<i>Oncidium cheiroporum</i>
<i>Laeliocattleya</i> Angel Love	<i>Oncidium concolor</i>
<i>Laeliocattleya</i> Hausermann's Sultan	<i>Oncidium cucullatum</i>
<i>Laeliocattleya</i> Jungle Festival	<i>Oncidium maculatum</i>
<i>Laeliocattleya</i> Mari's Song 'CTM 217' HCC/AOS	<i>Oncidium microchilum</i>
<i>Laeliocattleya</i> Mini Purple	<i>Oncidium ornithorhynchum</i> 'Lilac Blossom'
<i>Laeliocattleya</i> Nora's Melody	<i>Paphiopedilum</i> Armeni White
<i>Leptotes bicolor</i>	<i>Paphiopedilum</i> Joyce Hasagawa
<i>Lycaste</i> Alan Salzman	<i>Paphiopedilum</i> Lynleigh Koopowitz
<i>Lycaste</i> Aquila 'Détente' FCC/AOS	<i>Paphiopedilum</i> delenatii
<i>Lycaste</i> Lucianii	<i>Paphiopedilum</i> emersonii
<i>Lycaste</i> brevispatha	<i>Paphiopedilum</i> kolopakingii
<i>Lycaste</i> ciliata	<i>Paphiopedilum</i> malipoense
<i>Lycaste</i> cochleata	<i>Phragmipedium</i> Wilcox AM/AOS
<i>Lycaste</i> cruenta	<i>Pleurothallis</i> cocornaensis
<i>Lycaste</i> deppei	<i>Pleurothallis</i> ramulosa
<i>Lycaste</i> lanipes	<i>Polystachya</i> Darling Star
<i>Lycaste</i> leucantha	<i>Polystachya</i> campyloglossa
<i>Lycaste</i> powellii	<i>Polystachya</i> cultriformis
<i>Maxillaria</i> seymouriana	<i>Polystachya</i> fallax
<i>Maxillaria</i> tenuifolia	<i>Polystachya</i> mazumbaiensis
<i>Meiracyllium</i> trinasatum	<i>Polystachya</i> pubescens
<i>Milpasia</i> Leslie Garay	<i>Potinara</i> Burana Beauty 'Burana'
<i>Milpasia</i> Milt's Choice 'Helen of Troy'	

HCC/AOS	<i>Stanhopea pulla</i>
Potinara Free Spirit 'Lea' AM/AOS	<i>Stanhopea reichenbachiana</i>
Potinara Twentyfour Carat 'Lea'	<i>Stanhopea saccata</i>
AM/AOS	<i>Stanhopea tigrina</i>
<i>Rangaeris amaniensis</i>	<i>Stanhopea tricornis</i>
<i>Rhyncholaelia digbyana</i>	<i>Stanhopea wardii</i>
<i>Sigmatostalix radicans</i> 'HMO's Petite	<i>Stelis pusilla</i>
Prince'	<i>Trichocentrum albococcineum</i>
Sophrolaeliocattleya Haw Yuan Star	<i>Trichocentrum tigrinum</i>
'Pink Lady'	<i>Trichoglottis philippinensis</i> 'Pololei'
<i>Stanhopea candida</i>	<i>Trichopilia fragrans</i>
<i>Stanhopea cirrhata</i>	<i>Trichopilia suavis</i>
<i>Stanhopea costaricensis</i>	<i>Tuberolabium odoratissimum</i>
<i>Stanhopea ecornuta</i>	<i>Vanda tricolor</i> var. <i>suavis</i>
<i>Stanhopea embreei</i>	<i>Woodwardara Adelaide</i>
<i>Stanhopea grandiflora</i>	<i>Zygoneria</i>
<i>Stanhopea jenischiana</i>	<i>Zygopetalum</i>
<i>Stanhopea oculata</i>	

Intermediate to Warm Temperature

<i>Aerangis appendiculata</i>	<i>Bothriochilus bellus</i>
<i>Aerangis articulata</i>	<i>Brassavola cordata</i>
<i>Aerangis biloba</i>	<i>Brassavola cucullata</i>
<i>Aerangis brachycarpa</i>	<i>Brassavola flagellaris</i>
<i>Aerangis citrata</i>	<i>Brassavola Little Stars</i>
<i>Aerangis modesta</i>	<i>Brassavola martiana</i>
<i>Aerangis mooreana</i>	<i>Brassavola nodosa</i>
<i>Aerangis mystacidii</i>	<i>Brassavola tuberculata</i>
<i>Aeranthes Grandiose</i>	<i>Brassavola Yaki</i> 'Black's Best'
<i>Aerides crassifolia</i>	<i>Brassidium Dragon Flight</i> 'Fluff'
<i>Aerides falcata</i>	<i>Brassocattleya Binosa</i> 'Kirk'
<i>Aerides falcata</i> var. <i>houlletiana</i>	AM/AOS
<i>Aerides fieldingii</i>	<i>Brassocattleya Mt. Hood</i>
<i>Aerides lawrenceae</i>	<i>Brassolaelia Sarah Black</i>
<i>Aerides lawrenceae</i> var. <i>sanderiana</i>	<i>Bulbophyllum comosum</i>
<i>Aerides odorata</i>	<i>Bulbophyllum echinolabium</i>
<i>Aerides quinquevulnera</i>	<i>Bulbophyllum hamatipes</i>
<i>Amesiella philippinense</i>	<i>Bulbophyllum laxiflorum</i>
<i>Angraecum leonis</i>	<i>Bulbophyllum odoratissimum</i>
<i>Ascofinetia Cherry Blossom</i>	<i>Bulbophyllum rothschildianum</i>
'Delicado'	<i>Cattleya forbesii</i>

<i>Cattleya guttata</i>	<i>Neofinetia falcata</i>
<i>Cattleya lueddemanniana</i> 'Waterfield'	<i>Neostylis</i> Lou Sneary
<i>Cattleya luteola</i>	<i>Neostylis</i> Lou Sneary 'Blue Moon'
<i>Coelogynne cristata</i>	<i>Neostylis</i> Lou Sneary 'Pinky'
<i>Coryanthes bruckmuelleri</i>	AM/AOS
<i>Coryanthes leucocorys</i>	<i>Oncidium</i> Gold Dust
<i>Cycnoches chlorochilon</i>	<i>Oncidium</i> Tsiku Marguerite
<i>Cycnoches loddigesii</i>	<i>Oncidium</i> Twinkle 'Fragrance Fan-
<i>Cycnoches ventricosum</i>	tasy'
<i>Cycnoches warscewiczii</i>	<i>Oncidium</i> Twinkle 'Red Fantasy'
<i>Dendrobium loddigesii</i>	<i>Oncidium</i> crispum
<i>Dendrochilum magnum</i>	<i>Oncidium</i> tigrinum
<i>Encyclia cordigera</i>	<i>Otaara</i> Haw Yuan Bay 'She Shu'
<i>Epidendrum difforme</i>	<i>Peristeria elata</i>
<i>Epilaelia</i> Beverly Shea	<i>Phalaenopsis</i> Orchid World 'Bonnie
<i>Eria gigantea</i> 'Waterfield'	Vasquez' AM/AOS
<i>Eurychone rothschildianum</i>	<i>Polystachya bella</i>
<i>Gongora galeata</i>	<i>Rhynchostylis gigantea</i>
<i>Gongora grossa</i>	<i>Rhynchostylis illustre</i>
<i>Gongora horichiana</i>	<i>Ronnyara</i> Manuel Ugarte 'H & R'
<i>Gongora leucochila</i>	<i>Spathoglottis deplanche</i>
<i>Gongora pleiochroma</i>	<i>Trichocentrum</i> Nathakhun
<i>Gongora quinquenervis</i>	<i>Trichoglossis wenzellii</i>
<i>Gongora unicolor</i>	<i>Tuberolabium kotoense</i>
<i>Laeliocattleya</i> Whitiniae	<i>Vanda</i> Pat Delight
<i>Leptotes unicolor</i>	<i>Vascostylis</i> Crownfox Red Gem
<i>Maxillaria ochroleuca</i>	<i>Vascostylis</i> Tham Yuen Hae 'Blue
<i>Maxillaria picta</i>	Queen' HCC/RSPC, JC/AOS,
<i>Maxillaria rufescens</i>	HCC/AOS

Warm Temperature (65°F/18°C and above)

<i>Angraecum aporoides</i>	<i>Angraecum</i> Lemforde White Beauty
<i>Angraecum birrinense</i>	<i>Angraecum</i> Longiscott 'Lea'
<i>Angraecum bosseri</i>	<i>Angraecum</i> magdalenae
<i>Angraecum boissierianum</i>	<i>Angraecum</i> sesquipedale
<i>Angraecum compactum</i>	<i>Angraecum</i> Veitchii
<i>Angraecum didieri</i>	<i>Angraecum</i> White Emblem
<i>Angraecum distichum</i>	<i>Ansellia</i> africana
<i>Angraecum eburneum</i>	<i>Arundina</i> graminifolia
<i>Angraecum eichlerianum</i>	<i>Brassia</i> gireoudiana
<i>Angraecum germinyanum</i>	<i>Brassia</i> longissima 'Pumpkin Patch'

<i>Brassia verrucosa</i>	<i>Phalaenopsis</i> Wes Addison 'Blood Brother'
<i>Bulbophyllum lobbii</i>	<i>Phalaenopsis amboinensis</i>
<i>Coelogyne lawrenceana</i>	<i>Phalaenopsis bellina</i>
<i>Dendrobium anosmum</i>	<i>Phalaenopsis fasciata</i>
<i>Dendrochilum cobbianum</i>	<i>Phalaenopsis gigantea</i>
<i>Doritaenopsis</i> Garnet Elf 'Mary'	<i>Phalaenopsis hieroglyphica</i>
<i>Doritaenopsis</i> Phoenix Fire 'Cardinal'	<i>Phalaenopsis lueddemanniana</i>
<i>Oeniella polystachys</i>	<i>Phalaenopsis mannii</i>
<i>Phalaenopsis</i> Caribbean Sunset 'Sweet Fragrance'	<i>Phalaenopsis modesta</i>
<i>Phalaenopsis</i> Desert Red 'Ruby'	<i>Phalaenopsis schilleriana</i>
<i>Phalaenopsis</i> Dotty Woodson 'Claudette' HCC/AOS	<i>Phalaenopsis violacea</i>
<i>Phalaenopsis</i> Ember 'Blumen Insel' AM/AOS	<i>Rhyncholaelia glauca</i>
<i>Phalaenopsis</i> Kilby Cassviola 'Sweet Fragrance'	<i>Rhynchostylis coelestis</i>
<i>Phalaenopsis</i> Mary Lillian Taylor 'Desert Orange' AM/AOS	<i>Rhynchostylis gigantea</i> Sagarik Strain
<i>Phalaenopsis</i> Mini Mark	<i>Rhynchostylis gigantea</i> var. <i>alba</i>
<i>Phalaenopsis</i> Orchid World 'Roman Holiday' AM/AOS	<i>Rhynchostylis retusa</i>
<i>Phalaenopsis</i> Perfection Is 'Chen' FCC/AOS	<i>Schoenorchis fragrans</i>
<i>Phalaenopsis</i> Samba	<i>Schoenorchis gemmata</i>
<i>Phalaenopsis</i> Sweet Memory 'Amy Dawn' AM/AOS	<i>Sedirea japonica</i>
<i>Phalaenopsis</i> Valentini	<i>Sobennikoffia humbertiana</i>
	<i>Vanda coerulescens</i>
	<i>Vanda dearei</i>
	<i>Vanda denisoniana</i>
	<i>Vanda roeblingiana</i>
	<i>Vanda tessellata</i>
	<i>Vanda tricolor</i>

Appendix D

Orchids by Intensity of Fragrance



Although many orchids mentioned in this book have very strong, noticeable scents, some of them have light scents, which some growers may not be able to detect.

Light Fragrance

<i>Acineta superba</i> —light vanilla	<i>Bulbophyllum comosum</i> —hay scented
<i>Amesiella philippinense</i> —minty	<i>Bulbophyllum hamatipes</i> —musky
<i>Angraecum distichum</i> —jasmine	<i>Bulbophyllum laxiflorum</i> —musky
<i>Ansella africana</i> —light floral	<i>Bulbophyllum rothschildianum</i> —peach, fruity
<i>Arundina graminifolia</i> —floral	
<i>Ascofinetia</i> Cherry Blossom 'Delicado'—sweet floral	<i>Cadetia chionantha</i> —sweet floral
<i>Beallara</i> Marfitch 'Howard's Dream' AM/AOS—rose	<i>Cadetia taylori</i> —vanilla
<i>Brassavola</i> Yaki 'Black's Best'—musty-soapy; similar to the <i>B. cucullata</i> parent	<i>Catasetum roseum</i> —Vicks VapoRub in the morning, cinnamon at night
<i>Brassia</i> gireoudiana—musky	<i>Cattleya Brabantiae</i> —spicy
<i>Brassia longissima</i> 'Pumpkin Patch'—light, sweet candy	<i>Cattleya Fascelis</i> —spicy
<i>Brassia verrucosa</i> —musky	<i>Cattleya bicolor</i> var. <i>grossii</i> —spicy, aromatic-floral, rose
<i>Brassidium</i> Dragon Flight 'Fluff'—heliotrope	<i>Cattleya forbesii</i> —fragrance of bubble gum
<i>Brassocattleya</i> Binosa 'Kirk' AM/AOS—spicy	<i>Cattleya granulosa</i> —rosy-flora
<i>Bulbophyllum ambrosia</i> —honey, bitter almonds	<i>Cattleya guttata</i> —sweet floral
	<i>Cattleya harrisoniana</i> —floral
	<i>Cattleya intermedia</i> 'Carlos'—floral
	<i>Cattleya luteola</i> —fresh floral
	<i>Cattleya mossiae</i> —garlic

<i>Cattleya schilleriana</i> —honey	<i>Epidendrum difforme</i> —medicinal
<i>Cattleya warneri</i> —clean, spicy	<i>Epidendrum parkinsonianum</i> —spicy
<i>Cattleya warscewiczii</i> —violets	to floral
<i>Cirrhopetalum graveolens</i> —carrión	<i>Epilaelia Beverly Shea</i> —sweet floral
<i>Coelogyne lawrenceana</i> —sweet floral	<i>Gongora horichiana</i> —sweet floral
<i>Coelogyne ochracea</i> —musk	<i>Gongora leucohila</i> —spicy, nutmeg
<i>Coryanthes bruckmuelleri</i> —herbal	<i>Gongora pleiochroma</i> —powdered
<i>Cymbidium Golden Elf 'Sundust'</i> HCC/AOS—rose	cocoa, lilac, hyacinth, sweet floral
<i>Cymbidium cyperifolium</i> —sweet	<i>Gongora quinquenervis</i> —cinnamon, cloves, lily of the valley
<i>Cymbidium sinensis</i> —light, sweet floral	<i>Gongora unicolor</i> —chocolate fla- vored corn chips, sweet, cocoa
<i>Dendrobium Comet King 'Akatsuki'</i> — sweet floral	<i>Iwanagaara Appleblossom 'Fantas- tic'</i> —sweet floral
<i>Dendrobium Spring Bride</i> —fresh, clean fragrance	<i>Jumellea confusa</i> —jasmine
<i>Dendrobium Spring Doll</i> —fresh, clean fragrance	<i>Jumellea densifoliata</i> —jasmine
<i>Dendrobium Sweet Song 'Memory'</i> — fresh, clean fragrance	<i>Laelia albida</i> —primrose
<i>Dendrobium bellatulum</i> —lemon, orange	<i>Laelia anceps</i> —primrose, vanilla
<i>Dendrobium chrysotoxum</i> —pineapple, melon, mango	<i>Laelia lundii</i> —floral scent
<i>Dendrobium jenkinsii</i> —honey	<i>Laelia perrinii</i> —spicy floral
<i>Dendrobium lawesii</i> —floral	<i>Laelia pumila</i> var. <i>coerulea</i> —light floral
<i>Dendrobium loddigesii</i> —sweet floral	<i>Laelia tenebrosa</i> —spicy
<i>Dendrobium macrophyllum</i> —sweet floral	<i>Laeliocattleya Mini Purple</i> —Charles Marden Fitch describes it as “light spicy blend with under- tones of dusky cloves”
<i>Dendrobium nobile</i> —honey, musk by day; mown hay at night	<i>Laeliocattleya Whitiniae</i> —sweet floral
<i>Dendrobium nobile</i> var. <i>virginale</i> — floral	<i>Leptotes bicolor</i> —vanilla
<i>Dendrobium parishii</i> —rhubarb, raspberry	<i>Leptotes unicolor</i> —sweet floral
<i>Doritaenopsis Garnet Elf 'Mary'</i> — sweet floral	<i>Lycaste Alan Salzman</i> —spicy
<i>Doritaenopsis Phoenix Fire 'Cardi- nal'</i> —sweet floral	<i>Lycaste Aquila 'Détente' FCC/AOS</i> — sweet floral
<i>Dracula chestertonii</i> —fungus	<i>Lycaste Imschootiana</i> —spicy
<i>Encyclia adenocaula</i> —floral	<i>Lycaste bradeorum</i> —lemon
<i>Encyclia polybulbon</i> —sandalwood, cloves	<i>Lycaste brevispatha</i> —fresh apples
	<i>Lycaste ciliata</i> —ripe apples
	<i>Lycaste cochleata</i> —oranges
	<i>Masdevallia Confetti</i> —spicy, “like Necco wafers”
	<i>Masdevallia agaster</i> —floral

Masdevallia attenuata—floral
Masdevallia cyclotega—floral
Masdevallia laucaneana—rosy-floral
Masdevallia livingstoneana—fruity scent
Masdevallia mejiana—spice
Maxillaria ochroleuca—tutti-frutti
Maxillaria picta—sweet floral
Maxillaria rufescens—vanilla, egg crème
Maxillaria sanderiana—sweet floral
Meiracyllium trinasutum—cinnamon
Milpasia Leslie Garay—rosy-flora
Miltoniopsis Bert Field—light floral
Miltoniopsis Celle 'Wasserfall'
 AM/AOS—rosy-flora
Miltoniopsis Hajime Ono—light rose
Miltoniopsis Hamburg 'Red Velvet'—rosy-flora
Miltoniopsis santanaei—rosy
Neostylis Lou Sneary—vanilla candy
Neostylis Lou Sneary 'Pinky'
 AM/AOS—vanilla, candy
Odontioda Vesta 'Charm'—citrus
Odontobrassia Fangtastic Bob
 Henley—floral
Odontocidium Tiger Crow 'Golden Girl' HCC/AOS—light floral
Oncidium Gold Dust—floral
Oncidium Issaku Nagata 'Volcano Queen' HCC/AOS—light floral
Oncidium Tsiku Marguerite—sweet, soapy
Oncidium concolor—spiced apple pie
Oncidium crispum—musty, “like cockroaches”
Oncidium microchilum—cider
Otaara Haw Yuan Bay 'She Shu'—vanilla
Paphiopedilum Armeni White—citrus
Paphiopedilum Joyce Hasagawa—raspberry
Paphiopedilum Lynleigh Koopowitz—raspberry
Paphiopedilum delenatii—roses, lemon honey
Paphiopedilum emersonii—chocolate
Paphiopedilum kolopakingii—honey-suckle
Paphiopedilum malipoense—raspberry, apple
Peristeria elata—citrus, eucalyptus
Phalaenopsis Caribbean Sunset
 ‘Sweet Fragrance’—rose floral
Phalaenopsis Desert Red 'Ruby'—sweet
Phalaenopsis Dotty Woodson
 ‘Claudette’ HCC/AOS—sweet
Phalaenopsis Ember 'Blumen Insel'
 AM/AOS—rose floral
Phalaenopsis Kilby Cassviola 'Sweet Fragrance'—spicy
Phalaenopsis Mary Lillian Taylor
 ‘Desert Orange’ AM/AOS—spicy
Phalaenopsis Mini Mark 'Holm'—sweet floral
Phalaenopsis Samba—sweet floral
Phalaenopsis Valentini—freesia
Phalaenopsis Wes Addison 'Blood Brother'—floral
Phalaenopsis amboinensis—musk
Phalaenopsis fasciata—rosy-floral
Phalaenopsis gigantea—orange peel
Phalaenopsis hieroglyphica—rosy-floral
Phalaenopsis lueddemanniana—sweet
Phalaenopsis mannii—mandarin orange
Phalaenopsis schilleriana—rose petals
Phalaenopsis violacea—floral with a touch of spice and cinnamon
Phragmipedium Wilcox AM/AOS—roses
Pleurothallis cocornaensis—moldy socks

<i>Pleurothallis ramulosa</i> —sweet	<i>Stanhopea pulla</i> —lemon-lime candy, cool minty, citrus
<i>Polystachya</i> Darling Star—floral	<i>Stelis pusilla</i> —sweet
<i>Polystachya bella</i> —fruity, “like Lemon Pledge”	<i>Thunia marshalliana</i> —orange
<i>Potinara</i> Free Spirit ‘Lea’	<i>Trichocentrum albococcineum</i> —floral
AM/AOS—sweet floral	<i>Trichoglossis philippinensis</i> ‘Pololei’—ripe apples
<i>Schoenorchis fragrans</i> —sweet	<i>Trichoglossis wenzellii</i> —sweet
<i>Schoenorchis gemmata</i> —sweet	<i>Vanda Pat Delight</i> —ripe grapes
<i>Sedirea japonica</i> —clean and fresh lemon fragrance	<i>Vanda cristata</i> —floral
<i>Sigmatostalix radicans</i> ‘HMO’s Petite Prince’—honey	<i>Vanda roeblingiana</i> —sweet
<i>Spathoglottis deplanche</i> —fragrance of grape soda	<i>Vascostylis</i> Tham Yuen Hae ‘Blue Queen’ HCC/RSPC, JC/AOS, HCC/AOS—jasmine
<i>Stanhopea candida</i> —sweet	<i>Zygopetalum maxillare</i> —floral
<i>Stanhopea cirrhata</i> —Vicks	

Strong Fragrance

<i>Acampe papillosa</i> —hyacinths	<i>Aerides lawrenceae</i> var. <i>sanderiana</i> —lemon-spice
<i>Aerangis appendiculata</i> —gardenia	<i>Aerides odorata</i> —spicy; ribbon candy, cloves, lilac
<i>Aerangis articulata</i> —jasmine	<i>Aerides quinquevulnera</i> —cinnamon
<i>Aerangis biloba</i> —gardenia, lily	<i>Angraecum aporooides</i> —gardenia
<i>Aerangis brachycarpa</i> —vanilla, jasmine	<i>Angraecum birrinense</i> —orange blossom
<i>Aerangis citrata</i> —lemon	<i>Angraecum bosseri</i> —spicy floral
<i>Aerangis confusa</i> —tuberose, gardenia	<i>Angraecum compactum</i> —spicy, citrusy
<i>Aerangis fastuosa</i> —tuberose, lily	<i>Angraecum didieri</i> —sweet, spicy
<i>Aerangis kirkii</i> —tuberose, gardenia	<i>Angraecum germinyanum</i> —jasmine
<i>Aerangis kotschyana</i> —gardenia	<i>Angraecum leonis</i> —jasmine
<i>Aerangis modesta</i> —minty spice	<i>Angraecum magdalena</i> —jasmine
<i>Aerangis mooreana</i> —jasmine	<i>Angraecum sesquipedale</i> —jasmine
<i>Aerangis mystacidii</i> —lily of the valley	<i>Angraecum Veitchii</i> —jasmine
<i>Aerangis somalensis</i> —gardenia	<i>Angraecum</i> White Emblem—jasmine
<i>Aeranthes Grandiose</i> —jasmine	<i>Angranthes Grandalena</i> —jasmine
<i>Aerides crassifolia</i> —aromatic floral	<i>Anguloa clowesii</i> —chocolate and mint, paste, coconut, citrus
<i>Aerides falcata</i> —citrus, fruity	<i>Bifrenaria harrisoniae</i> —fruity
<i>Aerides falcata</i> var. <i>houlletiana</i> —citrus, fruity	
<i>Aerides fieldingii</i> —lily-of-the-valley, cyclamen	
<i>Aerides lawrenceae</i> —lemon-spice, honey, anise	

<i>Bothriochilus bellus</i> —almond/poppy pastry filling	<i>Bulbophyllum maximum</i> —musky
<i>Brassavola Little Stars</i> —soapy-sweet	<i>Bulbophyllum odoratissimum</i> —pleasant fragrance
<i>Brassavola cordata</i> —soapy-sweet	<i>Bulbophyllum phalaenopsis</i> —carrion
<i>Brassavola cucullata</i> —musty-soapy	<i>Bulbophyllum suavissimum</i> —musky
<i>Brassavola martiana</i> —soapy-sweet	<i>Catasetum Orchidglade 'Davie Ranches' AM/AOS</i> —spicy, medicinal
<i>Brassavola nodosa</i> —freesia, lily-of-the-valley	<i>Catasetum candida</i> —wintergreen
<i>Brassavola tuberculata</i> —nicotiana, gardenia	<i>Catasetum collare</i> —wintergreen
<i>Brassia ochroleuca</i> —spicy, spiced apple pie	<i>Catasetum discolor</i> —rye bread
<i>Brassocattleya Mt. Hood</i> —vanilla	<i>Catasetum expansum</i> —turpentine in morning; rye bread in afternoon
<i>Brassolaelia Memoria Bernice Foster</i> —sweet floral	<i>Catasetum gnomus</i> —wintergreen
<i>Brassolaelia Yellow Bird</i> —citrus to spicy	<i>Catasetum integerrimum</i> —spice
<i>Brassolaeliocattleya Arthur Bossin 'Rapture'</i> —sweet floral	<i>Catasetum maculatum</i> —rye bread
<i>Brassolaeliocattleya Formosan Gold</i> —vanilla	<i>Catasetum tenebrosum</i> —citrus
<i>Brassolaeliocattleya George King 'Serendipity' AM/AOS</i> —vanilla	<i>Catasetum warscewiczii</i> —lemon
<i>Brassolaeliocattleya Goldenzelle 'Lemon Chiffon' AM/AOS</i> —sweet floral	<i>Cattleya Chocolate Drop 'Kodama' AM/AOS</i> —lily-of-the-valley, citrus, roses, lilies
<i>Brassolaeliocattleya Haw Yuan Beauty 'Orchis'</i> —vanilla	<i>Cattleya Peckhaviensis</i> —honey
<i>Brassolaeliocattleya Hawaiian Avalanche</i> —sweet floral, vanilla	<i>Cattleya Pradit Spot 'Black Prince'</i> —sweet floral
<i>Brassolaeliocattleya Momilani Rainbow</i> —sweet floral	<i>Cattleya aclandiae</i> —spicy
<i>Brassolaeliocattleya Pamela Hetherington 'Coronation' FCC/AOS</i> —sweet floral	<i>Cattleya dowiana</i> —lemon, soapy, spicy, vanilla
<i>Brassolaeliocattleya Ports of Paradise 'Emerald Isle' HCC/AOS</i> —citrus	<i>Cattleya intermedia</i> —sweet floral
<i>Brassolaeliocattleya Rio's Green Magic</i> —citrus	<i>Cattleya labiata</i> —spicy, aromatic, cloves
<i>Bulbophyllum cocoinum</i> —coconut	<i>Cattleya loddigesii</i> —baked milk chocolate
<i>Bulbophyllum echinolabium</i> —carrion	<i>Cattleya lueddemanniana 'Waterfield'</i> —floral
<i>Bulbophyllum lobbii</i> —jasmine, orange blossoms	<i>Cattleya maxima 'Mountainside'</i> —heliotrope, sweet pea
	<i>Cattleya quadicolor</i> —ripe plums
	<i>Cattleya schroederae</i> —almonds
	<i>Cattleya walkeriana</i> var. <i>alba</i> —vanilla, cinnamon
	<i>Caularthron bicornutum</i> —fruit, candy, cotton candy, raspberries, strawberries

<i>Cirrhopetalum ornatissimum</i> —said by Linet Hamman to smell like whale oil, while the lip smells like fresh herring	<i>Dendrobium anosmum</i> raspberry
<i>Cochleanthes Moliere</i> —candy, rose	<i>Dendrobium antennatum</i> —rosy-flora
<i>Cochleanthes discolor</i> —candy, cedar, pepper, camphoraceous	<i>Dendrobium aureum</i> —fruity, violets
<i>Coelogyne Intermedia</i> —sweet, fruity	<i>Dendrobium cariniferum</i> —tangerines
<i>Coelogyne cristata</i> Banana, candy sweet	<i>Dendrobium delicatum</i> ‘Brechts’—wintergreen
<i>Coelogyne fimbriata</i> —yeasty	<i>Dendrobium densiflorum</i> —honey
<i>Coelogyne pandurata</i> —cinnamon	<i>Dendrobium draconis</i> —mandarins, tangerines
<i>Coelogyne zurowetzii</i> —spicy floral	<i>Dendrobium fimbriatum</i> var. <i>oculatum</i> —sweet
<i>Cycnoches</i> —vanilla, spice	<i>Dendrobium griffithianum</i> —spicy floral
<i>Cycnoches chlorochilon</i> —jasmine	<i>Dendrobium hainanense</i> —honey
<i>Cycnoches loddigesii</i> —jasmine	<i>Dendrobium heterocarpum</i> —honey-suckle, primrose
<i>Cycnoches ventricosum</i> —jasmine	<i>Dendrobium kingianum</i> —floral, hyacinth, lilac, honey
<i>Cycnoches warscewiczii</i> —ripe fruit	<i>Dendrobium moniliforme</i> —rosy-floral
<i>Cymbidium eburneum</i> —sweet, like paperwhite narcissus	<i>Dendrobium monophyllum</i> —rosy-floral, jasmine, fruity
<i>Cymbidium ensifolium</i> —citrus, lemony scent with a touch of jasmine	<i>Dendrobium musciferum</i> —vanilla
<i>Cymbidium goeringii</i> —jasmine, lily-of-the-valley, lemons	<i>Dendrobium primulinum</i> var. <i>giganteum</i> —primrose
<i>Cymbidium kanran</i> —lemon peel	<i>Dendrobium pugioniforme</i> —vanilla
<i>Cymbidium mastersii</i> —almonds	<i>Dendrobium rhodopterygium</i> var. <i>semialba</i> —sweet floral
<i>Cymbidium suave</i> —sweet	<i>Dendrobium speciosum</i> —hyacinth
<i>Cymbidium tracyanum</i> —peach	<i>Dendrobium unicum</i> —peach, apricot
<i>Cymbidium virescens</i> —the sweet, delicate fragrance earned it the moniker of “the scent of the king”	<i>Dendrobium virginium</i> —gardenia, rose, woody
<i>Darwinara</i> Charm ‘Blue Star’—vanilla	<i>Dendrobium wardianum</i> —caramel
<i>Dendrobium Chrystaline</i> —hyacinths	<i>Dendrobium williamsonii</i> —spicy, citrus
<i>Dendrobium Gai Quest</i> —sweet floral	<i>Dendrochilum cobbianum</i> —fresh, vanilla
<i>Dendrobium Jesmond Fancy</i> —sweet floral	<i>Dendrochilum arachnites</i> —cinnamon
<i>Dendrobium Jesmond Gem</i> —sweet floral	<i>Dendrochilum magnum</i> —sweet “wheaty” or spicy scent
<i>Dendrobium Light River</i> —sweet floral	<i>Diaphananthe pellucida</i> —heavy floral sweet scent
<i>Dendrobium Sea Mary ‘Snow King’</i> —sweet floral	<i>Diaphananthe pulchella</i> —gardenia

<i>Encyclia citrina</i> —lemon	<i>Lycaste Lucianii</i> —sweet and spicy
<i>Encyclia cordigera</i> —honey and vanilla	<i>Lycaste Walnut Valley 'Black's Glow'</i> —spicy
<i>Encyclia fragrans</i> —honey, vanilla, gardenias, magnolias, lilac	<i>Lycaste deppei</i> —peppermint, eucalyptus
<i>Encyclia lancifolia</i> —spicy	<i>Lycaste locusta</i> —Granny Smith apples
<i>Encyclia phoenicea</i> —chocolate	<i>Masdevallia glandulosa</i> —cloves
<i>Encyclia radiata</i> —spicy floral, coconut cream pie, lilac, carnation, hyacinth	<i>Masdevallia triangularis</i> —musty, repugnant
<i>Encyclia tampensis</i> —honey	<i>Maxillaria seymouriana</i> —lemony
<i>Encyclia trulla</i> —spice	<i>Maxillaria tenuifolia</i> —coconut; box of crayons
<i>Epicattleya Dora Tinschert 'Spring-dale'</i> HCC/AOS—sweet floral	<i>Milpasia Milt's Choice 'Helen of Troy'</i> —rosy-floral
<i>Epidendrum ciliare</i> —white floral, grapefruit	<i>Miltonia regnellii</i> —oranges, coriander
<i>Epidendrum falcatum</i> —jasmine, Easter lily	<i>Miltonia schroederiana</i> —spice floral, carnation
<i>Epidendrum inversum</i> —cloves	<i>Miltonia spectabilis</i> —rose, spicy
<i>Epidendrum nocturnum</i> —eucalyptus, aniseed	<i>Miltonia spectabilis</i> var. <i>moreliana</i> —rose, spicy
<i>Epidendrum phoeniceum</i> —chocolate	<i>Miltoniopsis phalaenopsis</i> —rose, lily-of-the-valley, cyclamen
<i>Eria gigantea 'Waterfield'</i> —citrus	<i>Miltoniopsis roezlii</i> —fruity, rose
<i>Eria hyacinthoides</i> —carrión	<i>Neofinetia falcata</i> —jasmine, vanilla
<i>Eurychone rothschildianum</i> —cinnamon	<i>Neostylis Lou Sneary 'Blue Moon'</i> —jasmine
<i>Gongora galeata</i> —orange	<i>Odontoglossum pendulum</i> —lemony rose
<i>Gongora grossa</i> —fishy, stale, musty, sweaty gym clothes	<i>Odontoglossum pulchellum</i> —vanilla, rosy-floral
<i>Haraella odorata</i> —citrus	<i>Oeniella polystachys</i> —vanilla; lily-of-the-valley
<i>Jumellea sagittata</i> —floral, jasmine	<i>Oncidium cucullatum</i> —violet
<i>Laelia purpurata</i> var. <i>werckhauseri</i> —spice, anise	<i>Oncidium longipes</i> —aniseed, cinnamon, floral
<i>Laelia rubescens</i> —wintergreen	<i>Oncidium maculatum</i> —honey
<i>Laeliocattleya Angel Love</i> —citrusy	<i>Oncidium ornithorhynchum 'Lilac Blossom'</i> —vanilla, “like a fresh morning,” baby powder, grape, spicy, cinnamon, cocoa, candy-sweet
<i>Laeliocattleya Hausermann's Sultan</i> —cloves	
<i>Laeliocattleya Jungle Festival</i> —sweet floral	
<i>Laeliocattleya Mari's Song 'CTM 217'</i> HCC/AOS—sweet floral	
<i>Laeliocattleya Nora's Melody</i> —sweet floral	

Oncidium Sharry Baby 'Misaki'—chocolate, vanilla

Oncidium tigrinum—vanilla, freesia

Oncidium Twinkle 'Fragrance Fantasy'—sweet

Oncidium Twinkle 'Red Fantasy'—sweet

Phalaenopsis Orchid World 'Bonnie Vasquez' AM/AOS—spicy

Phalaenopsis Orchid World 'Roman Holiday' AM/AOS—spicy

Phalaenopsis Perfection Is 'Chen' FCC/AOS—spicy, cloves, carnation

Phalaenopsis Sweet Memory 'Amy Dawn' AM/AOS—freesia

Phalaenopsis bellina—freesia, lily of the valley, rose cologne, touch of velvet, lemon

Phalaenopsis modesta—honeysuckle, lilac, grapes, sweet candy

Polystachya campyloglossa—bananas, strawberries

Polystachya cultriformis—lily-of-the valley, lime blossoms

Polystachya fallax—jasmine, tropical fruit

Polystachya mazumbaiensis—rose, gardenia

Polystachya pubescens—honey

Potinara Burana Beauty 'Burana' HCC/AOS—citrus

Potinara Twentyfour Carat 'Lea' AM/AOS—vanilla

Rangaeris amaniensis—lily-of-the-valley, lily

Rhynchosmia digbyana—lily-of-the-valley, lemon

Rhynchosmia glauca—rose, lily-of-the-valley, cyclamen

Rhynchostylis coelestis—citrus

Rhynchostylis gigantea—citrus

Rhynchostylis gigantea Sagarik Strain—citrus

Rhynchostylis gigantea var. *alba*—citrus

Rhynchostylis illustre—citrus

Rhynchostylis retusa—citrus

Ronnyara Manuel Ugarte 'H & R'—sweet floral

Sobennikoffia humbertiana—spice

Sophrolaeliocattleya Haw Yuan Star 'Pink Lady'—sweet, floral

Stanhopea ecornuta—fresh floral, cinnamon

Stanhopea embreei—chocolate

Stanhopea oculata—chocolate

Stanhopea reichenbachiana—jasmine

Stanhopea saccata—cinnamon

Stanhopea tricornis—jasmine

Trichocentrum Nathakhun—honey

Trichocentrum tigrinum—lily-of-the-valley

Trichopilia fragrans—narcissus

Trichopilia suavis—floral; intoxicating

Tuberolabium kotoense—floral

Vanda coerulescens—like grape bumblebee, concord grapes

Vanda dearei—vanilla, cinnamon

Vanda denisoniana—sweet

Vanda tesselata—grapes, lilac

Vanda tricolor—vanilla

Vanda tricolor var. *suavis*—vanilla

Vascostylis Crownfox Red Gem—citrusy

Woodwardara Adelaide—sweet

Zygocolax—sweet

Zygomeria—hyacinth

Zygopetalum—sweet

Zygopetalum Artur Elle 'Tanzanite' AM/AOS—hyacinths, violets, sweet perfume

<i>Zygopetalum</i> BG White 'Stonehurst' HCC/AOS, AM/AOS— hyacinths, violets, sweet perfume	<i>Zygopetalum crinitum</i> —spicy-floral, narcissus
<i>Zygopetalum</i> Redvale 'Fire Kiss'— hyacinth	<i>Zygopetalum intermedium</i> —rose, lilac <i>Zygopetalum mackayi</i> —hyacinth, narcissus

Very Strong Fragrance

<i>Angraecum</i> Lemforde White Beauty— jasmine	<i>Lycaste cruenta</i> —spicy, cinnamon, lemon, cloves
<i>Angraecum</i> Longiscott 'Lea'—jasmine	<i>Lycaste lanipes</i> —heady, honey perfume
<i>Angraecum</i> boissierianum—jasmine	<i>Lycaste leucantha</i> —sweet, heady perfume
<i>Angraecum</i> eburneum—gardenia	<i>Lycaste powellii</i> —sweet floral
<i>Angraecum</i> eichlerianum—jasmine, lily	<i>Oncidium cheiroporum</i> —citrus, lemon
<i>Brassavola</i> flagellaris—hot chocolate	<i>Stanhopea costaricensis</i> —very sweet, cloves, baby powder, spicy
<i>Brassolaelia</i> Sarah Black—very sweet floral	<i>Stanhopea grandiflora</i> —jasmine
<i>Bulbophyllum</i> beccarii—said to smell like 100 dead elephants rotting in the sun	<i>Stanhopea jenischiana</i> —cinnamon, fruity
<i>Catasetum</i> fimbriatum—spice	<i>Stanhopea tigrina</i> —sweet
<i>Cochleanthes</i> amazonica—candy, rose, narcissus, verbena	<i>Stanhopea wardii</i> —jasmine, floral hand soap, candy, chocolate
<i>Coryanthes</i> leucocorys—mint	<i>Tuberolabium odoratissimum</i> —sweet
<i>Dendrochilum</i> glumaceum—curry	
<i>Lycaste</i> aromatica—cinnamon, spicy, like Big Red chewing gum	

Appendix E

Orchids by Time of Fragrance



Day

<i>Acampe papillosa</i>	<i>Brassolaeliocattleya</i> Formosan
<i>Acineta superba</i>	Gold
<i>Aerangis fastuosa</i>	<i>Brassolaeliocattleya</i> George King
<i>Aerides crassifolia</i>	‘Serendipity’ AM/AOS
<i>Aerides falcata</i>	<i>Brassolaeliocattleya</i> Goldenzelle
<i>Aerides falcata</i> var. <i>houlletiana</i>	‘Lemon Chiffon’ AM/AOS
<i>Aerides fieldingii</i>	<i>Brassolaeliocattleya</i> Haw Yuan
<i>Aerides lawrenceae</i>	Beauty ‘Orchis’
<i>Aerides lawrenceae</i> var. <i>sanderiana</i>	<i>Brassolaeliocattleya</i> Hawaiian
<i>Aerides odorata</i>	Avalanche
<i>Aerides quinquevulnera</i>	<i>Brassolaeliocattleya</i> Momilani
<i>Anguloa clowesii</i>	Rainbow
<i>Anselliaria africana</i>	<i>Brassolaeliocattleya</i> Pamela Hetherington ‘Coronation’ FCC/AOS
<i>Arundina graminifolia</i>	<i>Brassolaeliocattleya</i> Ports of Paradise
<i>Ascofinetia</i> Cherry Blossom ‘Delicado’	‘Emerald Isle’ HCC/AOS
<i>Beallara Marfitch</i> ‘Howard’s Dream’	
AM/AOS	<i>Bulbophyllum ambrosia</i>
<i>Bifrenaria harrisoniae</i>	<i>Bulbophyllum beccarii</i>
<i>Bothriochilus bellus</i>	<i>Bulbophyllum cocoinum</i>
<i>Brassia gireoudiana</i>	<i>Bulbophyllum comosum</i>
<i>Brassia longissima</i> ‘Pumpkin Patch’	<i>Bulbophyllum echinolabium</i>
<i>Brassia ochroleuca</i>	<i>Bulbophyllum hamatipes</i>
<i>Brassia verrucosa</i>	<i>Bulbophyllum laxiflorum</i>
<i>Brassidium</i> Dragon Flight ‘Fluff’	<i>Bulbophyllum lobbii</i>
<i>Brassocattleya</i> Mt. Hood	<i>Bulbophyllum maximum</i>
<i>Brassolaeliocattleya</i> Arthur Bossin	<i>Bulbophyllum odoratissimum</i>
‘Rapture’	<i>Bulbophyllum phalaenopsis</i>

<i>Bulbophyllum rothschildianum</i>	<i>Cattleya warneri</i>
<i>Bulbophyllum suavissimum</i>	<i>Cattleya warszewiczii</i>
<i>Cadetia chionantha</i>	<i>Caularathron bicornutum</i>
<i>Cadetia taylori</i>	<i>Cirrhopetalum graveolens</i>
<i>Catasetum Orchidglade 'Davie Ranches' AM/AOS</i>	<i>Cirrhopetalum ornatissimum</i>
<i>Catasetum candida</i>	<i>Cochleanthes Molieri</i>
<i>Catasetum collare</i>	<i>Cochleanthes amazonica</i>
<i>Catasetum discolor</i>	<i>Cochleanthes discolor</i>
<i>Catasetum expansum</i>	<i>Coelogynne Intermedia</i>
<i>Catasetum fimbriatum</i>	<i>Coelogynne cristata</i>
<i>Catasetum gnomus</i>	<i>Coelogynne fimbriata</i>
<i>Catasetum integerrimum</i>	<i>Coelogynne lawrenceana</i>
<i>Catasetum maculatum</i>	<i>Coelogynne ochracea</i>
<i>Catasetum roseum</i>	<i>Coelogynne pandurata</i>
<i>Catasetum tenebrosum</i>	<i>Coelogynne zurowetzii</i>
<i>Catasetum warszewiczii</i>	<i>Coryanthes bruckmuelleri</i>
<i>Cattleya Brabantiae</i>	<i>Coryanthes leucocorys</i>
<i>Cattleya Chocolate Drop 'Kodama' AM/AOS</i>	<i>Cycnoches</i>
<i>Cattleya Fascelis</i>	<i>Cycnoches chlorochilon</i>
<i>Cattleya Peckhaviensis</i>	<i>Cycnoches loddigesii</i>
<i>Cattleya Pradit Spot 'Black Prince'</i>	<i>Cycnoches ventricosum</i>
<i>Cattleya aclandiae</i>	<i>Cycnoches warszewiczii</i>
<i>Cattleya bicolor</i> var. <i>grossii</i>	<i>Cymbidium Golden Elf 'Sundust' HCC/AOS</i>
<i>Cattleya dowiana</i>	<i>Cymbidium cyperifolium</i>
<i>Cattleya forbesii</i>	<i>Cymbidium eburneum</i>
<i>Cattleya granulosa</i>	<i>Cymbidium ensifolium</i>
<i>Cattleya guttata</i>	<i>Cymbidium goeringii</i>
<i>Cattleya harrisoniana</i>	<i>Cymbidium kanran</i>
<i>Cattleya intermedia</i>	<i>Cymbidium mastersii</i>
<i>Cattleya intermedia</i> 'Carlos'	<i>Cymbidium sinensis</i>
<i>Cattleya labiata</i>	<i>Cymbidium suave</i>
<i>Cattleya loddigesii</i>	<i>Cymbidium tracyanum</i>
<i>Cattleya lueddemanniana</i> 'Waterfield'	<i>Cymbidium virescens</i>
<i>Cattleya luteola</i>	<i>Darwinara Charm 'Blue Star'</i>
<i>Cattleya maxima</i> 'Mountainside'	<i>Dendrobium Chrystaline</i>
<i>Cattleya mossiae</i>	<i>Dendrobium Comet King 'Akatsuki'</i>
<i>Cattleya quadicolor</i>	<i>Dendrobium Gai Quest</i>
<i>Cattleya schilleriana</i>	<i>Dendrobium Jesmond Fancy</i>
<i>Cattleya schroederae</i>	<i>Dendrobium Jesmond Gem</i>
<i>Cattleya walkeriana</i> var. <i>alba</i>	<i>Dendrobium Light River</i>
	<i>Dendrobium Sea Mary 'Snow King'</i>

Dendrobium Spring Bride
Dendrobium Spring Doll
Dendrobium—Sweet Song 'Memory'
Dendrobium *anosmum*
Dendrobium *antennatum*
Dendrobium *aureum*
Dendrobium *bellatulum*
Dendrobium *cariniferum*
Dendrobium *chrysotoxum*
Dendrobium *delicatum* 'Brechts'
Dendrobium *densiflorum*
Dendrobium *draconis*
Dendrobium *fimbriatum* var.
 oculatum
Dendrobium *griffithianum*
Dendrobium *hainanense*
Dendrobium *heterocarpum*
Dendrobium *jenkinsii*
Dendrobium *kingianum*
Dendrobium *lawesii*
Dendrobium *loddigesii*
Dendrobium *macrophyllum*
Dendrobium *moniliforme*
Dendrobium *monophyllum*
Dendrobium *musciferum*
Dendrobium *nobile*
Dendrobium *nobile* var. *virginale*
Dendrobium *parishii*
Dendrobium *primulinum* var.
 giganteum
Dendrobium *pugioniforme*
Dendrobium *rhodopterygium* var.
 semialba
Dendrobium *speciosum*
Dendrobium *unicum*
Dendrobium *virgineum*
Dendrobium *wardianum*
Dendrobium *williamsonii*
Dendrochilum *cobbianum*
Dendrochilum *glumaceum*
Dendrochilum *arachnites*
Dendrochilum *magnum*

Doritaenopsis *Garnet Elf* 'Mary'
Doritaenopsis *Phoenix Fire* 'Cardinal'
Dracula *chestertonii*
Encyclia *adenocaula*
Encyclia *citrina*
Encyclia *cordigera*
Encyclia *fragrans*
Encyclia *lancifolia*
Encyclia *phoenicea*
Encyclia *polybulbon*
Encyclia *radiata*
Encyclia *tampensis*
Encyclia *trulla*
Epicattleya *Dora Tinschert* 'Spring-dale' HCC/AOS
Epidendrum *difforme*
Epidendrum *falcatum*
Epidendrum *inversum*
Epidendrum *parkinsonianum*
Epidendrum *phoeniceum*
Epilaelia *Beverly Shea*
Eria *gigantea* 'Waterfield'
Eria *hyacinthoides*
Eurychone *rothschildianum*
Gongora *galeata*
Gongora *grossa*
Gongora *horichiana*
Gongora *leucochila*
Gongora *pleiochroma*
Gongora *quinquenervis*
Gongora *unicolor*
Haraella *odorata*
Iwanagaara *Appleblossom* 'Fantastic'
Laelia *albida*
Laelia *anceps*
Laelia *lundii*
Laelia *perrinii*
Laelia *pumila* var. *coerulea*
Laelia *purpurata* var. *werckhauseri*
Laelia *rubescens*
Laelia *tenebrosa*
Laeliocattleya *Angel Love*

<i>Laeliocattleya</i> Angel Love	<i>Milpasia</i> Milt's Choice 'Helen of Troy'
<i>Laeliocattleya</i> Hausermann's Sultan	<i>Miltonia regnellii</i>
<i>Laeliocattleya</i> Jungle Festival	<i>Miltonia schroederiana</i>
<i>Laeliocattleya</i> Mari's Song 'CTM 217'	<i>Miltonia spectabilis</i>
HCC/AOS	<i>Miltonia spectabilis</i> var. <i>moreliana</i>
<i>Laeliocattleya</i> Mini Purple	<i>Miltoniopsis</i> Bert Field
<i>Laeliocattleya</i> Nora's Melody	<i>Miltoniopsis</i> Celle 'Wasserfall'
<i>Laeliocattleya</i> Whitiniae	AM/AOS
<i>Leptotes</i> <i>bicolor</i>	<i>Miltoniopsis</i> Hajime Ono
<i>Leptotes</i> <i>unicolor</i>	<i>Miltoniopsis</i> Hamburg 'Red Velvet'
<i>Lycaste</i> Alan Salzman	<i>Miltoniopsis</i> <i>phalaenopsis</i>
<i>Lycaste</i> Aquila 'Détente' FCC/AOS	<i>Miltoniopsis</i> <i>roezlii</i>
<i>Lycaste</i> Imschootiana	<i>Miltoniopsis</i> <i>santanae</i>
<i>Lycaste</i> Lucianii	<i>Neofinetia</i> <i>falcata</i>
<i>Lycaste</i> Walnut Valley 'Black's Glow'	<i>Neostylis</i> Lou Sneary
<i>Lycaste</i> <i>aromatica</i>	<i>Neostylis</i> Lou Sneary 'Blue Moon'
<i>Lycaste</i> <i>bradeorum</i>	<i>Neostylis</i> Lou Sneary 'Pinky'
<i>Lycaste</i> <i>brevispatha</i>	AM/AOS
<i>Lycaste</i> <i>ciliata</i>	<i>Odontioda</i> Vesta 'Charm'
<i>Lycaste</i> <i>cochleata</i>	<i>Odontobrassia</i> Fangtastic Bob
<i>Lycaste</i> <i>cruenta</i>	Henley
<i>Lycaste</i> <i>deppei</i>	<i>Odontocidium</i> Tiger Crow 'Golden
<i>Lycaste</i> <i>lanipes</i>	Girl' HCC/AOS
<i>Lycaste</i> <i>leucantha</i>	<i>Odontoglossum</i> <i>pendulum</i>
<i>Lycaste</i> <i>locusta</i>	<i>Odontoglossum</i> <i>pulchellum</i>
<i>Lycaste</i> <i>powellii</i>	<i>Oeniella</i> <i>polystachys</i>
<i>Masdevallia</i> Confetti	<i>Oncidium</i> Issaku Nagata 'Volcano
<i>Masdevallia</i> <i>agaster</i>	Queen' HCC/AOS
<i>Masdevallia</i> <i>attenuata</i>	<i>Oncidium</i> <i>longipes</i>
<i>Masdevallia</i> <i>cyclotega</i>	<i>Oncidium</i> Gold Dust
<i>Masdevallia</i> <i>glandulosa</i>	<i>Oncidium</i> Sharry Baby
<i>Masdevallia</i> <i>livingstoneana</i>	<i>Oncidium</i> Sharry Baby 'Misaki'
<i>Masdevallia</i> <i>mejiana</i>	<i>Oncidium</i> Tsiku Marguerite
<i>Masdevallia</i> <i>triangularis</i>	<i>Oncidium</i> Twinkle 'Fragrance
<i>Maxillaria</i> <i>ochroleuca</i>	Fantasy'
<i>Maxillaria</i> <i>picta</i>	<i>Oncidium</i> Twinkle 'Red Fantasy'
<i>Maxillaria</i> <i>rufescens</i>	<i>Oncidium</i> <i>cheiroporum</i>
<i>Maxillaria</i> <i>sanderiana</i>	<i>Oncidium</i> <i>concolor</i>
<i>Maxillaria</i> <i>seymouriana</i>	<i>Oncidium</i> <i>crispum</i>
<i>Maxillaria</i> <i>tenuifolia</i>	<i>Oncidium</i> <i>cucullatum</i>
<i>Meiracyllium</i> <i>trinasutum</i>	<i>Oncidium</i> <i>maculatum</i>
<i>Milpasia</i> Leslie Garay	

Oncidium microchilum
Oncidium ornithorhynchum 'Lilac
 Blossom'
Otaara Haw Yuan Bay 'She Shu'
Paphiopedilum Armeni White
Paphiopedilum Joyce Hasagawa
Paphiopedilum Lynleigh Koopowitz
Paphiopedilum delenatii
Paphiopedilum emersonii
Paphiopedilum kolopakingii
Paphiopedilum malipoense
Peristeria elata
Phalaenopsis Caribbean Sunset
 'Sweet Fragrance'
Phalaenopsis Desert Red 'Ruby'
Phalaenopsis Dotty Woodson
 'Claudette' HCC/AOS
Phalaenopsis Ember 'Blumen Insel'
 AM/AOS
Phalaenopsis Kilby Cassviola 'Sweet
 Fragrance'
Phalaenopsis Mary Lillian Taylor
 'Desert Orange' AM/AOS
Phalaenopsis Mini Mark 'Holm'
Phalaenopsis Orchid World 'Bonnie
 Vasquez' AM/AOS
Phalaenopsis Orchid World 'Roman
 Holiday' AM/AOS
Phalaenopsis Perfection Is 'Chen'
 FCC/AOS
Phalaenopsis Samba
Phalaenopsis Sweet Memory 'Amy
 Dawn' AM/AOS
Phalaenopsis Valentini
Phalaenopsis Wes Addison 'Blood
 Brother'
Phalaenopsis amboinensis
Phalaenopsis bellina
Phalaenopsis fasciata
Phalaenopsis gigantea
Phalaenopsis hieroglyphica
Phalaenopsis lueddemanniana

Phalaenopsis mannii
Phalaenopsis modesta
Phalaenopsis schilleriana
Phalaenopsis violacea
Phragmipedium Wilcox AM/AOS
Pleurothallis cocornaensis
Pleurothallis ramulosa
Polystachya Darling Star
Polystachya bella
Polystachya pubescens
Potinara Burana Beauty 'Burana'
 HCC/AOS
Potinara Free Spirit 'Lea' AM/AOS
Potinara Twentyfour Carat 'Lea'
 AM/AOS
Rhynchostylis coelestis
Rhynchostylis gigantea
Rhynchostylis gigantea Sagarik Strain
Rhynchostylis gigantea var. *alba*
Rhynchostylis illustre
Rhynchostylis retusa
Ronnyara Manuel Ugarte 'H & R'
Schoenorchis fragrans
Schoenorchis gemmata
Sedirea japonica
Sigmatostalix radicans 'HMO's Petite
 Prince'
Sobennikoffia humbertiana
Sophrolaeliocattleya Haw Yuan Star
 'Pink Lady'
Spathoglottis deplanche
Stanhopea candida
Stanhopea cirrhata
Stanhopea costaricensis
Stanhopea ecornuta
Stanhopea embreei
Stanhopea grandiflora
Stanhopea jenischiana
Stanhopea oculata
Stanhopea pulla
Stanhopea reichenbachiana
Stanhopea saccata

<i>Stanhopea tigrina</i>	<i>Vanda tricolor</i>
<i>Stanhopea tricornis</i>	<i>Vanda tricolor</i> var. <i>suavis</i>
<i>Stanhopea wardii</i>	<i>Vascostylis</i> Crownfox Red Gem
<i>Stelis pusilla</i>	<i>Vascostylis</i> Tham Yuen Hae 'Blue Queen' HCC/RSPC, JC/AOS, HCC/AOS
<i>Thunia marshalliana</i>	<i>Woodwardara</i> Adelaide
<i>Trichocentrum albococcineum</i>	<i>Zygocolax</i>
<i>Trichocentrum Nathakhun</i>	<i>Zygoneria</i>
<i>Trichocentrum tigrinum</i>	<i>Zygotetalum</i>
<i>Trichoglottis philippinensis</i> 'Pololei'	<i>Zygotetalum</i> Artur Elle 'Tanzanite' AM/AOS
<i>Trichoglottis wenzellii</i>	<i>Zygotetalum</i> BG White 'Stonehurst' HCC/AOS, AM/AOS
<i>Trichopilia suavis</i>	<i>Zygotetalum</i> Redvale 'Fire Kiss'
<i>Tuberolabium kotoense</i>	<i>Zygotetalum</i> crinitum
<i>Tuberolabium odoratissimum</i>	<i>Zygotetalum</i> intermedium
<i>Vanda</i> Pat Delight	<i>Zygotetalum</i> mackayi
<i>Vanda coerulescens</i>	<i>Zygotetalum</i> maxillare
<i>Vanda cristata</i>	
<i>Vanda dearei</i>	
<i>Vanda roeblingiana</i>	
<i>Vanda tesselata</i>	

Evening

<i>Aerangis appendiculata</i>	<i>Angraecum distichum</i>
<i>Aerangis articulata</i>	<i>Angraecum eburneum</i>
<i>Aerangis biloba</i>	<i>Angraecum eichlerianum</i>
<i>Aerangis brachycarpa</i>	<i>Angraecum germinyanum</i>
<i>Aerangis citrata</i>	<i>Angraecum Lemforde</i> White Beauty
<i>Aerangis confusa</i>	<i>Angraecum leonis</i>
<i>Aerangis kirkii</i>	<i>Angraecum Longiscott</i> 'Lea'
<i>Aerangis kotschyana</i>	<i>Angraecum magdalena</i>
<i>Aerangis modesta</i>	<i>Angraecum sesquipedale</i>
<i>Aerangis mooreana</i>	<i>Angraecum Veitchii</i>
<i>Aerangis mystacidii</i>	<i>Angraecum</i> White Emblem
<i>Aerangis somalensis</i>	<i>Angranthes</i> Grandalena
<i>Aeranthes</i> Grandiose	<i>Brassavola</i> Little Stars
<i>Amesiella philippinense</i>	<i>Brassavola</i> Yaki 'Black's Best'
<i>Angraecum aporooides</i>	<i>Brassavola</i> cordata
<i>Angraecum birrinense</i>	<i>Brassavola</i> cucullata
<i>Angraecum bosseri</i>	<i>Brassavola</i> flagellaris
<i>Angraecum boissierianum</i>	<i>Brassavola</i> martiana
<i>Angraecum compactum</i>	<i>Brassavola</i> nodosa
<i>Angraecum didieri</i>	<i>Brassavola</i> tuberculata

<i>Brassocattleya</i> Binosa 'Kirk' AM/AOS	<i>Masdevallia laucheana</i>
<i>Brassolaelia</i> Memoria Bernice Foster	<i>Oncidium tigrinum</i>
<i>Brassolaelia</i> Sarah Black	<i>Polystachya campyloglossa</i>
<i>Brassolaelia</i> Yellow Bird	<i>Polystachya cultriformis</i>
<i>Brassolaeliocattleya</i> Rio's Green Magic	<i>Polystachya fallax</i>
<i>Diaphananthe pellucida</i>	<i>Polystachya mazumbaiensis</i>
<i>Diaphananthe pulchella</i>	<i>Rangaeris amaniensis</i>
<i>Epidendrum ciliare</i>	<i>Rhyncholaelia digbyana</i>
<i>Epidendrum nocturnum</i>	<i>Rhyncholaelia glauca</i>
<i>Jumellea confusa</i>	<i>Trichopilia fragrans</i>
<i>Jumellea densifoliata</i>	<i>Vanda denisoniana</i>
<i>Jumellea sagittata</i>	

Appendix F

Orchids by Season of Bloom



Spring Blooming

<i>Aerangis citrata</i>	<i>Dendrobium hainanense</i>
<i>Aerangis fastuosa</i>	<i>Dendrobium kingianum</i>
<i>Aerangis modesta</i>	<i>Dendrobium loddigesii</i>
<i>Angraecum germinyanum</i>	<i>Dendrobium moniliforme</i>
<i>Angraecum White Emblem</i>	<i>Dendrobium monophyllum</i>
<i>Arundina graminifolia</i>	<i>Dendrobium musciferum</i>
<i>Bifrenaria harrisoniae</i>	<i>Dendrobium rhodopterygium</i> var. <i>semialba</i>
<i>Brassia gireoudiana</i>	<i>Dendrobium virginium</i>
<i>Brassia ochroleuca</i>	<i>Dendrochilum glumaceum</i>
<i>Bulbophyllum maximum</i>	<i>Dracula chestertonii</i>
<i>Catasetum tenebrosum</i>	<i>Epicattleya Dora Tinschert</i> 'Spring- dale' HCC/AOS
<i>Cattleya Pradit Spot</i> 'Black Prince'	<i>Epidendrum phoeniceum</i>
<i>Cattleya bicolor</i> var. <i>grossii</i>	<i>Gongora horichiana</i>
<i>Cattleya loddigesii</i>	<i>Iwanagaara</i> Appleblossom 'Fantastic'
<i>Cattleya lueddemanniana</i> 'Waterfield'	<i>Laelia lundii</i>
<i>Cattleya luteola</i>	<i>Lycaste aromatica</i>
<i>Cattleya schroederae</i>	<i>Lycaste bradeorum</i>
<i>Caularhron bicornutum</i>	<i>Lycaste brevispatha</i>
<i>Coelogyné ochracea</i>	<i>Lycaste ciliata</i>
<i>Cymbidium goeringii</i>	<i>Lycaste cochleata</i>
<i>Cymbidium suave</i>	<i>Lycaste cruenta</i>
<i>Cymbidium virescens</i>	<i>Lycaste lanipes</i>
<i>Dendrobium cariniferum</i>	<i>Lycaste locusta</i>
<i>Dendrobium densiflorum</i>	<i>Masdevallia Confetti</i>
<i>Dendrobium fimbriatum</i> var. <i>oculatum</i>	
<i>Dendrobium griffithianum</i>	

<i>Masdevallia agaster</i>	<i>Phalaenopsis Sweet Memory 'Amy Dawn'</i> AM/AOS
<i>Masdevallia cyclotega</i>	<i>Phalaenopsis amboinensis</i>
<i>Maxillaria ochroleuca</i>	<i>Phalaenopsis gigantea</i>
<i>Maxillaria seymouriana</i>	<i>Phalaenopsis lueddemanniana</i>
<i>Meiracyllium trinasutum</i>	<i>Phalaenopsis modesta</i>
<i>Miltoniopsis Bert Field</i>	<i>Phragmipedium Wilcox</i> AM/AOS
<i>Miltoniopsis Hajime Ono</i>	<i>Pleurothallis cocornaensis</i>
<i>Odontoglossum pendulum</i>	<i>Pleurothallis ramulosa</i>
<i>Odontoglossum pulchellum</i>	<i>Polystachya Darling Star</i>
<i>Oeniella polystachys</i>	<i>Potinara Twentyfour Carat 'Lea'</i>
<i>Oncidium concolor</i>	AM/AOS
<i>Oncidium maculatum</i>	<i>Rhyncholaelia glauca</i>
<i>Oncidium microchilum</i>	<i>Stelis pusilla</i>
<i>Phalaenopsis Desert Red 'Ruby'</i>	<i>Trichopilia suavis</i>
<i>Phalaenopsis Orchid World 'Bonnie Vasquez'</i> AM/AOS	<i>Vanda dearei</i>
<i>Phalaenopsis Orchid World 'Roman Holiday'</i> AM/AOS	<i>Vanda denisoniana</i>

Spring to Summer Blooming

<i>Aerangis appendiculata</i>	<i>Cycnoches chlorochilon</i>
<i>Aerangis brachycarpa</i>	<i>Cycnoches warscewiczii</i>
<i>Aerangis confusa</i>	<i>Cymbidium eburneum</i>
<i>Aerangis kirkii</i>	<i>Dendrobium chrysotoxum</i>
<i>Aerangis kotschyana</i>	<i>Dendrobium macrophyllum</i>
<i>Aerangis mooreana</i>	<i>Dendrobium parishii</i>
<i>Aerangis somalensis</i>	<i>Dendrobium williamsonii</i>
<i>Angraecum compactum</i>	<i>Doritaenopsis Phoenix Fire 'Cardinal'</i>
<i>Angraecum didieri</i>	<i>Encyclia adenocaula</i>
<i>Angraecum magdalena</i>	<i>Encyclia phoenicea</i>
<i>Ansellia africana</i>	<i>Encyclia tampensis</i>
<i>Brassia verrucosa</i>	<i>Epidendrum difforme</i>
<i>Bulbophyllum odoratissimum</i>	<i>Epidendrum inversum</i>
<i>Cattleya Peckhaviensis</i>	<i>Laelia purpurata</i> var. <i>werckhauseri</i>
<i>Cattleya forbesii</i>	<i>Lycaste Aquila 'Détente'</i> FCC/AOS
<i>Cattleya granulosa</i>	<i>Masdevallia glandulosa</i>
<i>Cattleya mossiae</i>	<i>Masdevallia laucheana</i>
<i>Cattleya schilleriana</i>	<i>Masdevallia mejiana</i>
<i>Cattleya warneri</i>	<i>Miltoniopsis Celle 'Wasserfall'</i>
<i>Coelogyné lawrenceana</i>	AM/AOS

<i>Miltoniopsis</i> Hamburg 'Red Velvet'	<i>Rhynchostylis retusa</i>
<i>Oncidium crispum</i>	<i>Schoenorchis fragrans</i>
<i>Oncidium ornithorhynchum</i> 'Lilac Blossom'	<i>Sedirea japonica</i>
<i>Oncidium tigrinum</i>	<i>Spathoglottis deplanche</i>
<i>Paphiopedilum</i> Armeni White	<i>Thunia marshalliana</i>
<i>Phalaenopsis</i> Wes Addison 'Blood Brother'	<i>Trichocentrum Nathakhun</i>
<i>Phalaenopsis hieroglyphica</i>	<i>Trichocentrum tigrinum</i>
<i>Polystachya bella</i>	<i>Trichoglottis philippinensis</i> 'Pololei'
<i>Rangaeris amaniensis</i>	<i>Vanda coerulescens</i>
<i>Rhyncholaelia digbyana</i>	<i>Vanda cristata</i>
<i>Rhynchostylis coelestis</i>	<i>Zygopetalum</i> Artur Elle 'Tanzanite' AM/AOS

Summer Blooming

<i>Aerangis mystacidii</i>	<i>Maxillaria rufescens</i>
<i>Aerides crassifolia</i>	<i>Maxillaria sanderiana</i>
<i>Aerides falcata</i>	<i>Maxillaria tenuifolia</i>
<i>Aerides fieldingii</i>	<i>Oncidium cucullatum</i>
<i>Angraecum eichlerianum</i>	<i>Peristeria elata</i>
<i>Bothriochilus bellus</i>	<i>Phalaenopsis</i> Dotty Woodson 'Claudette' HCC/AOS
<i>Brassolaeliocattleya</i> Arthur Bossin 'Rapture'	<i>Schoenorchis gemmata</i>
<i>Bulbophyllum comosum</i>	<i>Sobennikoffia humbertiana</i>
<i>Bulbophyllum suavissimum</i>	<i>Stanhopea candida</i>
<i>Catasetum candida</i>	<i>Stanhopea cirrhata</i>
<i>Catasetum collare</i>	<i>Stanhopea costaricensis</i>
<i>Catasetum expansum</i>	<i>Stanhopea ecornuta</i>
<i>Catasetum roseum</i>	<i>Stanhopea grandiflora</i>
<i>Cattleya labiata</i>	<i>Stanhopea jenischiana</i>
<i>Cattleya warscewiczii</i>	<i>Stanhopea oculata</i>
<i>Cymbidium cyperifolium</i>	<i>Stanhopea pulla</i>
<i>Dendrobium antennatum</i>	<i>Stanhopea reichenbachiana</i>
<i>Dendrobium bellatulum</i>	<i>Stanhopea saccata</i>
<i>Doritaenopsis</i> Garnet Elf 'Mary'	<i>Stanhopea tigrina</i>
<i>Epidendrum parkinsonianum</i>	<i>Stanhopea tricornis</i>
<i>Jumellea densifoliata</i>	<i>Stanhopea wardii</i>
<i>Masdevallia triangularis</i>	<i>Trichoglottis wenzellii</i>

Summer to Fall Blooming

<i>Aerides falcata</i> var. <i>houlletiana</i>	<i>Coelogyne fimbriata</i>
<i>Aerides odorata</i>	<i>Cycnoches</i>
<i>Aerides quinquevulnera</i>	<i>Cycnoches ventricosum</i>
<i>Angraecum birrinense</i>	<i>Cymbidium</i> Golden Elf 'Sundust'
<i>Brassavola cucullata</i>	HCC/AOS
<i>Brassia longissima</i> 'Pumpkin Patch'	<i>Gongora galeata</i>
<i>Bulbophyllum hamatipes</i>	<i>Gongora leucochila</i>
<i>Bulbophyllum lobbii</i>	<i>Haraella odorata</i>
<i>Bulbophyllum rothschildianum</i>	<i>Laelia tenebrosa</i>
<i>Catasetum Orchidglade</i> 'Davie Ranches' AM/AOS	<i>Lycaste deppei</i>
<i>Catasetum fimbriatum</i>	<i>Lycaste powellii</i>
<i>Catasetum integerrimum</i>	<i>Masdevallia attenuata</i>
<i>Catasetum warscewiczii</i>	<i>Miltonia regnellii</i>
<i>Cattleya aclandiae</i>	<i>Miltonia schroederiana</i>
<i>Cattleya dowiana</i>	<i>Miltonia spectabilis</i>
<i>Cattleya guttata</i>	<i>Miltonia spectabilis</i> var. <i>moreliana</i>
<i>Cattleya maxima</i> 'Mountainside'	<i>Miltoniopsis roezlii</i>
<i>Cirrhopetalum graveolens</i>	<i>Neofinetia falcata</i>
<i>Cirrhopetalum ornatissimum</i>	<i>Trichocentrum albococcineum</i>
	<i>Zygopetalum crinitum</i>

Fall Blooming

<i>Aerangis articulata</i>	<i>Dendrochilum magnum</i>
<i>Angraecum Lemforde</i> White Beauty	<i>Gongora quinquenervis</i>
<i>Angraecum Longiscott</i> 'Lea'	<i>Laelia anceps</i>
<i>Brassavola flagellaris</i>	<i>Laelia perrinii</i>
<i>Catasetum maculatum</i>	<i>Laelia rubescens</i>
<i>Cattleya Chocolate Drop</i> 'Kodama' AM/AOS	<i>Oncidium longipes</i>
<i>Cymbidium sinensis</i>	<i>Sigmatostalix radicans</i> 'HMO's Petite Prince'
<i>Cymbidium tracyanum</i>	<i>Vanda roeblingiana</i>
<i>Dendrobium wardianum</i>	<i>Zygopetalum intermedium</i>
<i>Dendrochilum cobbianum</i>	

Fall to Winter Blooming

<i>Aerides lawrenceae</i>	<i>Cycnoches loddigesii</i>
<i>Aerides lawrenceae</i> var. <i>sanderiana</i>	<i>Diaphananthe pulchella</i>
<i>Angraecum eburneum</i>	<i>Epilaelia</i> Beverly Shea
<i>Catasetum discolor</i>	<i>Eurychone rothschildianum</i>

<i>Lycaste leucantha</i>	<i>Tuberolabium kotoense</i>
<i>Rhynchostylis gigantea</i>	<i>Vanda tesselata</i>
<i>Rhynchostylis gigantea</i> Sagarik Strain	<i>Vanda tricolor</i>
<i>Rhynchostylis gigantea</i> var. <i>alba</i>	<i>Vanda tricolor</i> var. <i>suavis</i>
<i>Rhynchostylis illustre</i>	<i>Zygopetalum mackayi</i>

Winter Blooming

<i>Acampe papillosa</i>	<i>Bulbophyllum ambrosia</i>
<i>Acineta superba</i>	<i>Bulbophyllum cocoinum</i>
<i>Amesiella philippinense</i>	<i>Cattleya quadicolor</i>
<i>Angraecum Veitchii</i>	<i>Cymbidium mastersii</i>
<i>Angraecum aporooides</i>	<i>Dendrobium Gai Quest</i>
<i>Angraecum bosseri</i>	<i>Dendrobium Jesmond Fancy</i>
<i>Angraecum sesquipedale</i>	<i>Dendrobium Light River</i>
<i>Brassavola Little Stars</i>	<i>Dendrobium Sea Mary 'Snow King'</i>
<i>Brassolaeliocattleya Formosan Gold</i>	<i>Dendrobium delicatum 'Brechts'</i>
<i>Brassolaeliocattleya Goldenzelle</i>	<i>Dendrobium heterocarpum</i>
'Yellow Chiffon' AM/AOS	<i>Dendrobium speciosum</i>
<i>Brassolaeliocattleya Haw Yuan</i>	<i>Dendrobium unicum</i>
Beauty 'Orchis'	<i>Diaphananthe pellucida</i>
<i>Brassolaeliocattleya Hawaiian</i>	<i>Jumellea sagittata</i>
Avalanche	<i>Laeliocattleya Angel Love</i>
<i>Brassolaeliocattleya Pamela Hetherington</i> 'Coronation' FCC/AOS	<i>Lycaste Imschootiana</i>
<i>Brassolaeliocattleya Ports of Paradise</i>	<i>Lycaste Walnut Valley 'Black's Glow'</i>
'Emerald Isle' HCC/AOS	<i>Trichopilia fragrans</i>

Winter to Spring Blooming

<i>Angraecum leonis</i>	<i>Leptotes unicolor</i>
<i>Cochleanthes amazonica</i>	<i>Masdevallia livingstoneana</i>
<i>Coelogyne cristata</i>	<i>Maxillaria picta</i>
<i>Dendrobium draconis</i>	<i>Oncidium cheiroporum</i>
<i>Dendrobium Jesmond Gem</i>	<i>Paphiopedilum emersonii</i>
<i>Dendrobium Spring Bride</i>	<i>Paphiopedilum kolopakingii</i>
<i>Dendrobium Spring Doll</i>	<i>Paphiopedilum malipoense</i>
<i>Dendrobium jenkinsii</i>	<i>Phalaenopsis fasciata</i>
<i>Dendrobium lawesii</i>	<i>Phalaenopsis mannii</i>
<i>Dendrobium primulinum</i> var. <i>giganteum</i>	<i>Phalaenopsis schilleriana</i>
<i>Laelia albida</i>	<i>Polystachya fallax</i>
<i>Leptotes bicolor</i>	<i>Zygoneria</i>
	<i>Zygopetalum maxillare</i>

Variable Blooming

These orchids can flower different times of the year and sometimes bloom multiple times in one year.

<i>Aerangis biloba</i>	<i>Cattleya intermedia</i>
<i>Aeranthes Grandiose</i>	<i>Cattleya intermedia</i> 'Carlos'
<i>Angraecum boisserianum</i>	<i>Cattleya walkeriana</i> var. <i>alba</i>
<i>Angraecum distichum</i>	<i>Cochleanthes Moliere</i>
<i>Angranthes Grandalena</i>	<i>Cochleanthes discolor</i>
<i>Anguloa clowesii</i>	<i>Coelogyne Intermedia</i>
<i>Ascofinetia Cherry Blossom</i>	<i>Coelogyne pandurata</i>
'Delicado'	<i>Coelogyne zurowetzii</i>
<i>Beallara Marfitch</i> 'Howard's Dream'	<i>Coryanthes bruckmuelleri</i>
AM/AOS	<i>Coryanthes leucocorys</i>
<i>Brassavola Yaki</i> 'Black's Best'	<i>Cymbidium ensifolium</i>
<i>Brassavola cordata</i>	<i>Cymbidium kanran</i>
<i>Brassavola martiana</i>	<i>Darwinara Charm</i> 'Blue Star'
<i>Brassavola nodosa</i>	<i>Dendrobium Chrystaline</i>
<i>Brassavola tuberculata</i>	<i>Dendrobium Comet King</i> 'Akatsuki'
<i>Brassidium Dragon Flight</i> 'Fluff'	<i>Dendrobium Sweet Song</i> 'Memory'
<i>Brassocattleya Binosa</i> 'Kirk'	<i>Dendrobium anosmum</i>
AM/AOS	<i>Dendrobium aureum</i>
<i>Brassocattleya Mt. Hood</i>	<i>Dendrobium nobile</i>
<i>Brassolaelia Memoria Bernice Foster</i>	<i>Dendrobium nobile</i> var. <i>virginale</i>
<i>Brassolaelia Sarah Black</i>	<i>Dendrobium pugioniforme</i>
<i>Brassolaelia Yellow Bird</i>	<i>Dendrochilum arachnites</i>
<i>Brassolaeliocattleya George King</i>	<i>Encyclia citrina</i>
'Serendipity' AM/AOS	<i>Encyclia cordigera</i>
<i>Brassolaeliocattleya Momilani</i>	<i>Encyclia fragrans</i>
Rainbow	<i>Encyclia lancifolia</i>
<i>Brassolaeliocattleya Rio's Green</i>	<i>Encyclia polybulbon</i>
Magic	<i>Encyclia radiata</i>
<i>Bulbophyllum beccarii</i>	<i>Encyclia trulla</i>
<i>Bulbophyllum echinolabium</i>	<i>Epidendrum ciliare</i>
<i>Bulbophyllum laxiflorum</i>	<i>Epidendrum falcatum</i>
<i>Bulbophyllum phalaenopsis</i>	<i>Epidendrum nocturnum</i>
<i>Cadetia chionantha</i>	<i>Eria gigantea</i> 'Waterfield'
<i>Cadetia taylori</i>	<i>Eria hyacinthoides</i>
<i>Catasetum gnomus</i>	<i>Gongora grossa</i>
<i>Cattleya Brabantiae</i>	<i>Gongora pleiochroma</i>
<i>Cattleya Fascelis</i>	<i>Gongora unicolor</i>
<i>Cattleya harrisoniana</i>	<i>Jumellea confusa</i>

Laelia pumila var. *coerulea*
Laeliocattleya Angel Love
Laeliocattleya Hausermann's Sultan
Laeliocattleya Jungle Festival
Laeliocattleya Mari's Song 'CTM 217'
 HCC/AOS
Laeliocattleya Mini Purple
Laeliocattleya Nora's Melody
Laeliocattleya Whitiniae
Lycaste Alan Salzman
Lycaste Lucianii
Milpasia Leslie Garay
Milpasia Milt's Choice 'Helen of Troy'
Miltoniopsis phalaenopsis
Miltoniopsis santanaei
Neostylis Lou Sneary
Neostylis Lou Sneary 'Blue Moon'
Neostylis Lou Sneary 'Pinky'
 AM/AOS
Odontioda Vesta 'Charm'
Odontobrassia Fangtastic Bob
 Henley
Odontocidium Tiger Crow 'Golden Girl' HCC/AOS
Oncidium Gold Dust
Oncidium Issaku Nagata 'Volcano Queen' HCC/AOS
Oncidium Sharry Baby
Oncidium Sharry Baby 'Misaki'
Oncidium Tsiku Marguerite
Oncidium Twinkle 'Fragrance Fantasy'
Oncidium Twinkle 'Red Fantasy'
Otaara Haw Yuan Bay 'She Shu'
Paphiopedilum Joyce Hasagawa
Paphiopedilum Lynleigh Koopowitz
Paphiopedilum delenatii

Phalaenopsis Caribbean Sunset
 'Sweet Fragrance'
Phalaenopsis Ember 'Blumen Insel'
 AM/AOS
Phalaenopsis Kilby Cassviola 'Sweet Fragrance'
Phalaenopsis Mary Lillian Taylor
 'Desert Orange' AM/AOS
Phalaenopsis Mini Mark 'Holm'
Phalaenopsis Perfection Is 'Chen'
 FCC/AOS
Phalaenopsis Samba
Phalaenopsis Valentini
Phalaenopsis bellina
Phalaenopsis violacea
Polystachya campyloglossa
Polystachya cultiformis
Polystachya mazumbaiensis
Polystachya pubescens
Potinara Burana Beauty 'Burana'
 HCC/AOS
Potinara Free Spirit 'Lea' AM/AOS
Ronnyara Manuel Ugarte 'H & R'
Sophrolaeliocattleya Haw Yuan Star
 'Pink Lady'
Stanhopea embreei
Tuberolabium odoratissimum
Vanda Pat Delight
Vascostylis Crownfox Red Gem
Vascostylis Tham Yuen Hae 'Blue Queen' HCC/RSPC, JC/AOS,
 HCC/AOS
Woodwardara Adelaide
Zygocolax
Zygopetalum
Zygopetalum BG White 'Stonehurst'
 HCC/AOS, AM/AOS
Zygopetalum Redvale 'Fire Kiss'

Appendix G

Sources for Fragrant Orchids



Most orchid sellers have at least some fragrant offerings, but some suppliers consciously breed for fragrance or search out crosses that have fragrance potential. These are the sources in the following list. Some of them offer mail order while others also sell at their greenhouse. The list is by no means complete, but will get you started. You can also check out the Web. The American Orchid Society (AOS) has an excellent Web site that lets you search for suppliers by geographic location. The society publishes *Orchids*, a magazine with additional sources. In fact, joining AOS, is highly recommended for the many resources it provides.

The Web addresses have not been given in this list, since they are subject to frequent change and can be found easily with any search engine.

Andy's Orchids

734 Oceanview Avenue
Encinitas, California 92024
Phone: (888) 514-2639
Fax: (888) 632-8991
E-mail: info@AndysOrchids.com

This company grows over 3000 species. Its Web site has a very effective search engine that allows you to search for fragrant orchids. The last time I used it, I came up with a list of more than 100 fragrant orchids for sale. The Web site is also very informative and gives helpful cultural information.

Big Leaf Orchids

4932 Longwood Court
Irving, Texas 75038
Phone: (972) 659-1406
Fax: (972) 659-1438
E-mail: phal@bigleaforchids.com

Peter Lin, owner of this small, backyard company, loves phalaenopsis and has a special affection for the fragrant ones. Check out his Web site for some quality clones and crosses. The site hosts a highly informative phalaenopsis forum.

Cal Orchids

1251 Orchid Drive
Santa Barbara, California 93111
Phone: (805) 967-1312
Fax: (805) 967-6882
E-mail: info@calorchid.com

Owners Lauris and James Rose have been in the orchid business since 1970. They offer some choice fragrant species and hybrids including select neofinetias and their hybrids, as well as a good selection of angraecoids, miscellaneous cymbidiums, and brassavolas. Web-only catalog.

Countryside Orchids

P.O. Box 958
Corrales, New Mexico 87048
Phone: (505) 263-6888
Fax: (505) 792-9807
E-mail: billschn@aol.com

This company offers an absolutely mind-boggling range of mostly species, but some hybrids and mericlones. The on-line catalog is highly informative and indicates which orchids are fragrant. An amazing resource!

Gold Country Orchids

390 Big Ben Road
Lincoln California 95648
Phone: (916) 645-8600
Fax: (916) 645-7076
E-mail: gcorchids@aol.com

Owner Alan Koch is one of the few orchid breeders putting a great deal of effort into producing compact and miniature cattleyas that have fragrance. Among the conspicuous

species in his work are *Cattleya aclandiae*, *C. walkeriana*, and *C. luteola*, along with other sweetly scented species such as *Rhyncholaelia digbyana* and *Brassavola nodosa*. His Web site offers on-line ordering.

Ha'iku Maui Orchids

2612 Pololei Place
Ha'iku, Hawaii 96708
Phone: (808) 573-1130
Fax: (808) 572-7015
E-mail: haikumaui.orchids@verizon.net

Norman Mizuno, the president of this company, is from New York where he grew prize-winning orchids under lights. He specializes in orchids and selected forms that are easy to grow. His printed and on-line catalogs include a broad selection of fragrant orchids which are prominently marked as such. The company makes special efforts to grow their plants under lower light conditions so they will adapt well to growers in mainland United States.

Hoosier Orchid Company

8440 West 82nd Street
Indianapolis, Indiana 46278
Phone: (888) 291-6269
Fax: (317) 291-8949
E-mail: orchids@hoosierorchid.com

The company offers a broad selection of species, including an extraordinary number of angraecoids, most of which are fragrant. It also includes other genera noted for fra-

grant species, such as *Zygopetalum* and *Stanhopea*.

I. N. Komoda Orchids

P.O. Box 576
Makawao, Hawaii 96768
Phone/Fax: 808-572-0756
E-mail: orchidhi@maui.net

Owner Ivan Komoda specializes in and breeds primarily miltoniopsis but offers some masdevallis and other species. He is developing pink forms with waterfall patterns and has often used *Miltoniopsis santanae* (profiled in this book) to give warmth tolerance and fragrance. He has no catalog, but offers specials in *Orchids* magazine ads and has a Web site.

J & L Orchids

20 Sherwood Road
Easton, Connecticut 06612
Phone: (203) 261-3772
Fax: (203) 261-8730
E-mail: jlorchid@snet.net

A miniature orchid lover's paradise. The highly knowledgeable owners, Cordelia Head, Marguerite Webb, and Lucinda Winn, know their orchids and are very familiar with which ones are fragrant. Their print and on-line catalogs also indicate if the plants are fragrant.

Lauray of Salisbury

432 Undermountain Road
Route 41
Salisbury, Connecticut 06068
Phone: (860) 435-2263
E-mail: jbecker@mohawk.net

Owner Judy Becker is an AOS judge, so knows her orchids and is specifically knowledgeable about some of the fragrant ones. She assisted me greatly with this book, and she and I are working to offer more fragrant orchids to our customers. Her company offers a broad range of orchid species and hybrids, as well as some nice orchid companions like begonias, gesneriads, and succulents.

Norman's Orchids

11039 Monte Vista Avenue
Montclair, California 91763
Phone: (909) 627-9515
Fax: (909) 627-3889
E-mail: support@orchids.com

This company has the most useful and easy-to-navigate site for purchasing orchids on-line that I have experienced. You can search by various requirements—light needs, flower color, plant size, fragrance—to come up with a list of orchids that fit your needs. Then you can store the names of these orchids in your wish list until you're ready to purchase plants. The company has a series of fragrant phalaenopsis as well as a very broad selection of other fragrant species, hybrids, and clones. On-line catalog only.

Porter's Orchids

10868 Royston Road
Grand Ledge, Michigan 48837
Phone: (888) 622-7643
Fax: (517) 622-4188

This company specializes in orchids that are easy to grow and bloom and are well suited to home culture. It offers a broad range of hybrids and species, a good number of which are fragrant and marked as such on the on-line catalog.

Phoenix Orchids

2807 West Villa Rita Drive
Phoenix, AZ 85053
Phone: (602) 938-3741
E-mail: phorchids@msn.com

Owner Eric Goo breeds *phalaenopsis*. His various crosses and meristems focus on the reds and yellows, a good number of which are fragrant. Web catalog only.



Glossary

axil the angle between the upper side of a leaf and the stem from which it grows

column the central part of the orchid flower that contains both the male (stamen) and female (pistil) parts

cultivar a cultivated variety

deciduous dropping the leaves; not evergreen

dormant a state of inactive growth

epiphyte, epiphytic a plant that grows on another and gets its nutrients from air and moisture

grex a group of hybrid plants with the same parents

hybrid a cross between two plants, generally of two different species or genera

intergeneric involving two or more genera

keiki a plantlet. The Hawaiian word for *baby*.

lip the lowermost petal of an orchid flower, usually different from the other two petals in shape, color, and size

inflorescence the arrangement of flowers on an axis

mericlon a plant derived from tissue culture that is genetically identical to its parents

meristem undifferentiated tissue that can develop into specialized tissues or new organs

monopodial a type of growth habit in which the plant continues to grow vertically from its tip. Examples: phalaenopsis, vandas

pendulous hanging downward

proboscis a long, hollow tube attached to the head of an animal and used for taking in food and drink

pseudobulb the thickened (bulb-like) stem of many orchid plants

raceme an unbranched flower stem in which the flowers are borne on short stalks and usually open from the bottom of the stem to the top

rhizome a root-bearing stem found on sympodial orchids

sepal one of three outermost parts of an orchid flower

sheath a modified leaf that encloses developing flower bulbs

spike an unbranched flower stem with many stalkless flowers

spur a tubular or sac-like extension of an orchid flower, generally containing nectar

subterete somewhat cylindrical

sympodial a type of growth habit in which a new shoot arises from the rhizome of the previous growth. Examples: cattleyas, oncidiums

terete cylindrical

terminal at the end of a stem

terrestrial a plant that grows in or on the ground

throat the opening in the lip of an orchid flower

umbel a flat-topped flower stem in which all the flower stalks originate from the same point on the stem

vandaceous having a growth habit like that of the genus *Vanda* in which the leaves grow in two rows



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