



Florida West Coast Orchid Society

Orchid News & Views

January 2009 Volume 7, No 1

Meeting Information

January 8, 2009

*7:00 pm Educational Class—Michael Polin
on ' Cattlya Culture, Big Catts Are Dangerous!'*

7:30 pm Featured Speaker

Francisco Miranda on Pt 2 Brazilian Orchids

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- 3rd in series on Orchid Seed Germination Pgs 5-6
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- Remember food

www.fwcoss.org

Our guest speaker for the January 8 meeting is Francisco Miranda. He's a native Brazilian with a masters degree in Orchid Taxonomy specializing in Brazilian Laeliinae. He is a known author and has spent many years in the field in his native country. He has extensive first hand knowledge about the habitats and distribution of these showy species.

Visit FWCOS website at www.fwcoss.org

FWCOS Orchid News & Views

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14444 Neptune Rd, Seminole, FL 33776
Content must be received by one week past the
monthly meeting for inclusion in the following
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Diane Jones—Membership, Email or mailing address
changes:

14541 Iroquois Ave., Largo, FL 33774

The Florida West Coast Orchid Society (FWCOS)
Meets every 2nd Thursday of the month at Pinellas
County Extension.

Operating Procedures for Membership

Membership—the term of membership shall
be for the calendar year. Annual dues for the
first annual member in a household shall be
\$18.00, each additional annual member in a
household and not receiving a newsletter shall
be \$12.00.

Members renewing before December 31st may
receive a 10% discount for the early renewal.
For new members joining from July to De-
cember these months will be prorated at
\$1.50/month in addition to the next year's
membership of \$18.00. In the case of a
household with life or honorary members,
they shall be considered the first annual mem-
ber of a household. Lifetime membership is
\$180.00.

FWCOS Board of Directors 2008

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DID YOU KNOW.....

THE FWCOS WEBSITE, fwcos.org has
Membership Applications as well as a
map showing the location of the
FWCOS meetings.

From Our President

To all our Members and Orchid Friends,

I hope your holidays were fun and the New Year will bring you many great times, great health and of course, blooming orchids.



As we look ahead to this New Year, I want to make sure that we are hearing from all of you on activities and ideas that you would like for us to do this year. So, please email any of your Board members, including myself, with those great thoughts.

Our society has made great progress in our volunteering work at the Gardens and we have plans to complete our 2010 hours by May 1st. I encourage all of you to spend a couple of hours with us in these cooler months to help give back to the Extension center.

We will also be starting our project with Sunken Gardens in early spring. Bill Nunez will be leading this work to re-establish some Florida native orchids in the beautiful oak trees. There are many ways you can assist with this, so please get in touch with Bill. We will give monthly updates at our meetings.

Please accept my heartfelt gratitude for the wonderful support and work that each of you do that makes our society so successful. Please continue to bring your friends and neighbors as we have plans for some outstanding speakers and guests this year under the leadership of Bob Barrett. Let everyone know about our website and we now have the past newsletters posted on there that you can share with them.

Thanks for allowing me to serve this group another year and I look forward to a very successful 2009!

☐ Pam Heath

From Our Membership Chairman

We had a great dinner for December, unfortunately it did not produce any new members. However, we did receive a lot of renewals. My cut off date is the end of January, that is so I have time to get the new Directory out to the members. Mail your membership dues which are \$18 after December 31 to: Diane Jones, 14541 Iroquois Ave, Largo, FL 33774 and make the check out to 'FWCOS'.



Diane Jones

Happy Holidays

Diane Jones



Francisco Miranda is a native Brazilian with a masters degree in Orchid Taxonomy specializing in Brazilian Laeliinae. He has spent many years in the field in his native country and has extensive first hand knowledge about the habitats and distributions of these showy species. His presentation will include his personal photography showing plants blooming in situ.



A Blue Ribbon for Marty Heath! All year he is there for us maintaining our website as well as making additions or changes as called upon. I am grateful for Marty as he is patient with me when I learn of 'another' mistake I have made in the newsletter and he replaces the first one with a new one. Now he's done something which I know will please many of you due to your requests for a '**Newsletter Archive**'. It is now complete and on our website. **Thank you, Marty, from all of us.**

FWCOS Christmas Party



The line is long!



Hungry!



Meat Cutters



GROWING INSTRUCTIONS

What is a Green Thumb?

It helps to be able to think like an orchid plant. If you acquire this ability, you will be able to tell when your plants sulk, when they are stubborn, shy, aggressive or sick. You will be able to take advantage of the times when they show determination and cooperation. Like children, they respond to proper loving care by growing beautiful, strong and sturdy.

When you tend a plant and watch it grow, each new growth is of primary interest. Gradually, the plant becomes an old dear friend; together you share creative satisfaction. Gradually, you acquire an instinct for the needs of the plant. This is probably the real meaning of 'having a green thumb'.

What is a Black Thumb?

It is not necessary that you have a 'green thumb' to grow orchids successfully. You can grow healthy, blooming plants by conscientiously following a few simple rules for their care and feeding.

If you do not have a 'green thumb', or if you do not follow the rules, then you have a 'black thumb'.

Growing Orchids - The King of Horticultural Hobbies

There is nothing mysterious or forbidding about growing orchids. As no other plant, they thrive on little attention and reward you bountifully. They survive under temperature extremes which would destroy most other garden and house plants. An orchid plant needs air, water, daylight and some feeding. If you will follow the simple instructions below your plants will offer you many years of enjoyment.

For Better Blooms - Proper Light

About 50 per cent of filtered sunlight is desirable, whether the plants are grown indoors or outdoors. Filtered sunlight can be achieved through lace curtains, Venetian blinds, trees and the like. Most orchid plants should never be exposed to direct sun, either indoors or outdoors. Vandas can take more light than cattleyas; phalaenopsis do well with less light.

As a general guide, a plant grown under proper light will have light green leaves; one receiving insufficient light will have deep, dark green leaves. Too much light will yellow the leaves.

When watering - Remember You Are Not Giving a Horse a Drink?

Orchids require moisture - not a great amount of watering. As a general rule, a good pot watering once a week is sufficient; however, your plants will feel rewarded if you also sprinkle or mist the foliage once a day if it seems excessively dry or hot. If your plants are grown outdoors it is not necessary to spray or water the plants during rainy spells. If you grow plants indoors under warm and dry conditions, you should provide extra humidity by placing the pot over a pan containing gravel or pebbles and filling the pan with water to a level just below the surface of the pot. The water will evaporate and create humidity for the plant. Remember, orchids do not like wet feet.

Fertilizing Your Plants

For cattleyas potted in tree fern, a balanced, soluble 20-20-20 or 18-18-18 fertilizer at the rate of one teaspoonful per gallon of water every two weeks is recommended. For vandas and phalaenopsis, a weekly feeding is desirable. If your plants are potted in osmunda you can cut the feeding to about every two months.

When to Repot

A plant is usually potted so that it need not be repotted for two years. At that time two things generally have happened. One, the plant is about to overgrow the pot; second, the potting medium is broken down and holds too much moisture which results in rotting roots. When repotting, trim off all old dry brown roots, fill the pot with about one third broken pot pieces or gravel, and pack the fresh medium rather firmly around the roots of the plants. Make sure you pot only the roots and not any part of the bottom of the plant. Keep the level of the potting medium about 1/2" below the top of the pot. When setting the plant in the medium, keep the back end of the plant against the side of the pot, allowing room for the new growth-end to grow toward the other side of the pot.

Orchid Biology From One Hobbyist's Perspective

Making Baby Orchids

By Jeffrey Dromm

Part Three: Orchid Flower

Natural Pollination

Pollination in orchids is defined as the transfer of pollen grains containing the male gametes/ sperm from the anther to the ovules (the female gametes/ eggs) via the stigma. The movement of the pollen from the anther to the stigma is required for **Fertilization** (the fusion of nuclei from pollen grains with the nuclei in the ovule). This fusion allows the development of seeds which are small embryonic plants.

In nature there are two methods of pollination **Abiotic** and **Biotic**. Abiotic is defined as pollination without the help of or involvement of organisms. Examples of abiotic pollination are **Anemophily** which is pollination by the wind and **Hydrophily** pollination by water. Only about 10 percent of all flowering plants are pollinated in that way, the majority being by wind. Biotic pollination involves the use of various organisms as pollinators. There are approximately 200,000 known pollinators, of which, the majority are insects. This is called **Entophily**. The remaining pollinators are comprised of animals such as birds and bats called **Zoophily**.

Eighty six percent of all orchid pollination is accomplished by insects. The most common insect pollinators are bees, wasps, butterflies, moths, beetles and flies. The remaining pollination is by animals such as bats and hummingbirds or in some few examples by self fertilization.

Insects and animals do not visit orchid flowers with the task of pollination in mind, but are seeking nectar, a mate, food or for other yet unknown reasons. In order for orchids to obtain pollination of their flowers nature developed a special symbiotic relationship with the pollinators. This was accomplished by orchids thru evolution, incorporating attractants to lure the insect or animal to the flower.

As a result, the flowers adopted various colors, shapes, sizes, nectars and scents. Some orchid flowers are quite selective about their pollinators and actually mimic specific insect species. Orchid flowers may also provide attraction to specific insects by

their scent and whether the scent appears during the day or at night. Scents may vary from floral and spicy to putrefying. Vividly colored orchids with and without a detectable scent routinely attract bees and wasps. They are almost always the most strongly scented during daylight hours.



Jeff Dromm

For example, members of the *Cattleya* family, with their showy labellums, are pollinated mainly by bees. The bees are attracted to the flower's colors and scent which lead it to the labellum. The bee then commences to force its way to the column and its nectar. On withdrawing from the apex of the column it must back out, because of insufficient space to turn around. In this process pollinia, on the apex of column, stick to the bee's head. The bee then visits another *Cattleya* flower and this time while backing out deposits the attached pollinia to the stigmatic cavity (which is just below the apex and behind that flower's own pollinia). In the process of this deposition the bee again picks up that flower's own pollinia and the process continues during all of the bees' visitations. **See figure 1.**

Orchids whose scents appear at night are usually white in color (more visible at night) and are visited by moths which are most active at night. They are next in frequency as pollinators of orchid flowers. The most famous example of moth pollination involves the Madagascan orchid *Angraecum sesquipedale* called "The Star of Bethlehem /Christmas orchid, or simply Star or Comet Orchid". In the process of studying the orchid, Charles Darwin noted that the flower's nectar was found at bottom or distal portion of the spur or **Nectary**. This is a gland that produces nectar and is often located at the base of the orchid's labellum. The length of this nectary is anywhere from 10-16 inches. **See figures 2 and 4.** The word sesquipedale is Latin for one foot and a half, a reference to the apparent length of the spur. Darwin postulated that in order for the flower to be pollinated, an insect pollinator must exist with a **Proboscis** or cylindrical tube/tongue as long as the spur. He predicted that a moth would be found that met the criteria.

This conjecture was the subject of much ridicule by the scientific community. In 1903 long after Darwin's death such a pollinator was discovered. *Xanthopan morgani praedicta* or Morgan's Sphinx, more commonly called the Hawk Moth is that pollinator. See figures 3 and 4

The mechanism of pollination was result of the orchid's adaptation for luring the moths. The moth's feeding involves the insertion of its' proboscis to the bottom of the spur, during the process the pollinia attaches to the base of this proboscis. When the moth feeds on the next flower it deposits the pollinia from the previous flower. This is accomplished on insertion of its tongue into the spur thus detaching it to the new flower's stigma. Once again the process continues on all of the moths flower visitations.

Methods and modes of pollination are as varied as the genera that comprise the family of orchids. The Genus Ophrys or Bee Orchids secrete a fragrance similar to female bee pheromones and along with visual and texture cues deceive the male bees into trying to mate with the flower. This act removes or deposits pollinia. In the genus *Catasetum*, the flowers have a trigger that acts like a lever and when touched causes pollinia to be propelled out and to stick to the bees with a fast drying cement. The list of examples of natural pollination in orchids is exhaustive and fascinating. I hope that this small look into realm of natural orchid pollination will contribute to a greater appreciation of this intriguing family of plants.

Next month's article will be on the pollination of several types of orchid flowers by hand.



Figure 2
Angraecum sesquipedale

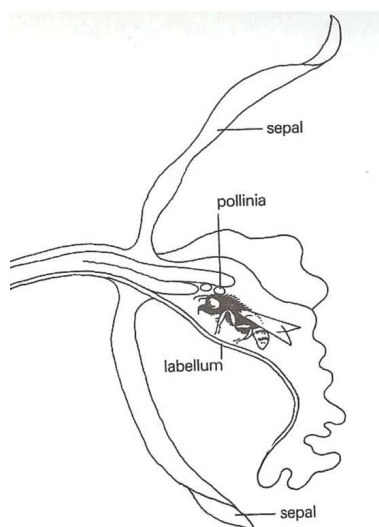


Figure 1
Courtesy of "The Complete Book of Orchid Growing", by Peter McKenzie Black



Figure 3
Hawk Moth



Figure 4
Courtesy of the Smithsonian and
Illustrator Emily Damstra

Meetings and Events

January 2009

Jan 3-4 - Sarasota Orchid Society Show , Contact: Monroe Kokin, 594 River Ct., Osprey, FL 34229; (941) 586-7795; orchidpix@comcast.net.

Jan 8, FWCOS: 7 pm Education Class; 7:30 pm Featured Speaker; Pinellas County Extension Center, 12520 Ulmerton Rd, Largo; RSVP Cheryl Finke cfinke@tampabay.rr.com

Jan 10, 1:30 pm AOS Judging: Orlando, Harry P Leu Gardens, Palm Room, 1920 N Forest Ave, Orlando.

Jan 10-11 - *Orchid Show and Sale , Fort Pierce Community Center, 600 N. Indian River Rd., Fort Pierce, FL. Contact: Faith Conte; (772) 461-0735; faith222@comcast.net.

Jan 15, 7:30 pm Tampa Bay Orchid Society, Seminole Garden Center, 5800 Central Ave, Tampa.

Jan 15 - 10:00 am St Pete Garden Club Horticulture Seminar; Michael Pollen's featured speaker, 9:30 is coffee. Bring a friend & wear a flower. Afterwards an optional plant exchange.

Jan 16-18 - Fort Lauderdale Orchid Society Show , War Memorial Auditorium, Fort Lauderdale, FL. Contact: Wayne Musgrave, 1730 NE 28th St., Wilton Manors, FL 33334; (954) 566-0557; cashflowman@aol.com.

Jan 23-25 - Manatee River Orchid Society Show , Manatee Civic Center, One Haben Blvd., Palmetto, FL. Contact: Shirley N. DeVoe, 2407 63rd St. W, Bradenton, FL 34209; (941) 792-0108; sdevoe1@tampabay.rr.com .

Jan 23-25 - Southwest Florida Orchid Society Show; Clarion Hotel, 12635 South Cleveland Avenue, Fort Meyers, FL Contact Kevin Piotrowiez 1506 Cranville Square, Fort Meyers 33919

Jan 27 - FWCOS Board Meeting

Jan 27 - Tampa Orchid Club 10 a m Speaker Rafael Romero 'Cattleya Culture'. Contact Sue Barnum 813-281-2126. The Ragan Center, 1200 E Lake Ave, Tampa

Jan 28, 7:30 pm AOS Judging, Tampa Garden Center, 2629 Bayshore Blvd, Tampa

Jan 31, Feb 1 Tamiami International Orchid Festival Contact Martin Motes 305-247-4398 vandas@mindspring.com

February 2009

Feb 7, 8 Venice Orchid Society Show, Venice Community Center 326-S Nokomis Ave, Venice Contact Barbara Wagner 941-923-7706 barbjwag@comcast.net

Feb 12, FWCOS: 7 pm Education Class; 7:30 pm Featured Speaker; Pinellas County Extension Center, 12520 Ulmerton Rd, Largo; RSVP Cheryl Finke cfinke@tampabay.rr.com

Feb 21: FWCOS Members Sale at Chad Whetstone's Greenhouse. Members, start setting aside your plants to sell.

Feb 24: Tampa Orchid Club; Charles Chapman on Cynoches & Cymbidiums Contact Sue Barnum 281-2126

Feb 27—March 1: 63rd Miami International Orchid Show, Sheraton Miami Mart Hotel and Exhibition Center; 711 NW 72nd Ave, Miami; S FL Orchid Society - Contact Dr Paul Wetter 305-232-2517 paul@sls.org

Sat., Apr 18—FWCOS Annual Orchid Auction

Our Condolences

It is with sad notification we announce the recent passing of members,
Cliff Curry, Charles Thornton
and Ruth Fox

From Our Members

Orchid History – The Early Years

By Jack Majewski



Our present Gregorian calendar has been around almost 500 years. It is a solar calendar adopted by Pope Gregory XIII in 1582. The Gregorian calendar begins its timeline at 0, which marks the birth of Christ. Dates occurring after 0 were traditionally designated AD or Anno Domini (in the year of the Lord) and dates prior to 0 were referred to as BC (before Christ).

The current best estimate of the earth's age is approximately 4.5 billion years. (If we let 10 feet on a tape measure equal 1 billion years, 45 feet would equal 4.5 billion years.) Slightly over 1 billion years passed by before living organisms appeared, the first organisms being single cells. (So, we need to reel in 10 feet or 1 billion years.) Almost 2 billion more years passed before multi-celled organisms that we might call green algae appear. (So let's reel in another 20 feet or 2 billion years.) Vascular plants, which can be thought of as plants that left the "soup", evolved at 90 percent of the earth's history, or about 425 million years ago. (We are now down to 4' 3" of our original 45 feet.) Dinosaurs made their appearance 250 million years later or about 175 million years ago. (We now have 1' 9" left on our tape.) An additional 80 million years would pass before angiosperms, or flowering plants, would appear, about 95 million years ago. (We now have just 1 inch left.) Thus, 99.998 percent of earth's history would pass before the plant family Orchidaceae debuted. So in the big scheme of things orchids have been on this earth a relatively short time. But compared to the time man has been on the planet a relatively long time.

To put this in further perspective, Neanderthal Man first made his appearance about 75,000 years ago and Homo Sapiens about 38,000 years ago. (Amazingly, this would be just 1/200th of an inch on our measure.) It's hard to comment about these very early years of orchids, as it appears that orchids could have conceivably been growing on the planet all most 95 million years before anything resembling a human made an appearance.

The early interactions of humans and orchids are not well documented. About 1000 BC, the Chinese wrote about orchid scents, but the earliest reference in western civilization is by the Greek writer and botanist, Theophrastus. He mentions orchids in his "Enquiry into Plants", written three centuries before the birth of Christ. The Greeks gave orchids the name "orchis", which means testicle, based on a similarity of shape between some terrestrial orchid tubers with animal testes.

Orchids became part of early medicine at a time when the treatment of an illness was frequently based on the assumption that human ailments were best cured by parts of plants that resemble the areas being treated. The roots of orchids, since they resembled testicles, were crushed and eaten in an attempt to encourage sexual activity, a practice that continued until the seventeenth century.

A love potion derived from *Orchis mascula* is said to have been created by squeezing the nectar out of 20 stems into warm goat's milk or Greek yogurt. John Partridge, physician to Charles I of England, suggested, "*it have great force to provide the desire and doth excite both sexes therewith*".

Witches in Europe are said to have used the tubers of orchids in love charms and in potions, fresh tubers promoting true love, while the shriveled tubers curbed misplaced passions.

In Asia Minor, salep, a drink made from orchid tubers, was a long established beverage that gave support during famines. The nutritious starch-like substance known as 'bassorin' has a sweetish taste and was used instead of starch as a preservative. Salep is still a cherished beverage and is now an ice-cream flavor as well. About this same time 1000 AD, the Chinese would publish the first-known book describing orchids and how to cultivate them.

Continued...

The best-known mimicry is by orchids that resemble wasps, bees and spiders to attract the right pollinator. An example is the genus *Ophrys* (OFF-riss) native in North Africa, the Middle East and Europe.

Five hundred years ago, Europeans discovered the New World while trying to circumnavigate the globe. In a few short years the description of the earth went from flat and the center of the universe to round and a planet in the solar system. In the newly discovered Americas, Europeans would learn from the Aztecs of the flavoring vanilla, made from the seed capsule of an orchid, *Vanilla planifolia*. At one time, *Vanilla planifolia* was the main source of vanilla, and widely used to flavor chocolate and other sweets.

Native to Mexico, *Vanilla planifolia* produces beans (or more correctly seed capsules) that, when dried and cured, produce vanillin, the active ingredient of vanilla. Incidentally, the Aztecs in South America used this plant as a flavoring long before Christopher Columbus set sail from Europe in 1492.

In the 1800's a recently consolidated Britain gained dominance over the oceans and with it, new prosperity. The nineteenth century would see significant numbers of new tropical orchids sent to English conservatories. The strangeness and beauty of orchid flowers created excitement and demand. Interest in horticulture and orchids intensified throughout the nineteenth century.

Chance played a major role in the introduction of tropical orchids into Europe, creating a mania for orchids that later spread to North America. The first tropical orchid flowered in England as early as 1732 and by the last decade of that century, 15 were growing at the Royal Botanic Gardens, Kew. By 1812, orchids were being grown commercially, but it was not until a consignment of tropical plants was sent to William Cattley, that enthusiasm rapidly grew. The plants he had been sent were, by chance, tied together by tropical specimens with strong stems and tough leaves. William Cattley was intrigued by the 'packaging' material and succeeded in rooting some of the stems. In November 1818, one of these plants produced large, flamboyant flowers that caused a sensation. The plant genus was named *Cattleya* for William Cattley.

In 1859 naturalist Charles Darwin published a treatise, which he titled 'On the Origin of Species by Natural Selection or the Preservation of Favored Races in the Struggle of Life'. Public debate raged over the radical theory. Although radical at the time we now know that both color and scent play important roles in attracting pollinating insects. Color, or course, is only important during daylight hours, which is why flowers that are pollinated at night by moths are frequently glistening white. They do however; usually have distinctive shapes that insects can immediately recognize, preventing them from wasting time by attending the wrong plants.

Where scent is the main attractant for night-flying insects, it is often only apparent during the hours of darkness and undetectable in daylight. Orchids that do this include *Aerangis* and *Angraecum* from tropical Africa.

While researching his treatise on the island of Madagascar, Darwin noted the long spurs of the *Angraecums* (some up to 10 inches). The close associations of orchids with specific insects, caused Darwin to predict that there must be a moth with a proboscis long enough to obtain the nectar from the base of the spur and so perform the act of pollinating this species. Much later, the Sphinx moth of Madagascar was discovered and it was thought to be the elusive species in question.

Many orchids pollinated during daytime have sweet scents, but some are nauseous and well suited to attract flies. *Bulbophyllum fletcherianum* has an aroma of rotting meat.

As well as using color and scent to attract pollinating insects, some flower have shapes that mimic insects, encouraging the presence of pollinators that will move from plant to plant of the same species, ensuring pollination and as Darwin put it, the preservation of favored race in the struggle of life.

Continued...

Evolution has assured that these flowers closely resemble parts of the female pollinator, so that only the male of the species is attracted. The male frequently believes it has found a mate, and this form of pollination is known as pseudo copulation.

As debate over Darwin's treatise raged, the fashion for natural history and specifically exotic plants and orchids increased. Within a short time, "orchid fever" had gripped Victorian England.

Many orchids collected in the wild were first sent to England, either to botanical gardens or wealthy collectors. Interest in orchids spread and plants were soon being sent to Europe and North America.

In North America collectors of orchids were mainly in the New England area. Around 1855 a large collection owned by Edward Rand was presented to Harvard University, which was to later become headquarters of the American Orchid Society. Today, although the A.O.S. has moved its headquarters to warmer climates, Harvard is still a major repository of orchids in North America.

For most of the twentieth century, England, with its wealth, dominated orchid culture; however, the advent of World War I greatly reduced the number of orchid growers. Bombs destroyed many conservatories. Strategic materials such as coal for heating and labor became scarce during the war effort. At this time many English collections were shipped to North America for safekeeping. After the war many did not make it back.

Commercial orchid growing in the United States expanded tremendously between 1900 and 1920 and by this time the number of patient amateurs was also increasing. Demand put great pressure on the supplies of wild plants. The reason for this was that it was still so difficult to grow orchids from seed. Although a seed capsule may contain a million seeds, orchid seed is tiny, as fine as dust, and contains little or no food for the developing embryo to grow. Attempts to germinate the seed by spreading it around the base of one of the parent plants often resulted in complete failure or in the production of but a handful of seedlings.

However in 1922 a startling discovery occurred. I believe it was the most important, single event in the history of orchids. If orchid history had it's own calendar this would certainly be the dividing point between the early years and the modern era (BC-AD). Dr. Lewis Knudson a plant physiologist at Cornell University made a discovery that would revolutionize orchid growing, and changes the course of orchid history forever. He found that orchid seed germinated readily in a glass flask on a mixture of chemicals combined with agar, sugar or glucose and water. The availability of the nutrients and sugar enabled the embryos to develop and grow. The Knudson Formulae has since been used to germinate millions of seeds. As do all revolutions, the one in orchid seed germination brought about an explosive period in orchid growing that brought us into the modern era of orchids.

All this talk about every new potting mix that appears—could it be that our Orchids good-naturedly adapt themselves to whatever we put them in?

The more I hear and see and read of the various orchid culture techniques, the less important any one aspect of it appears. I keep remembering back when gathering orchids in their natural state in Panama, Guam, Puerto Rico, the Philippines, Trinidad, etc., how amazed I was that some of them could possibly exist under such extremes of dryness or wetness, and extremes of light varying from blinding brilliance to almost darkness. And yet they seemed to be doing very well.

All of which goes to prove, I guess, that orchids have an almost unbelievable trait of adaptability. Being of an experimental turn, like most, I try everything I hear about, and if there is an orchid "food", potting mix, vitamin, hormone, etc., that I haven't tried, it's because I haven't heard about it. And I'm just beginning to realize that whenever I go into my greenhouse with that experimental look on my face, and something "new" in my hand, my orchids must smile tolerantly to each other and say, "Well, here we go again."

Monthly Checklist for January and February

Cattleya Watering and fertilizing will be at a minimum, as will potting. Be on the lookout for senescing sheaths on your winter-into-spring bloomers. Careful removal of the dying sheaths will still allow buds to develop without the danger of condensation-induced rot. Low light will lead to weak spikes, so, and as noted above, staking is critical. If you have a chance to get out to nurseries, there may still be a chance to acquire good plants in sheath for spring bloom. Getting them now not only ensures that you'll have them, but allows them to acclimate to your conditions and bloom at their best.

Cymbidium We are well into the flowering season now. Outdoor growers should be cautious of freezing temperatures. Damage starts to occur below 30 F. Be diligent about tying the inflorescences for best arrangement of the flowers. Also watch closely for slugs and snails. If weather is quite wet, protect the plants from the rain and this will help to reduce the risk of botrytis spotting.

Lycaste The most glorious of all orchids, *Lycaste*, will be moving toward their flowering season. Make sure the palm-like leaves do not interfere with the emerging inflorescences. Tying them loosely together often is helpful. Some growers cut the leaves off at the pseudobulb, but this removes part of the attractiveness of this elegant orchid. Resist picking up the plant to inspect those beautiful buds and then setting it down in all different directions as the flower buds will be forced to re-orient themselves to the light source each time and will not open as nicely as they should. Keep plants a little drier during the shorter days.

Odontoglossums *Odontoglossums* and their intergeneric hybrids offer a great splash of color now. Though once thought of as being difficult to grow and requiring cool temperatures due to the emphasis on *odontoglossum* breeding, the new intergeneric hybrids made using *Oncidium* and *Brassia*, for example, are just the opposite. These plants are quite content in more intermediate conditions. New growths generally emerge in the spring, later forming beautiful plump pseudobulbs. Look for the flower spikes to emerge from the inner sheath of the pseudobulb. If your plant's pseudobulbs are shriveled, then the plants have been kept too dry or too wet. Inspect the roots to determine which condition prevailed. If the lead pseudobulb is large, plump and green (and back bulbs are shriveled) but no flower spike is evident, the plants may have been kept too dry.

Paphiopedilum The standard *Paphiopedilum* *insigne*-derived hybrids, which are called "bull dogs" and "toads," are at their peak. Unlike most other orchids, they can even be potted while in bud. There really is no wrong time to pot a *paphiopedilum*, and no other orchid responds so favorably to fresh mix and a cleanup. Keep an eye on watering until roots begin to grow.

Phaliopedilum Now is the peak of spike development, with the first plants in full flower. Staking and plant preparation is a must for those all-important spring shows. Correct staking now will give a better display and also make it much easier to transport to your society meetings and shows. Care with watering is vital to avoid mechanical damage to the flowers, as well as rot-related problems. Keep spent blooms cleaned up to avoid botrytis inoculation. Do not repot this month. Now you'll be seeing lots of *phalaenopsis* at orchid shows and sales.

Zygopetalum For the most part, the flowering season will have ended for this group, providing the grower a chance to do some repotting. The plants will then have a chance to become well established before the hotter months of summer arrive. Most growers use bark mixes, but some exceptional results have been seen lately using rock-wool blends. You may want to try this mix, but do not change your whole collection over to this new media until you are sure it is right for you. First, experiment with a few plants to see how they respond.

This and That

Did you hear about this? The other morning, the telephone rang at the home of one of our members. The gentleman of the house answered and a female voice asked for his wife. He said she was out to an orchid group meeting. The voice said, "Oh, darn! I wanted to ask her something. Maybe you could help me. It's about polyploidy. I know that it is necessary to have two sets of haploids in order to have matched chromosomes, making it a diploid. But what I want to know is, what is the best generic technique for bringing about a stable tetraploid?" After some silence, a rather anguished voice replied, "Lady, I told you all I know about orchids is when I said "Hello".

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Paul Mitchell's Cranberry Chutney

[Here's the recipe that He hopes you enjoy it.. It takes a little extra time to make but it is worth the effort.]

1 cup raisins	2 tablespoons peeled ginger julienne
1-1/2 cups boiling water	1 cup fresh orange juice
2 cups sugar	6 cups fresh cranberries
1-1/2 cup boiling water	2 sm tart green apples, pared, chopped fine
2 tablespoons white wine vinegar	1 cup toasted, slivered almonds (abt 5 oz)
2 tablespoons julienne of peeled ginger	

Place raisins in small metal bowl. Pour boiling water over. Let stand 15 minutes. Drain; set aside.

Bring sugar and vinegar to boil in heavy medium saucepan over medium-low heat, stirring to dissolve sugar. Increase heat and boil until syrup turns light golden brown, stirring constantly, about 10 minutes. Remove from heat. Stir in ginger and orange peel. Add orange juice and bring to boil, stirring constantly. Add cranberries and cook just until they begin to pop, about 5 minutes. Add raisins to cranberries. Mix in apples and almonds. Cool.

(Can be prepared 2 days ahead. Cover with plastic wrap and refrigerate. Best served the day prepared before the flavors have melded, though it is also tasty once they have.)

Note: I add 3 to 4 tsp. Sure Gel (powdered pectin) to recipe when orange juice is added and brought to a boil. You may want to experiment with this to adjust the thickness of the liquid in the finished recipe.



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