FIDGETING: THE LITTLE CHANGES THAT MAKE A BIG DIFFERENCE

CAROL SIEGEL

Y THIRD-GRADE TEACHER, Miss Switt, used to tell the story of the man who quit too soon. She said he wanted to invent a new drink that everyone would love. He experimented and invented "One-Up." When this didn't sell, he tried something different and called it "Two-Up." When this wasn't good either, he tried again and invented "Three-Up." Finally, discouraged, he quit after his "Six-Up" failed. Miss Switt said, "He never knew how close he came to success. If he had just fidgeted a little bit more, he would have had it—"Seven-Up."

Fidgeting... Miss Switt was on to something. You can often get discouraged in your orchid growing. You spend a lot of money and time on your orchids, only to see too many of them share the sad fate of Six-Up. It makes you just want to GIVE-Up. You may, however, be closer than you think to success. Sometimes, all you have to do is fidget a little with your growing technique, and that little change will make a big difference in your orchid results.

GCK Dunsterville shares his classic "fidgeting" story in his book, Orchid Hunting In The Lost World (And Elsewhere In Venezuela). The president of Shell Oil, Dunsterville roamed snake-infested and mosquitoladen forests and rivers in search of Venezuela's 1200 wild orchids. On one trip, he brought back a gorgeous specimen of Scuticaria steelei from Angel Falls. To keep the dangling five-foot-long leaves out of the way, he hung it high under the plastic roof of his greenhouse. Year after year, he hoped in vain for another sight of its magnificent, large flowers, but the plant refused to bloom. One day, while reorganizing his greenhouse, he moved the plant to an identical spot three feet to the left. Very soon after this, the orchid burst into glorious bloom for the first time. As Dunsterville remarked: "It is episodes like that that make orchid growing so fascinating, and which emphasize to us how much we still have to learn about what orchids do, or do not, like."

Diana Smith, Greater Las Vegas Orchid Society grower, had a similar fidgeting success. She had a healthy specimen plant of *Coelogyne lawrenceana*, which sat on a lower shelf of her greenhouse. Every year, the buds on the plant would hopefully swell and then all blast. Finally, frustrated, she hung it high up near the roof of her greenhouse to get it out of the way. The plant rewarded this small change by bursting into such glorious bloom that it earned an AOS award that year.

Fidgeting is really fine-tuning your orchid techniques and practices without making huge changes, like building a new greenhouse or throwing out all your orchids and starting again. If you grow on a windowsill,

fine-tuning may mean putting up a sheer curtain to filter light. If you grow under lights, fine-tuning may mean growing phalaenopsis instead of high-light-requiring big vandas. If you have a greenhouse, fine-tuning may mean watering with reverse-osmosis instead of tap water. These little changes are small things everyone can do to produce a better growing environment for our beloved orchids.

What Can You Fidget with to Help Your Orchids?

MOVE IT

For one thing, you can move your troublesome plant a little. Every growing area has microclimates. Your high benches may get more light and be warmer than your lower benches. The corner of your greenhouse may get less air movement than a central area. The southwest side of the house can get more light than the northeast side. Unbelievably, just moving a plant a few feet may give it a whole new environment and increase success.

Marni Turkel, noted potter and orchid grower, related that her *Dendrochilum yuccaefolium* disappointingly did absolutely nothing for years. Frustrated, she divided it into pieces and moved the plant to an area with brighter light and more extreme temperatures. Amazingly, it started to bloom on every division.

Bob Gordon, phalaenopsis genius, points out: "Finding the right place to grow your phals is also important. If you have the wrong spot, nothing you can do will make them bloom. If you have the right spot, almost nothing you can do will keep them from blooming."

Try mapping the microclimates in your growing area. Light a candle and see where it flickers most. A lot of air movement may dry out plants faster. If the candle doesn't flicker at all, add a fan. See how the placement of windows or heaters or coolers affects the temperature at different times of day and at different seasons. One side of my growing area is ten degrees cooler than the other. Moving an odontoglossum to the cooler side may make all the difference. Humidity right next to my fogger is 10 percent higher than farther away from it. Moving a phragmipedium to this wet place may really add to plant happiness.

Make a physical map of your area using a light meter, hygrometer and minimum/maximum thermometer to get your information. Actually, stand in front of your fans, coolers, and windows and see if you are getting hit by desiccating hurricane winds, catching a chill, or getting too much sun in your eyes. Mark different areas on your map with notations like "cool,"

"warm," "dry," "wet," "bright," "shady," and the like. Then decide if your problem plant might benefit from a different spot.

You can also modify your growing area a little bit if you find it is too dry or too wet for your needs. Decide what you want to change. Too bright for a mottled-leaf paph? Put up a little shade cloth. Move it to a lower bench. Too dry in one spot? Add a mister or another fogger. Too dark in your greenhouse? Cut down a tree or add a bank of fluorescent lights. Put up Mylar or white styrofoam to reflect light. Wash your windows. Too cold? Add insulation to reduce chilling of plants near an exterior wall. Fiddle a little.

HOLD ME, TOUCH ME

A little change that will make a huge difference is to simply spend a little hands-on time with your beautieseven just five minutes a day. Many folks water with a sprinkler or hose and rarely get close to their orchids unless they are in bloom or in trouble. Resolve to spend a few minutes a day pushing, prodding, looking, touching and getting to know your plants. Slip one out of the pot and look at the roots. Look under a few leaves and see if you have beasties. Lift the pot and see if it is lighter than it was a few days ago. Look at the potting mix and see if it looks like mud.

David Grove, in "Learn to Think Like An Orchid," says observing your plant will help you learn to think like an orchid and make you a big success. It is most important to focus on each plant's response to its environment and culture. Spending time with plants helps you to diagnose symptoms of distress as soon as they appear and even before they are visible. Grove speaks of a friend who came home for lunch so that he didn't have to go eight hours before seeing his orchids after his morning inspection! Train yourself to be observant of your plants, and allow them to tell you what they need. There is a beautiful little village called Igls in the Austrian Alps with a house that has three wooden flower boxes. On the boxes is written, "Lassett Blumen Sprechen", which means "Let Flowers Speak." Just spend time with your orchids and let them speak to you.

GET POTTED

Want to do one easy, cheap thing that is guaranteed to help difficult plants?

Mike Levin, former president of the Las Vegas Orchid Club, feels that when an orchid—or an entire collection—is not doing well, the best thing to do is to repot the orchid in fresh medium. As he says, "Repotting forces one to examine the roots, the lifeline of the orchid. Paphs especially love to be repotted, anytime, and even after just six months."

Members of our club in Las Vegas get many out-ofbloom hotel plants donated to the raffle. Myra Lee Glassman in our club calls them *Orchidis hotelis* because they often don't have tags. They are great plants to learn on, but members know they have to change the medium right away to give the plant a fighting chance of doing well. Plants repotted into almost any media seem to give a sigh of relief. Contrary to many, I put all my new purchases in fresh Aussie Gold mix, in bloom or not, as soon as they come in (with the exception of cattleyas.) My buds rarely blast, and I don't import any bugs.

Every five years or so a new darling mix comes out. Orchid taxonomist Harold Koopowitz says that it is living proof of how hardy orchids really are, that they can withstand all these swings in mixes. In "Cattleya Culture," Ned Nash describes one of the many bizarre mixes tried over the years. He says Paul Gripp's first orchid job was collecting rat's nests from Topanga Canyon for Robert Chrisman to use in his cymbidium mix! Resist the urge to put ALL your plants in the newest rats' nest potting mix. Offer up just a few victims and see how they do. Wait a year, and then assess your results.

Judy White, in her beginners' series, says you should check the roots when the plant has been in the mix for a few months. If the roots are healthy, the mix is excellent. If the roots are soggy, mushy, or black, the mix is not draining well and may not be aerated enough for your watering schedule and growing conditions.

You can fine-tune your mix. If it stays too wet, add a material that has better drainage and less water retention like charcoal, Aliflor, Styrofoam, perlite or a coarser bark. If your plants are staying too dry, you can add sphagnum moss, smaller bark, coconut chips, or Aussie Gold, a water-retentive diatomite. Do you have a heavy hand with watering and a lot of humidity? Switch to a clay pot. Plastic pots hold twice as much water as clay pots. Make lots more holes in your plastic pots to help drainage. Do you fertilize a lot? You probably need to change your mix more often. Do you want to reflect more light? Put your plant in a white pot. Potting a big plant? Take the coarse stuff from the top of your potting mix tray. Potting a tiny plant? Dig down to get more of the fine crumbs on the bottom.

Dan Mumau and Mike Lawless in our Las Vegas Orchid Club experimented with different growing media. They found that their oncidiums did best in clear plastic pots with sphagnum moss. They had more root growth and no leaf wrinkling. Now they have repotted all their oncidiums, miltoniopsis and brassias with happy results.

You can also try taking some things out of mix and mounting them. Dan and Mike now put many of their species and all their vandas on wood logs or mounts, removing them from baskets. They are all doing much better with fat roots growing into the wood.

LIZARD SPECIAL AND OTHER FERTILIZER

You can fidget with the kind, timing and amount of fertilizer you use, too. Although some studies indicate

that just about any fertilizer used weakly and weekly will do, people report amazing results with change. I myself could not get my multifloral paphs to bloom for two years. I used a bloom booster fertilizer last fall for a month or two because that was what I had in the drawer. I was thrilled when dozens of my paphs burst into glorious bloom at the same time. My growths may simply have grown big enough to bloom, but I am a believer and am using bloom booster again this fall. Why argue with success? I later read that paph expert Helen Congleton recommends cutting down on high nitrogen in the fall to initiate bloom, substantiating my happy results. Bob Gordon, too, recommends lower-nitrogen fertilizer for phals in the fall spike-initiation period.

Scotty Nogaim in our Las Vegas club changed to fish emulsion when her orchids were reluctant to bloom and found that that change alone quickly initiated spikes in half a dozen shy bloomers. Leslie Doyle, another successful member, started spraying her plants with a solution of Amazing Kelp, a water-soluble product loaded with micronutrients. During the growing season, she drenched her foliage, pouring the leftover solution through the roots. She was amazed at the improved health of her plants. Miles Hoffman in our club got phals to bloom by spraying on his fertilizer solution of something called "Liquid Karma" from Trader Joe's. Carson Barnes in the article "Backyard Cloud Forest" says he started having great success when he applied his Lizard Special every time he misted or watered (lizard guano produced by his very own lizards). Some folks find that NOT fertilizing for a watering or two and just drenching the soil with lots of water washes out undesirable accumulated fertilizer salts and helps plants. Fidget with a lizard, foliar feeding, a new fertilizer, or a good drench.

GETTING WET

Little changes in your watering practices can help, too. It sometimes is confusing to figure out when to water an individual plant. As Kevin Donohue says, "It becomes difficult in large collections to remember that Plant A won't ever bloom if watered on the Harvest Moon and that Plant B needs exactly two and a half days in the freezer at the vernal equinox."

Diana Smith recommends grouping plants together that have similar watering needs. Some plants need to be watered daily, and others need a dry rest. Placing those plants together simplifies your watering.

Others suggest putting the thirsty plants in waterretentive medium and the "camels" in loose, open mix and watering them all together, simply varying the mix. I changed my plants to Aussie Gold and can water them together since the mix cannot be overwatered.

Know your limits, too. If you are a busy person and can get to your plants just once a week, avoid mounted plants and tiny plants that require daily attention. If you travel a great deal, see if you can get some of your watering automatic with a sprinkling system or mister.

An important change you can make is to give your plants water that is similar to rainwater. If you can, collect rainwater. If your city water is very hard, think about buying a reverse-osmosis system or renting a deionized water tank.

The thing that made the most difference in my growing was switching to deionized water. Under no circumstances give your plants water that has been softened with salt. You may change to potassium in your water softener for better watering results.

Judy White suggests an easy solution to your watering dilemma: "If you are still totally bewildered by watering and still can't figure out what to do, then use the most basic and simple rules of all: Water plants in two-inch pots every three days. Water plants in four-inch pots every five days. Water plants in six-inch pots every week. And if even that's too hard, water them all once a week. The ones that die are too sissy for your collection anyway."

SALT-WATER FISH IN A FRESH-WATER TANK

Sometimes, you can fine-tune what you buy. As Karen Ann Wilson says in "The Keys to Successful Orchid Culture," "You wouldn't want to put saltwater fish in a freshwater fish tank." An orchid from the tropical lowland is not going to be happy in a cold place. An orchid from a high mountain region, a cloud forest, won't like being outdoors in a typical warm Florida environment. Find out what type of climate your orchid came from and prefers by reading, going on the web, or speaking to other orchid growers. Then see IF you could grow it easily and reasonably well in your setup. If you can't, you might decide not to buy it, to give it away, or—if you MUST have it—to see what you can do to make your area a little more like where your orchid is from.

When buying plants, you can decide to buy whatever pleases you and let it take its chances, a kind of horticultural Darwinism. If it makes it, it makes it. Or you can purchase plants that have a fighting chance of surviving in conditions you can reasonably provide. Or you can buy more demanding plants and make little changes in your environment to make it more like the native orchid environment.

As Wes Addison says: "You can grow everything. It gets down to what kind of conditions you can give them or are willing to give them. Basically, I have a set of conditions in my greenhouse, and the plants that will survive under these conditions are surviving and the ones that won't are dead. If I want to grow the ones that died, then I would have to figure out where I went wrong and what needed to be done differently."

Karen Ann Wilson, who lives in west-central Florida, decided to limit herself to things that grew well in her environment. She loved masdevallias and draculas, but they didn't love her. As she says, "I have tried some of the more spectacular cool-growing species with predictably fatal results." Now, she restricts herself to a few

species that are tolerant of warm-growing conditions. You might restrict yourself to plants that like your growing conditions. You might grow lots of pleurothallids and phalaenopsis under your lights but not vandas and dendrobium.

However, Clarice Dean, talented vice-president of our club, loves draculas and masdevallias and wanted to grow the cool ones in the hottest, driest desert on earth. Clarice fidgeted a little and modified her culture to suit the orchids. She placed the plants right near the front of the swamp cooler. The plants were placed on a gridless humidity tray in 1/2 inch of filtered water. Each plastic-potted plant was placed snugly in a clay pot with a close fit. The water seeped into the clay pots and helped to cool and humidify the area around the plants. The pots have drainage material in the bottom so the plants were not sitting directly in the water. These little changes resulted in her bringing some gorgeous cool-growers in gorgeous bloom to our desert meetings. You can grow the impossible, but you will have to fidget a little.

In "A Pouch Fetish," Lenny Winter describes the little changes he made to make his phragmipedium feel more at home. He read that his favorite Phragmipedium pearcei grows along the banks of streams in Ecuador and Peru. There is a rainy season from March to June, tapering but still humid and wet in August. Then in September, October, and November there are showers, while December, January, February are the hot, dry months. Lenny made some changes to make his environment match the native environment as much as possible. Ingeniously, he set the plants in 1/2inch of water in a tray to simulate the rainy season. By December, he began reducing the water in the trays. In Mid-January, he put the plants on wire racks above the water. He watered the plants every third day, and in the "dry season" watered only every six days. In September, the watering was every third day again, and by September, they were back in the water again. He made small changes that he said made a big difference.

When making changes, knowing where a plant is originally from can help with culture. Marni Turkel tried to grow *Dendrochilum longifolium*, but it never bloomed. She noticed that the tag said it was from the Kasipi swamp of Papua New Guinea at high elevation. She put it outside with her sobralias where it got extreme temperature from 30-90°F, mimicking what she thought was the original environment. To her delight, the orchid bloomed at last.

ZAPPING THE LITTLE BEASTIES

Nothing is more discouraging than growing little creatures when you wanted to grow plants. Little changes can result in many fewer bugs, bacteria, fungus and virus.

First, make sure that you wear gloves when you touch your plants and change gloves after cutting or potting a plant, anything that releases plant juices. Try

not to have the water from one plant spray on another plant. Don't use a fingernail to cut off a spent blossom. Assume everything you own has a virus or fungus and don't spread it.

Clean up your area. Remove old sheaths where bugs can hide. Reduce crowding of plants, which causes less air movement and can lead to fungal and bacterial infection. Chemical sprays also have a hard time reaching areas that are crowded.

Bacteria and fungus multiply under cool, moist conditions. Water plants in the morning and have lots of fans blowing to dry out the leaves. If you get a dark, mushy brown or black spot or area on your leaves or sunken purple or brown spots, immediately cut off the affected part with a new razor blade. Discard razors after one use. Razor blades are the only 100 percent safe way to cut a plant and not spread disease. Just be careful not to cut yourself. Isolate sick plants and take care they don't touch other plants. Consider repotting plants with disease. Treat with the appropriate chemical.

Norman Fang of Norman's Orchids suggests watering with a solution of 1 tsp. of Physan to a gallon of water once a month to control disease. I do it, and I think it is a great little change.

Don't reuse pots. Others suggest all sorts of sterilizing techniques, but pots are cheap and plants are not. Spring for a new pot. Second, never reuse potting mix from one pot to another. It is like sharing dirty underwear.

Test languishing or funny-looking plants for virus. The literature suggests that established collections frequently have incurable virus. There are testing facilities listed in the back of orchid magazines. You will have to carefully isolate or handle such plants or throw them out.

Use the least toxic chemical to treat your problem. In our club, we swear by one tablespoon of ultra-fine horticultural oil in a quart of rubbing alcohol to spray on bugs. It is fabulous. Although you don't want to eat or breathe this, it is a low-toxicity way to zap beasties. Years ago, men used to use shake cyanide crystals from Mason jars with perforated lids on wet walkways to treat bugs. Just because it is out there doesn't mean it can't harm you or your orchids. Start with just a little soapy water and don't rush to use a nuclear bomb on your plants.

FIDGETING WITH YOUR SIMULTANEOUS EQUATION

Half the articles in orchid magazines are about how to fidget with your orchids.

They usually stress modifying one practice or techniques, treating it as though it were independent of all the others. It is easier to tell someone to add more light or grow in moss, but this segmented approach is basically false. Good growing needs a systems approach. When you fidget with one aspect of your growing, it will ultimately affect the others. You must become sen-

sitive to the whole growing set-up.

For example, Clarice Dean lives in the desert where it is very dry. As part of her fidgeting, she started watering a great deal more with good success. However, she points out that "I have found that most of my orchids (cattleyas included) like to be evenly moist—but no soggy bottoms." Her love of watering and her sprinkler system would have caused soggy bottoms, so she changed her potting mix, too, to Aliflor, a compacted aggregate (mixed with a little sponge rock and bark or coconut) which works beautifully for her in the desert.

Your growing area is a system with interrelated parts. You must focus on your total environment and how each variable forms an optimal environment. As Wes Addison, smart Tucson grower, cleverly notes: "The greatest challenge is creating a balance between water, light, nutrients, air movement and temperature. It doesn't matter whether you are in the tropics or in the desert, you still have to deal with the same elements, and once you figure that out, your plants are going to do well. Every time you change one of the elements you need for growing, it will have an effect on your plants. When you have higher heat, you need to water more. You need more air movement. You need to change something to take care of the additional water. The challenge is trying to create an overall atmosphere with balance...with the correct amount of water, light, heat, humidity, air movement and nutrients to sustain the plants well."

PUSHING OUT THE WALLS

Strangely, there is always room for one more plant in even the most crowded collections. We just squeeze it in. Overcrowding is the inevitable consequence of our orchid addiction. Like rabbits, the plants multiply when you shut off the lights at night. You can make little changes that make use of your space more efficiently and alleviate overcrowding that can block light and foster disease.

Downs Matthews in "How to Add to Your Collection without Building A New Greenhouse" suggests throwing out the dogs in your collection. Bad plants take up room, too. Relocate the inanimate objects like bark, pots, chairs, boxes, to free up space for plants. Use step benches to increase growing space. Wire dividers separating benches can increase the number of plants you can hang in wasted space. Make efficient use of overhead space by installing PVC pipes from one end of the greenhouse to the other to hang plants. Hang plants from a wheel of welded wire. Hang chains from the ceiling and grow plants one below the other. Run conduit fitted with wire hangers suspended in long rows. Put wire mesh at the back of benches to hang more plants. Use a tree or pillar to support tiers of shelves like a lazy Susan.

Dan Mumau and Mike Lawless purchased many single wire hook hangers from six to twelve inches long. They installed electrical conduit pipe along the roof of

the greenhouse and were able to get half the orchids off the benches and hang them high near the windows of the greenhouse for maximum light. It is an easy thing to do that will make a big difference in your space.

When making changes, always be open to experimentation and accident.

A FAREWELL TO ALGAE

Bud Mellott had a terrible time getting rid of algae in his greenhouse. It took several unhappy people a full day of scraping with a squeaky blade and Clorox to get the glass clean. One day, he was using a \$6 garden hose attachment composed of a plastic jar and nozzle from Ortho to treat a distant plant. When the plant crashed to the floor, he bent over and the powerful jet accidentally hit the window. The algae peeled off like magic.

Pat Holland and Becky Biondi in our club went to the pet store and bought two electric fish tank oxygenators for \$5 each and put them in a drum with water for their orchids. They noticed a real improvement in their orchids with this super-oxygenated water.

Leslie Doyle uses bamboo-skewers in her pots to check moisture. She puts the skewer in the north side of the pot to insure that the pot does not get turned, and if it does, that it is easy to tell. Paphs often get an unattractively twisted flower stem if the orchid is turned while the spike forms. This really helps.

Dan Mumau placed his phalaenopsis on their sides during the summer. He had a few getting crown rot due to the high fog and water. The plants don't bloom in the summer and this keeps the tops dry. From November to May, he keeps them upright since he doesn't need as much fog or water in the cool months. The plants love this innovative treatment.

Iris Cohen gave up on her pebble trays years ago. She says they were messy and spread bugs. Now she uses 18x25 inch heavy aluminum baking pans from a restaurant supply store. "You would be surprised at how may useful items for gardening you can find in a restaurant supply store." She finds old oven and refrigerator shelves are just the right size for the baking pan. The pots stand on them and the shelves are supported by overturned flowerpots. She says it is a good way to store pots, and that eggcrate is expensive. When the trays are full, she siphons the water into a pail with a ketchup pump. When company comes, she cleans trays and uses 1/2 tsp. Physan for algae.

Sometimes, you just have to keep changing just a bit. I started growing under fluorescent lights, plain old fluorescent bulbs. Little bloomed. So I changed to full-spectrum fluorescent lights. Many paphs and phals bloomed but not my cattleyas. I changed to High Intensity Discharge sodium bulbs that were brighter but I couldn't stand the yellow color. I changed to HID full spectrum Agrosun® bulbs but I bloomed everything but cattleyas. I upped my HID bulbs from 250 watt to 400 watt, but I still didn't have good cattleya blooming. I fidgeted once again and put in TWO 400 watt fixtures

in my space, and voila, my cattleyas bloomed. It was Seven-up all over again.

Keep fidgeting and trying and experimenting. You are closer to success than you think.≉

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About the Author

Carol Siegel, a retired English teacher and medical office manager, has been president and newsletter editor of the Greater Las Vegas Orchid Society for several years. Fascinated by pollination, she has spoken on "The Sex Life of Orchids" all around the country. A native orchid enthusiast, she has written articles on Nevada's native orchids for the *Native Orchid Conference Journal* and contributed articles to the *Orchid Digest* and *Southern Nevada Home and Garden*.



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The Orchid Digest Pinup

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Paphiopedilum Ripple

Crossing unusually shaped species orchids with standard complex flowers often leads to novel blooms. *Paphiopedilum* Ripple, shown here, is the result of breeding the large, gangly-shaped *P. hirsutissimum* with a fine round albinistic green flower, *P.* Via Virgenes. The offspring inherit the purple petal tips from the species parent. These types of hybrids are unfortunately produced too rarely; *P.* Fiddle Faddle (*P. hirsutissimum* x *P.* Crescent Meadow) is one of the few similar hybrids available. *Paphiopedilum* Ripple was made in 2005 by Terry Root and flowered at the Orchid Zone Nursery. Photography by James Comstock.

Overruns of this and some previous Pinups are available rolled and mailed in a tube for \$10 US each. These are limited overruns of 100 copies, so act fast! Price includes shipping and handling.

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