

GREATER LAS VEGAS ORCHID SOCIETY

THE ORCHID COLUMN

SUNDAY, DECEMBER 2, 2007



12:30 pm (It's a party!) NOT REGULAR TIME...

Carol Siegel, Newsletter Editor

It's party time once more! Our holiday party will be held at my home, 8601 Robinson Ridge Drive in Canyon Gate Country Club (located between Durango and Fort Apache on West Sahara) at 12:30 p.m. on Sunday, December 2nd. From Rainbow and Sahara, go west on Sahara until you pass Durango. The next light is Canyon Gate Drive (opposite the Lakes). Make a right turn into the guard gate. Make the first right after the guard gate, which will be Medalist, Iron Ridge and Robinson Ridge in just a minute. Mine is the first house on Robinson Ridge Drive. It has a peculiar grass driveway, copper exterior lights, and stained-glass shell doors. Lost? Call me at 254-4168.

We will eat and drink and shmooze and enjoy each other's company, as always. I will provide music and song with Mike and Adrienne Thurber who will play keyboard and violin and sing. Our very own Carol Mendocino will add her magnificent voice and great talent to our

party. I will provide a nail tech to paint orchids on our fingernails (guys, too, if they are liberated enough) and a caricature artist to draw our likenesses. I will provide paper goods, lots of Asian food, tiramasu, bread pudding, bok choy salad, wine, champagne AND a frozen margarita machine.

Each of us is asked to BRING A DISH (FILLED WITH FOOD, OF COURSE!) for 10-12, main dish, salad, side dish or dessert. WE ALSO TRADITIONALLY ASK EVERYONE TO BRING A FEW CANNED GOODS OR BOXED FOOD WHICH WE WILL DONATE TO THE SALVATION ARMY TO HELP THE NEEDY.

We thank Leslie Doyle for volunteering to bring a whole turkey. We appreciate Dr. Joel and Linda Davidson who are frying up two turkeys for us. Debbie Beauprae will kindly bring a ham. Many thanks to Bill Whaley who will bring luau smoked pork. Loosen your belts, put on your fancy pants, and join us for a good time.

Speaking of good times, if you imbibe too much at the party, we will take away your keys and put you in a cab. Terry Wilsey is a designated driver, and if you

would like to be one, tell us. WE CANNOT ALLOW YOU TO DRIVE IF IT IS NOT SAFE.

WE LOVE YOU. WE KNOW YOU WILL UNDERSTAND. ONE OF THE MARGARITA MACHINES WILL BE "VIRGIN" FOR THOSE WHO LIKE THE TASTE BUT NOT THE EFFECT.

The club will underwrite 100 holiday blooming orchids which members will get for a \$6 raffle ticket. The plants are worth at least \$20, so it is a bargain. Everyone will get one (couples will get two). I can't believe that it is that time again, but good things can't come around too fast! Don't forget your dish for 10-12, your canned goods, and your party shoes. MAKE SURE TO BRING SERVING SPOONS AND FORKS FOR YOUR DISH AND HAVE IT HEATED AND CUT-UP, IF NECESSARY, AHEAD OF TIME.

It is membership dues time again. Single dues will remain \$30 and couple dues will remain \$40. After we liquor you up, we will collect dues at the party or in January.

Speaking of January, we cannot wait until our January 6th meeting! James Comstock, the fabulous photographer of Orchid Digest, is coming back to do his incredible 3D orchid show. How lucky are we! He rarely does this for anybody. We wear 3D glasses and ooh and ahh over his magnificent slides of orchids up close and personal. It is easily the best show of the year.

In addition, we will have our White Elephant Sale, our big, fun fund-raiser that has you bringing in your best junk and carting out even more. This year, I have gotten two tickets anywhere Southwest Airlines flies donated to the club. We will sell raffle tickets for \$20 for a chance to win this \$800 value. Emboldened by my success, I have written to the whole world for dinners and tickets. Hopefully, they will succumb to my (our) charm. Anyway, we are counting on your CD's, books, sporting equipment, orchids, unwanted Xmas gifts and the like. Last year, we made \$1100.

We had a very beautiful day and a terrific turnout for our Greenhouse Tour. Mike Levin opened his greenhouse to us despite a painful back injury. Such a good sport! Clarice and Dennis Dean not only did a wonderful greenhouse tour but also opened their beautiful home to us for our meeting. Clarice cooked an Italian feast that was so good no one wanted to leave, and then opened bottles of wine, too. I made lots of desserts, and the club sold blooming orchids. To top it off, Tony provided a truckload of hotel plants, which we gave away free. Clarice did a talk on meters to use in your greenhouse, and I did one on bud blast. Being spoiled is the best thing in the world!

We enjoyed Mike Levin's enclosed patio that has hundreds of orchids growing happily under a north-facing window. He believes, "The key to growing in the desert is to create an environment that is not desert-like." We may live in the desert, but we must see to it that our orchids don't. We strive to create a

perfect bubble for our orchids to grow in.

We were impressed with Mike's evaporative cooler. All desert growers wrestle with the extreme heat and low humidity. Growers depend on evaporative coolers, air conditioning units or heat pumps, and fans to moderate temperatures. Mike Levin says, "I think the evaporative cooling is just super. It is like being in the mountains...Evaporative cooling takes the disadvantage of where we live and turns it into an asset. The most challenging thing is the heat and humidity, and you have a tool that takes those two problems and turns them into an asset because you get evaporative cooling here better than anywhere else. It takes care of air movement, excess heat, and humidity concerns." In dry air, water evaporating from the pads sucks heat out of the greenhouse and adds moisture to the air.

He stresses that good evaporation and heat removal depends on keeping your evaporative cooler pads in good condition and changing them often. He showed me the treated cardboard pads changed from his evaporative cooler after three years. They had grown gray, rock-hard, and ineffective. His new pads allowed more evaporation and great cooling, and he now will change his pads more often.

How much difference does an evaporative cooler make? When running efficiently with a fresh pad and low humidity, he says it is 75 degrees in his

greenhouse when it is 110 degrees outside!

THE WATER WALL

Many of us expressed interest in the water wall at Clarice and Dennis' greenhouse. A water wall is like an evaporative cooler on steroids, a whole wall of evaporation. Dennis says that the water wall is much more efficient and really practical for a bigger greenhouse. A master builder, Dennis designed a system that has water running down from PVC pipes with holes in it down a wall of treated cardboard pads with air channels. Gravity feeds the water down into a trough and tank where it is pumped back up. The pump is attached to exhaust fan and thermostat and keeps the greenhouse about thirty degrees cooler. The exhaust fans draw out the air about two-and-a-half times a minute. Dennis has a gravel floor that absorbs runoff water from misting and watering and bumps up the humidity-which he keeps at 80%. We really learned a lot on our greenhouse tour.

Terry Wilsey did a great job conducting elections in Scotty Nogaim's absence. Scotty is our Election Chairman, and we thank her. The present Board was thrilled to be re-elected and was especially moved by the kind and loving things that members said when nominating us. To be appreciated and treated so well makes the job a great joy. Carol Siegel is the president; Clarice Dean is the vice-president; Eileen McKyton is the secretary, and Diana Smith is the treasurer.

(As president, I have such fun working with such smart, nice, cooperative ladies.)

I spoke on "The Sex Life of Orchids" at UNLV in November, and a reporter interviewed me and wrote a very funny article for the RJ. A lot of people came to the greenhouse tour as a result of the talk and article. (One man did call and ask if I was doing a sex show at the university. Uncharacteristically, I was at a loss for words...) We hope all our guests will join us for the Holiday Party and will join our club. A special personal thanks to Paula Garrett who arranged for the talk. Paula is an important (and sweet) lady who works at the UNLV Arboretum and produced those gorgeous brochures on native orchids.

We were saddened to hear that Tony Billitere's son Randy had suffered a serious accident. We all pray for his complete recovery. We hope Scotty Nogaim is feeling better and that John's surgery goes well. Our sincerest condolences go to Shelly North on the loss of her brother-in-law. We also hope her mother's surgery is uneventful and that she recovers quickly. We hope Becky Biondi is recovering from her knee surgery and that Eileen McKyton's surgery is easy and successful. On a happy note, we congratulate the Schecter's on their granddaughter Talia's arrival.

Our display at the Fall Flower Show was such a big hit. To honor the 50th Anniversary of the Garden Club, the display theme was "gold," and it was

truly golden. Shelly North did a fabulous job and provided incredible gold fabric and backdrop and painted rocks as well as gorgeous gold glittery signage. We could not have done it without her. Despite her personal losses, she really came through.

We got a lot of help with the display from Clarice Dean, Eileen and Alex McKyton, Diana Smith, ME, and Ed McCormick. Clarice Dean ran off hundreds of culture sheets and information on our club. We won a big ribbon for our display, and EVERYONE gave us lots of compliments. It was our best one yet. Phyllis Bond won Best of Show (kudos to you!), too. I put in an educational display on native orchids, too.

We thank Tex and Gidget for serving as our judges once again and Poly Arcos for serving as clerk. We thank Karen Fields, Pat Holland, and Myra Lee Glassman for serving as ambassadors. We could not have had better representatives, and lots of people expressed interest in our club.

We were so proud of Alana Sullivan who ran the whole garden show. She did us really proud and was very supportive of our efforts.

Everyone knows that Leslie is the editor of the Silver State Gardener, a first-rate gardening publication. It is available for the ridiculously low price of \$5 a year (a YEAR...) If you pay by November 20th, you can get a free subscription to ORGANIC GARDEN, too! You can pay for

a subscription by sending a check made out to NGC to: Leslie Doyle 5910 Sheila Avenue Las Vegas, NV 89108. If you already have a subscription, you can renew it at our meeting or just add \$5 to your club membership renewal in December.

At the end of the newsletter is an article reprinted with permission of the AOS. It is called, "Murder, He Wrote," and is a funny and insightful look on how to grow better.

Keep blooming! Love, Carol

THE PEOPLE WHO MAKE IT HAPPEN:

CAROL SIEGEL- PRESIDENT
CLARICE DEAN -VICE-PRESIDENT
EILEEN MCKYTON- SECRETARY
DIANA SMITH-TREASURER
Miles Hoffman- "The Recruiter"
Paula Garrett- University Liaison

Dan Mumau, Michael Lawless, Marsha Hawley - Membership Hospitality Chairmen
Eileen McKyton/DanHawley-Welcome Desk
Lillian Patterson, Cathy Loftfield- Photographer /Historian
TonyBillitere, Sharon and Uwe Proehl, Myra Glassman, Ed McCormick- Raffle Angels

Marsha Hawley- Fund Raising Chairlady
Leslie Doyle, Shelly North and Eileen McKyton- Special Events

Jeri Lee, Myra Glassman, and Gail Harris- Nevada State Garden Club Representative

AlexMcKyton-BuildingChairmen&Webmaster
Tex &Gidget Severance and Mike Levin- Show and Tell Gurus and Judging Chairmen
Scotty Nogaim- Election & Raffle Lady
Terry Wilsey- Club Travel Agent
Miles Hoffman- Library Chairman
Clarice Dean-Species of the Month
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COMING ATTRACTIONS

Our meetings are held at the Nevada Garden Club Building at Twin Lakes and Washington between Valley View and Rancho at the western edge of Lorenzi Park. The meeting starts at 2, but I open the building at 1 for shopping.

- November 4, 2007 Greenhouse Tour- Homes of the Deans, Shelly North and Mike Levin
- December 2, 2007 Eighth Annual Holiday Party Carol's house
- January 6, 2008 Jim Comstock, "3D Photos of Orchids"
- February 3, 2008 Jason Fischer, Orchids Limited, "Growing Orchids From Seed"
- March 2, 2008 Steve Frowine, "Miniature Orchids"
- April 6, 2008 Mike Glikbarg, "Everything You Wanted to About Orchids"
- May 4, 2008 Ron Parsons, "Dendrobium"
- June 1, 2008 Mike Blietz, Exotic Orchids of Maui, "The World of Cattleya"
- July 13, 2008 "Fifteen Minute Solution- Another Culture Day"
- August 3, 2008 Barbecue
- September 7, 2008 Fred Clarke, "The Weird World of Bulbophyllum"
- October 5, 2008 George Vasquez, Zuma Canyon Orchids, "Phalaenopsis"
- November 2, 2008 Martin Motes, (THE Vanda Expert), "Vandas"
- December 7, 2008 Ninth Annual Holiday Party

Murder, He Wrote

The first orchid plant I acquired still flourishes in my collection! It was given to me some 12 years ago by Mr. Frederick Heutte, founder of the Norfolk (Virginia) Botanical Gardens. He obtained this plant from their greenhouses but never bloomed it in almost 40 years. The plant had been divided and redivided, and he gave me three divisions. Apparently, he had just never been able to give it enough light in his own back yard. My wife put it in an unheated, bright, south-facing room, and we waited. To our delight, this beautiful, yellow standard cymbidium, probably *Cym. President Wilson* (*Alexanderi* x *lowianum*), bloomed that first winter. Each division bore a half dozen flower spikes. Mr. Heutte, a venerable and kindly old gentleman, came to see the plant in bloom. His eyes filled with tears of joy and my eyes danced with excitement. Were there other orchids like this to be had?

This first orchid acquisition was followed by another, and another and another. I soon realized that I had been afflicted by a most fascinating and pleasant obsession, that of growing orchids. Much of what has happened during the past 12 years was related to my initial expectations from orchids. I was 53 years old, had a busy medical practice and had previously grown roses, up to 300 bushes in my "spare time." Orchid growing would be a snap!

I joined our local Tidewater Orchid Society and, through it, the American Orchid Society. The *AOS Bulletin* began arriv-

ing monthly, along with the beautiful illustrated catalogs of its advertisers, and I bought orchids! My initial purchases were indiscriminate, like most orchid growers. Any orchid got my attention, whether at a society meeting, a regional show or in a catalog. Fellow society members were generous in giving me plant divisions.

I now have over a thousand species representing 178 genera, and although I have many fine hybrids in my collection, these have enchanted me most. But I must confess that the species have also been the source of some of my greatest frustration.

From the beginning, I kept complete records of my orchids — when and where acquired, etc. Concurrent with the growth of my collection, my orchid reference library grew. I was always looking for cultural tips. I listened eagerly to the experienced growers in my society to get some hint of how to grow orchids better. I had the good fortune to have a number of well-known orchidists visit my greenhouse when they were here to lecture to our society. I had met Milton Warne in Hawaii in the summer of 1982, and he visited us that fall when he was in Norfolk for the AOS Trustees meeting. After that, our greenhouse visitors included Tom Barry, Bill Peters, Dr. Ben Berliner, Frank Fordyce, Dr. Alec Pridgeon, Charles Marden Fitch, Mark Werther, and Jack Webster, all experts, and each one with suggestions to improve my cultural techniques.

How then could I have killed so many orchids, or any orchids, with all the good counsel and advice I had?

The story of the first mistake I made

¹Suite One, 935 Redgate Avenue, Norfolk, Virginia 23507.



*New green tips of roots indicate that **Cattleya labiata autumnalis** is flourishing on the tree fern plaque.*



*A surviving plant of **Cattleya maxima** shows the comparison of an insect-chewed, weather beaten jungle leaf and nice, clear, green "greenhouse" leaf.*



***Oncidium altissimum** has long since outgrown its container, but continues to thrive with roots exposed to the air.*

begins with a confession to my dear wife, who followed behind all those newly acquired orchids which had "followed me home" with the eternal question, "What do you need with another orchid plant?" Until the writing of this article, she never knew how many orchids I had purchased and how many had died in my collection. I had disposed of the "corpus delicti" and the tell-tale tags as quickly as possible.

What was my first mistake? I confess that I probably bought too many orchids, at least too many for my initial culture, which philosophically was that everything was treated alike. Every Saturday morning, rain

or shine, everything was watered. After all, as a busy physician, when else could I take care of my plants? Every plant was watered and fertilized at the same time, flooded with a hose and left to dry. Sometimes this drying took several days, particularly if the sun was not out. Occasionally I would turn up the thermostat in the greenhouse to facilitate this drying, particularly after I learned that this would help. The first two dozen *Phalaenopsis* which I purchased quickly fell victim to this "uniculture," developed crown rot and died. No one had told me, in my rush to build that large collection so rapidly, that this could happen. After all, I

did not know what crown rot was!

Fortunately I learned early in my experience that every orchid needed special conditions to survive and ideally thrive in my greenhouse. These conditions had to be tailored to each group of plants, based on the best available information about their natural habitat. The lesson was well learned. After the first several dozen phalaenopsis had exited my collection in such an ignominious fashion, the next several hundred phalaenopsis continue to flourish. In the last 8-10 years, I probably haven't lost more than three or four plants. But I continue to lose many other orchids.

An overview of plant physiology may begin to give us some clue. "The leaves of a plant gather sunlight and carbon dioxide needed for photosynthesis; the roots gather the water and also the minerals that are essential to the plant" (Epstein, 1973) and they "respire." "Non-green parts (of plants), whether in light or dark, and green parts in the dark [are] found, like animals, to release carbon dioxide and consume oxygen. These gaseous exchanges are the external manifestations of the processes now known as *photosynthesis* and *respiration*, respectively. Photosynthesis occurs only in green plant organs exposed to light. Respiration occurs in all living plant tissue, green or non-green, in light or dark. The fact that green plants usually lose oxygen and use carbon dioxide in the light does not mean that no respiration occurs in such organs in the light, but merely that the rate of photosynthesis exceeds the rate of respiration" *Encyclopaedia Britannica* 18: 21. 1959). "Because they so often grow in strong light and on impenetrable substrata, orchids can utilize an exceptional variety of organs for energy harvest. Indeed *Encyclia tampensis*, like thousands of its relatives, conducts photosynthesis in stems, roots, and fruits, as well as in its leaves, but not with equal intensity" (Benzing and Pockman, 1989).

Where, then, had I interfered with the normal plant physiology of my orchids? Too much sun could burn the leaves, and too

little could slow the growth. I did not let them freeze or burn up. I tried to fertilize them regularly. I decided I had done something to the roots to interfere with respiration and that I was drowning my plants. My "heavy hand" at watering was murdering my plants. Or was it that simple?

Orchids can grow in a multitude of mixes, and each mix has its own characteristics which determine how much water it can retain. Some mixes remain wet and soggy while some dry almost immediately. One of the first things to do in growing orchids is to establish a balance between watering and the potting medium. It is necessary from the beginning to see how long it takes the plant to dry to determine whether to pot in clay, which dries quickly, or plastic, which dries more slowly and retains moisture. It took me a while to learn this, as many more plants died. Because of this I changed mixes many times often realizing that the newest mix was not always the most ideal. Many times I went back to a prior formula.

Nature really made the most of the epiphytic orchids with a root system that "just hangs out." Many times we take these tender, happy roots and stuff them into a dark (and wet) pot like we stuff every inch of our shirttails or blouses into our trousers or skirts. Unfortunately, for us to acclimate many orchids to a greenhouse culture, this becomes a necessary process. But how beautiful it is when the plant triumphs and those roots that grow freely climb out of the pot and literally scream, "Leave me alone!"

Potting mixes have a limited useful life expectancy and eventually rot like all organic matter. Many plants die because the roots suffocate. The potting mix must be porous to allow free drainage of water and must be open enough to allow oxygen to enter. As the potting medium gets older and deteriorates, it drains less freely and begins to hold more water, preventing oxygen contact with the roots. If not interrupted, this cycle will result in death of the roots and the plant. "Snow mold (in the potting medium) caused by the fungus *Ptychogaster*

sp. does essentially the same thing, causing the orchid plant to deteriorate due to suffocation as the roots are deprived of air and moisture" (Burnett, 1986).

To ensure adequate drying of the medium so the roots can breathe, my friend, Ben Berliner, taught me to "pot down." He showed me how it was better to put an orchid in a smaller pot and water it more frequently than to overpot and risk drowning the plant. We do not want to give the root systems more water than can evaporate adequately through the leaves. We can always put more water in, but we cannot take it out.

Another error which I frequently made was to acquire a new plant and to assume that it was properly potted and should remain in that pot for the next one, two or three years. Several questions have to be answered before that assumption can be made. Is the potting medium of the new plant compatible with one's current watering routine? If the plant was recently potted, what is the condition of the roots? It is best to take the plant out of a pot and look. Sometimes a plant has been potted up with virtually no root system. If this is the case, pot it down. A well-established plant with healthy roots will probably do well in the mix in which it is growing. I have a favorite grower from whom I have regularly purchased plants. However, many of his plants died until I realized what was happening. Most were wrapped in New Zealand sphagnum, put in a pot and generously overpotted with a surrounding bark mix. They died because I did not look at the roots and repot to fit my own cultural patterns.

Jungle-collected plants often struggle to establish themselves, so it is best to purchase plants which are already well established whenever possible. Because cultural information on some of the rarer species is often sketchy, it is important to know at least where the plant originated, whether at sea level or high elevations and whether it needs a cold period, a resting period, more water or less water, etc., in order to thrive and bloom.

I have killed lots of "little things." Small species which need slab culture or need to grow in a small pot dry out too quickly in my greenhouse and just don't survive. I'm death on seedlings for probably the same reason, although I have also drowned many of them. Because these need such close attention and care, I will wait until I retire from my medical practice to try these again.

Does disease enter into the death of plants? Certainly, it does. We toss out a virused plant. A plant with scale can be cleaned up, but occasionally a plant is too infested, and it's best to discard it. Black rot, root rot, brown rot and soft rot creep up rapidly; in most cases, only early detection can save the plant.

Some of my orchids have died without my help. There is such a thing as a plant just wearing out and dying. Ann Jesup lectured on this subject at the 33rd Eastern Orchid Congress in October, 1988. She showed prize-winning, highly-awarded plants that were here today and gone tomorrow. These were beautifully grown orchids that just outgrew their root systems. She demonstrated plant after plant that flourished one year and was dead the next. Plants will languish without reason and eventually just "give up the ghost."

We must recall the late, great wholesale murderers of orchids, the collectors of the late 18th and early 19th centuries, who pulled literally hundreds of thousands of plants from their jungle habitats and shipped them back to Europe. If five percent survived, they were fortunate. And here I am in the late 20th century, with every scientific edge for growing orchids ideally, and still killing them.

To the beginner who may read this article, please rest assured that every orchid grower loses orchids. A review of the list of species (Appendix) I have acquired over the years presents an honest review of what I have done. The list (Appendix) of plants which I have lost is deceiving. This covers a 12-year period. Many of these bloomed, stayed alive for several years and then died.

Many died the first year, and some were dead in six months.

I am certain that many experienced growers are unfamiliar with some of the rare species I have listed. There is a certain challenge to growing some of these "odd-ball" species. I have attempted to grow any and all of them, although it is quite apparent that I have not been totally successful. A perusal of the list will quickly tell you where I have failed. Anyone who has had 18 *Aerangis* species and has had only four plants survive should not try to grow this genus. I have tried *Aerangis luteo alba* var. *rhodosticta* five times, all unsuccessfully. In those cases when I have lost a single plant of a genus, I may well have bought it again and tried once more, simply because the flower is beautiful.

There are half dozen very large areas in my collection when I acquired 50 to 100 plants at a single stroke through import with a friend. These plants, from southeast Asia and South America, were not always in good condition, and their attrition rate was higher than usual. The large number of bulbophyllums I lost were dried up, rootless and very poor specimens, and it was for this reason they didn't survive. I could never get them established.

I was forewarned about the genus *Telipogon* which grows at about 2,500 meters under maximum summer temperatures less than 24 degrees C. I was told that if brought to my area it would not survive. It did not. For the same reason, I have avoided the cool-growing Colombian *miltoniopsis*, *masdevallias*, *draculas*, and I struggle with many of the cool-growing *dendrobiums* and *odontoglossums*.

I have two free-standing greenhouses. One, measuring 16 feet by 34 feet, is kept at 55-57 degrees F. The other greenhouse is round, 15 feet in diameter, and is kept at 65 degrees F. In addition, I have 100 or more beautiful *phalaenopsis* growing under lights in my house. As of this writing, a dozen different clones of *Laelia anceps* are in full spike. *Zygopetalum mackayi* 'Isabel', AM/

AOS, Z. B. G. White 'Stonehurst', AM/AOS and Z. Seagulls Landing are blooming with that marvelous fragrance that they impart to the greenhouse. *Schomburgkia splendida* has three spikes in full splendor. This past summer, seven or eight stanhopeas put on a show not to be believed, and my warm-growing miltonias were an exhibit in themselves. Literally hundreds of plants, species and outstanding hybrids, are now in spike.

I think that I pointed out that many species are virtually impossible to keep alive in "captivity." I am certain that there is someone, somewhere, who can successfully grow many of these with his or her special conditions. It would be interesting for some of the growers and collectors to do a follow-up on some of the plants they sell to determine how many of them continue to live in the hands of the amateur grower.

In these days of turmoil in Central and South America, certain hard facts face the orchid grower. Sixty percent of the tropical orchids of the world grow in Brazil. Slashing and burning have destroyed the natural habitat of many of these plants. The drug traffic has posed terrible problems for orchid collectors in Colombia and Peru. Parts of tropical America are not safe to visit. The time may come when there will be no more orchids in the wild. The greenhouse may be the only home to these most beautiful of all flowers. We must dedicate ourselves to improve cultural techniques to preserve those species which face total extinction in our time.

The orchids which have survived in my collection have brought me enough pleasure to more than compensate for the disappointment I have experienced when some have died. So that you may minimize the untimely death of plants in your collections, I offer the following simple suggestions:

1) Buy only as many orchids as you can comfortably care for and enjoy.

2) Buy good plants, as well established as possible.

3) Learn as much as you can about the natural environment of the plants you buy, and try to reproduce that in your culture.

4) Do not overwater or overpot and never lose sight of what the root system is doing.

5) Nothing is static in orchid growing. Avail yourself of every opportunity to discuss good culture with other experienced growers. Change your culture if someone is doing a better job.

6) We do not kill all the plants that die. There is a normal attrition, and many will wear out and die in spite of all we do.

LITERATURE CITED

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