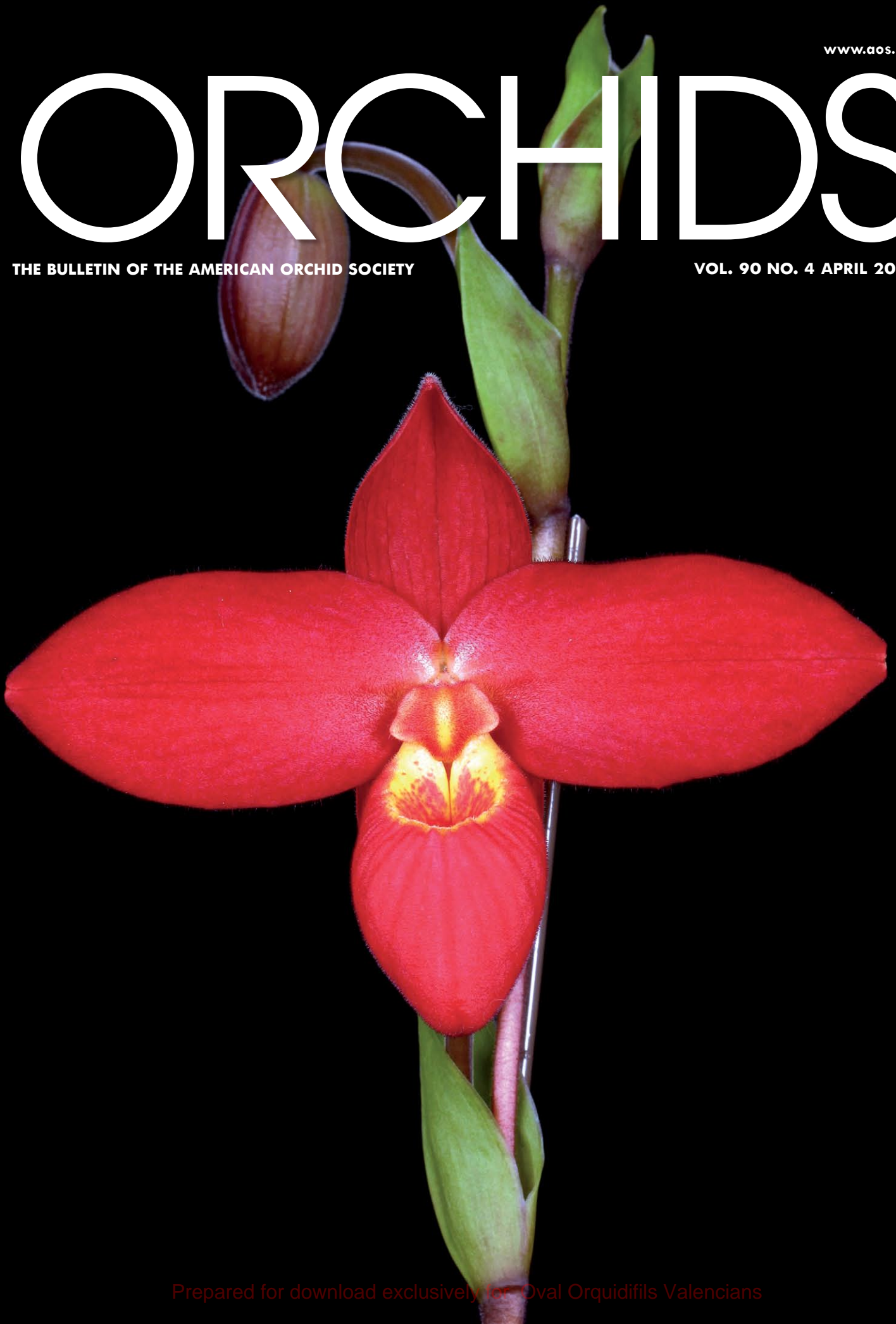


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ORCHIDS

THE BULLETIN OF THE AMERICAN ORCHID SOCIETY

VOL. 90 NO. 4 APRIL 2021

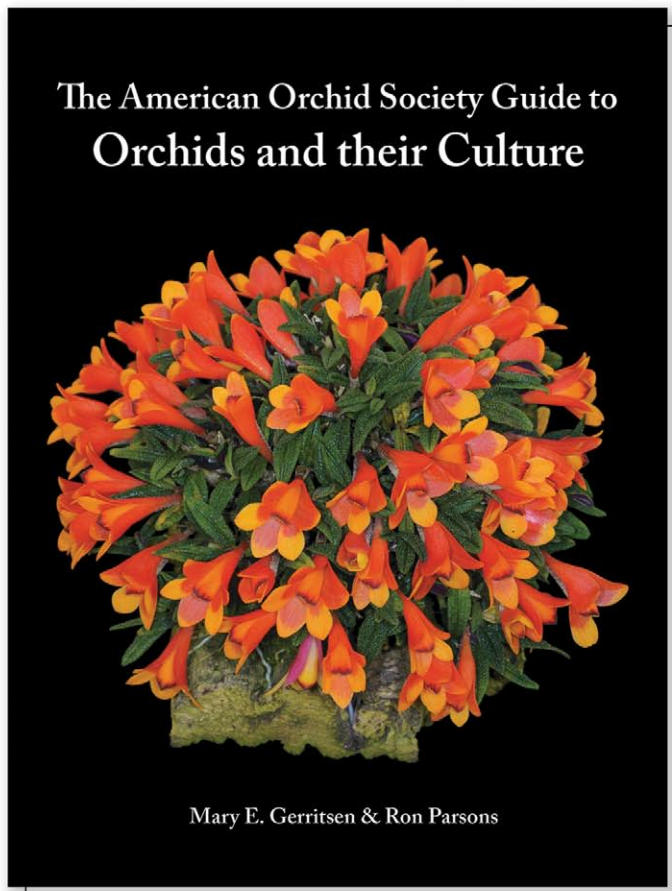


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The Bulletin of the American Orchid Society

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Volume 90, Number 4 April 2021 *Orchids* (ISSN 1087-1950) is published monthly by the American Orchid Society, Inc., at Fairchild Tropical Botanic Garden Editorial Office: 10901 Old Cutler Road, Coral Gables, Florida 33156 (telephone 305-740-2010; fax 305-747-7154; email theaos@aos.org; website www.aos.org). ©American Orchid Society, Inc. 2017. Printed by Allen Press, 810 East 10th Street, Lawrence, Kansas 66044. Subscription price of *Orchids* is \$79 a year within the US, \$99 Canada and Mexico and \$119 for all other countries. Single copies of current issue cost \$8.50 (plus shipping and handling). Prices are subject to change without notice. Although *Orchids* endeavors to assure the reliability of its advertising, neither *Orchids* nor the American Orchid Society, Inc. can assume responsibility for any transactions between our advertisers and our readers. Periodical postage paid at Miami, FL and additional offices. POSTMASTER: Send address changes to: *Orchids*, PO Box 565477, Miami, FL 33256. The American Orchid Society follows the *World Checklist of Selected Plant Families* with regard to questions of botanical nomenclature and synonymy in orchid species names and the International Orchid Register for hybrid nomenclature and parentage in editorial. The opinions and recommendations that appear in *Orchids* regarding the selection and use of specific plant-care products, including but not limited to pesticides, fungicides and herbicides, are those of the individual authors, and not those of the American Orchid Society, which neither adopts nor endorses such opinions and recommendations and disclaims all responsibility for them. When selecting and using such products, readers should seek and obtain the advice of the manufacturer and of responsible government agencies. Mail date: March 26, 2021.



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FRONT COVER

Although registered a quarter century ago, *Phragmipedium* Jason Fischer cultivars can still stop traffic. Essentially perfectly balanced and stunningly colored, *Phrag.* Jason Fischer 'World on Fire' FCC/AOS garnered 93 points when displayed at the Orchid Society of Minnesota Show on January 25, 2020. Exhibited by Orchids Limited and breathtakingly photographed by Bill Johnson.

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PRONUNCIATION GUIDE

Pronunciation of orchid names can be daunting for the novice and experienced grower alike. Presented below is a simplified pronunciation guide specific to the names found in this issue of *Orchids* magazine. An attempt has been made to represent each syllable using easily recognized sounds or words separated by hyphens and not standard phonetic symbols. Check out the Orchidist's Glossary on our website at <https://www.aos.org/orchids/orchidists-glossary.aspx>.

- Aciopea* (ay-see-OPE-a)
aclandiae (ak-LAND-ee-eye)
Aerangis (air-ANG-iss)
amboinensis (am-boy-NEN-sis)
Angraecum (an-GRAY-kum)
anitum (a-NEE-tum)
Apetalanthe (ay-pet-al-AN-thee)
atropubescens (at-roh-pew-BES-senz)
auratum (aw-RAY-tum)
aurea (AW-ree-um)
bellina (bel-LEE-na)
besseae (BESS-ee-eye)
Blepharoglossum (bleh-far-oh-GLOSS-sum)
boothii (BOOTH-ee-eye)
Brachionidium (brak-ee-oh-NID-ee-um)
bractescens (brak-TESS-senz)
Brassavola (brah-SAH-vohl-la)
Brassidium (brass-SID-ee-um)
Brassidomesa (brass-sid-oh-MAZE-za)
Brassoepidendrum (brass-soh-ep-ih-DEN-drum)
brevispatha (breh-vih-SPAH-tha)
Bulbophyllum (bul-boe-FILL-lum)
Callista (kal-LISS-ta)
campbellii (kam-BELL-ee-eye)
carmeniae (kar-MEN-ee-eye)
Catamodes (kat-a-MOE-deez)
Catasetinae (kat-a-SEET-ee-nee)
Catasetum (kat-a-SEE-tum)
Cattleya (KAT-lee-a)
cerina (SER-ee-na)
charlesworthii (charls-WORTH-ee-eye)
Chysis (KYE-sis)
ciliare (sil-lee-AIR-ee)
Coelogyne (see-LODJ-ih-nee)
coerulea (see-ROO-lee-a)
cordeliae (kore-DEE-lee-eye)
Coryopetalum (kore-ee-oh-PET-a-lum)
Cymbidium (sim-BID-ee-um)
Cymbilabia (sim-bih-LAY-bee-a)
Cymboglossum (sim-bow-GLOSS-sum)
decora (deh-KORE-a)
Dendrobium (den-DROH-bee-um)
Densiflorum (den-see-FLORE-um)
devonianum (deh-voh-nee-AY-num)
Dhaninivatii (dan-in-ih-VAT-ee-eye)
digbyana (dig-bee-AY-na)
Diodonopsis (dye-oh-doe-NOP-sis)
Dracula (DRAK-yew-la)
Dracuvallia (drak-yew-VAHL-lee-a)
Dryadella (dry-a-DEL-la)
eburneum (ee-BURN-ee-um)
- Encyclia* (en-SIK-lee-a)
Epicattleya (eh-pih-KAT-lee-a)
Epidendreae (eh-pih-DEN-dray-ee)
Epidendrum (eh-pih-DEN-drum)
erinacea (air-in-AY-see-a)
Espinhasoa (es-pin-HASS-oh-a)
falcata (fal-KAY-ta)
gargantua (gar-GAN-tew-a)
gaskelliana (gas-kell-ee-AY-na)
genetoapophantica (jen-et-oh-ap-oh-FAN-tih-ka)
Geratostylis (jer-at-oh-STY-liss)
Glottisarcon (glot-tiss-ARE-kon)
godefroyae (god-FROY-eye)
Gomesa (goh-MAZE-za)
Gongora (GONE-gore-a)
grandiflora (gran-dih-FLORE-a)
Guarianthe (gwar-ee-AN-thee)
Habenaria (hab-en-AIR-ee-ah)
hemimelas (hem-mee-MAY-las)
ilense (il-LEN-see)
intermedia (in-ter-MEED-ee-a)
Isochilus (eye-so-KYE-luss)
kaieteurum (kye-eh-TUR-um)
labiata (lah-bee-AY-ta)
Laelia (LAY-lee-a)
Laeliinae (lay-lee-EE-nee)
Lepanthes (leh-PAN-theez)
leucochilum (lew-koe-KYE-lum)
lindleyanum (lind-lee-AY-num)
linearis (lin-ee-AIR-iss)
loddigesii (lod-ih-JEEZ-ee-eye)
Lycaste (lye-KAS-tee)
Masdevallia (mas-deh-VAHL-ee-a)
medusa (meh-DOO-sa)
medusae (meh-DOO-see)
Miltonia (mil-TONE-ee-a)
modesta (moh-DESS-ta)
moreliana (more-ell-ee-AY-na)
Myrmecocattleya (mir-meh-koe-KAT-lee-a)
Myrmecophila (mir-meh-KOFF-ih-la)
Neofinetia (nee-oh-FIN-ay-a but most often heard as nee-oh-fin-ET-ee-a)
Nidema (nye-DEE-ma)
nigroviolacea (nye-groe-vye-oh-LAY-see-a)
nocturnum (nok-TUR-num)
nodosa (noe-DOE-sa)
Oncidiopsis (on-sid-ee-OP-sis)
Oncidium (on-SID-ee-um)
Paorchis (pay-ORE-kiss)
Paphiopedilum (paff-ee-oh-PED-ih-lum)
- Papilionanda* (pap-il-ee-oh-NAN-da)
Paraprasopphyllum (par-a-pray-SOFF-il-lum)
Phalaenopsis (fail-en-OP-sis)
Phragmipedium (frag-mih-PEED-ee-um)
Pleurothallis (plur-oh-THAL-liss)
Pridegonia (prid-eh-GOH-nee-a)
Prosthechea (pros-THEK-ee-a)
pseudepidendrum (sood-ep-ih-DEN-drum)
pumila (PEW-mih-la)
purpurata (pur-pur-AY-ta)
pygmaea (PIG-mee-a)
radicans (RAD-ih-kanz)
retisquama (ret-ih-SKWAY-ma)
Rhyncholaelia (rink-oh-LAY-lee-a)
Rhyncholaeliocattleya (rink-oh-lay-lee-oh-KAT-lee-a)
Robiquetia (roh-bih-QWET-ee-a)
rothschildianum (roth-child-ee-AY-num)
rubra (ROO-bra)
sanderiana (san-der-ee-AY-na)
sanderianum (san-der-ee-AY-num)
sandowiae (san-DOV-ee-eye)
sanguinea (san-GWIN-ee-a)
Sarcochilus (sar-koh-KYE-lus)
schilleriana (shill-er-ee-AY-na)
Schomburgkia (shom-BURG-kee-a)
Sergioara (sir-gee-oh-ARE-a)
sijmii (SEYE-mee-eye)
sincorana (sin-kore-AY-na)
Sobralia (soh-BRAY-lee-a)
spectabile (spek-TAB-ih-lee)
stamfordianum (stam-ford-ee-AY-num)
Stanhopea (stan-HOPE-a but most often mispronounced stan-HOPE-ee-a)
Stelis (STEE-liss)
superbiens (soo-PER-bee-enz)
Telipogon (tee-lee-POE-gon)
tessellata (tess-sell-AY-ta)
thysiflorum (thur-sih-FLORE-um)
 trianae (tree-AN-ee)
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Topic	Greenhouse Chat (Orchid Q&A) <i>Send in your Questions!</i>	Deflasking and pottling up: Best Practices	Greenhouse Chat (Orchid Q&A) <i>Send in your Questions!</i>	<i>Prosthechea karwinskii</i> in Mexico, reintroducing a threatened species
Presenter	Ron McHatton Chief Education and Science Officer	George Hatfield Award Winning Orchid Hybridizer	Ron McHatton Chief Education and Science Officer	Julia Douglas AOS Conservation Grant Recipient

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CENTENNIAL DONOR LIST IN THE FEBRUARY 2021 ISSUE:

We regret the accidental omission of Douglas Hartong from the list of gracious donors to our Centennial Celebration fund.

Vegetable Starter Trays for Orchid Seedlings

I USE SEEDLING starter trays with humidity domes in the fall and spring for my vegetables. It did not occur to me to use them in the greenhouse for my orchids but when I deflasked my first orchid seedlings a couple of months ago, I needed a place, protected from the elements, to put the fragile seedlings. I keep a small amount of water in the tray and the humidity dome on top with both vents open. It sits on a shelf in my Arizona greenhouse in the southeast corner. After the first month, my seedlings doubled in size (the seedlings are pictured in the larger containers). So, I decided to move a few of my more fragile orchid divisions into the tray to see if I could encourage strength and growth. After another month, I noticed new growth and better color on the leaves (the divisions are pictured in the smaller pots).

I feed them every other week with MSU high-potassium fertilizer. Once a week, I leave the lid off for several hours just to increase the airflow and prevent mold or fungi from growing. If you grow indoors, this would be a great place



for orchids needing higher humidity or those that are more fragile. We often get small divisions or purchase orchids in 2-inch (5-cm) pots because they are cheaper. This tray and dome will keep them protected as they grow. It fits well under a counter and you can even mount a grow light under the counter if you are growing in a more shaded environment. These seedling starter trays with humidity domes cost under \$10. Be sure to get the heavy weight tray so that it will not collapse when moved.

— Cindy Jepsen (email: cindyjepsen@cox.net).

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PRESIDENT'S MESSAGE

THE BLOOD THAT runs through the veins of the American Orchid Society is the documentation accumulated through centuries of research. A quick search of orchid books on the internet will yield countless offerings of books available. But the library of the AOS is filled with such books, often used as the number one source for any information needed on orchids. This is very important for the AOS as it is the go-to place for answers.

The study of orchids began centuries ago with Theophrastus, a student of Aristotle and a Greek medical botanist. He clearly identified them as orchids back in the first century. The subtleness of a color variation, a pseudobulb shape or markings may misidentify an orchid. With the tens of thousands of orchids on the planet, both natural and created, it is critical to know exactly what they are. This is where the books enter the picture. The library of the American Orchid Society is there to help.

The chair of the Archives/Library Committee of the AOS is Melana Davison. She is a dedicated orchid lover with many years of experience and an accredited judge for the American Orchid Society as well. As a judge, she knows the importance of having very accurate information at hand when researching an orchid. Her countless hours dedicated to the AOS, working in the library, have yielded immeasurable benefits. The AOS is very fortunate to have such a devoted volunteer. The library is housed in a separate building at Fairchild Tropical Botanical Gardens.

Not too long ago, in the archives room at the AOS headquarters, the air conditioner was found to be inadequate. There are many orchids that love warm temperatures and high humidity, but the archives do not. Climate control is very important, especially in South Florida, where the heat and humidity can wreak havoc on documents and books.

Consequently, to keep that area of the headquarters healthy, a new air conditioning system will be installed... *before* the summer months begin.

The spring Members' Meeting was held last month. As an organization, we have learned very well how to conduct business through the pandemic. It is clear, now that vaccines are becoming available, that slowly but surely, things will return to normal. Regardless, the virtual spring Members' Meeting went well, with a higher attendance than the previous meeting. We said good-bye to some trustees and welcomed new ones

— Michelle Dobard-Anderson, Edna Hamilton, Alison Gallaway and Barbara Schmidt. These trustees will add fresh, new voices to the already strong Board of Trustees we have now. We bid a fond farewell to Brandon Tam, Judy Bailey and Linda Wilhelm. I want to thank them for the work they did for the AOS; we are stronger because of their efforts.

Another strong point of the spring meeting was the silent auction. Very generous donations were made by some wonderful folks out there — everything from plants to fertilizer to gift cards and even experiences were donated. I am grateful to our donors for their donations and to those who purchased the auction items. This is a win-win for all. I would like to give a shout out to the auction committee, especially Jennifer Reinoso, for her work in this area.

With the spring meeting behind us, we move forward to the fall Members' Meeting and the grand AOS Centennial Celebration. With the event now just six months away, we have to put the machine into high gear. Many of the committees involved with the Centennial Celebration have already been working for months for this major event, but as the event grows closer, more and more has to fall into place. This is slated to be one of the most amazing events in the history of the American Orchid Society, and rightfully so. If you take a quick look at the website page promoting the Centennial you will find that the celebration includes live member meetings, lectures by well-known orchid experts, a live auction, orchid judging and a gala event to end all gala events. It truly will be a once-in-a-lifetime event.

The teaser for this event is the exclusive watercolor painting by Angela Mirro, an accomplished botanical artist, known by many for her attention to detail in her amazing work. She is creating the official poster for the Centennial celebrating the theme of *Orchids of the Americas*. Her work will include much flora and fauna vividly portrayed from different areas native to the Americas. The original work will be auctioned for the event and only 100 posters, *signed and numbered*, will be available for purchase.

Those who register for the Members' Meeting will receive many perks for that week, including a commemorative welcome bag with gift items, a member meet-and-greet social, special seating at the live auction, transportation to and from the judging event at the East Everglades Orchid Society Show, plus many more amenities. This event marks



Bob Fuchs (right) with Michael Coronado, R.F. Orchids vice-president and senior judge in the West Palm Beach center, in the garden at R.F. Orchids. Photograph courtesy of R.F. Orchids, Inc.

the welcome return of AOS members meeting in person, like a family reunion. Many of us have been a part of the AOS for decades and have forged friendships that transcend all boundaries; this celebration will bring us back together.

Let us not forget that this is the American Orchid Society, and we are here for these remarkable plants. The Centennial Celebration week will be extraordinary, but along with the fun we will pursue our goal of preserving orchids for generations to come. The proceeds from the Centennial are earmarked for conservation, something I hold very dear, as do many around the world. The loss of orchid habitats is devastating. Of course, some orchids may be cultivated *ex situ*, but to have them in their own natural habitat is priceless. It is the way things were meant to be. Many of us have been fortunate to see orchids in the wild, an experience few will forget. The American Orchid Society has been committed to the conservation of orchids since the society began.

Please take a moment to visit our website to find out more about the AOS Centennial Celebration gala event and fall Members' Meeting. Make it a priority to purchase gala tickets and register to receive all the benefits. It is going to be wonderful to get together, just as we used to do in the past.

I look forward to seeing many of you there! — *Robert Fuchs, AOS President (email bob@rforchids.com).*

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April: The Month of the Trigger

By Thomas Miranda



FRED CLARKE

Do not be in any hurry to water the emerging new growths of catasetums. Wait until they are 5 or so inches (12.7 cm) tall and the leaves are beginning to unfurl, like the plant on the far right.

OUR WORLD HAS changed remarkably during the passage of our previous year. With so many events, gatherings and travel plans having to be canceled or put off indefinitely, it almost seemed like the glorious rites of spring, summer and fall, and the many joys that accompany each season, were also postponed. Winter, being harsher than usual, did not help the situation much. It is difficult to gauge exactly how the isolation, the apprehension and the deprivation we all have collectively experienced have affected us. It sometimes feels like we react to everything with the hairline trigger switch of a catasetum these days in response to others, even those we deeply love.

Happily, spring, that timeless and profound trigger initiating the natural world's rebirth and the advent of our horticultural season, has returned this month, if seemingly a year late. Along with our sacred and jubilant spring, we have observed a resurgence of hope and inspiration for a better future. Already, orchid events have been advertised and rescheduled. The possibilities of travel and holidays with our friends and loved ones are seemingly more and more likely as restrictions diminish. I believe that our shared challenges can only lead us to greater understanding and empathy for each other. Growing orchids

teaches us to revel in the simplicity of plant culture, but also the complexity of understanding and nurturing these most astonishing and captivating of organisms. May we extrapolate the insights we glean from growing orchids to support and understand each other during these divisive times.

AND...THEY ARE OFF! Almost all orchids respond to the cool but unerringly increasingly warming spring weather, as well as the lengthening days (photoperiod) they experience in the Northern Hemisphere this month. It is always a challenge to contain one's enthusiasm and show restraint in March, but April allows us the chance at last to cut loose exuberantly and unleash the cultural regimens that we have been planning all winter! It is always hard for me to deny water to various orchids in my collection, but it is necessary to give certain orchids, such as catasetums, lycastes, soft-cane and deciduous dendrobiums, the winter's rest they need. Many of us watched in anticipation as roots have appeared on these plants, accompanied by tender new growths and leaves. Indeed, the time to start the race to nurture this year's blooms has begun.

THE BUFFET REOPENS It may still be entirely too early to visit our favorite seafood trough this month, but that is no reason to deny sustenance to your

orchid collection. Indeed, now is the time to feed and nurture all the plants that were, necessarily, experiencing benign neglect over the winter. Roots should be at least a couple of inches (>5 cm) long by now, and are searching for substrate to attach to and get established. This also means that potting season is contemporaneous. When you are at the garden center checking out all the new fertilizer formulas, be sure to stock up on all the potting supplies you will need over the next couple of months: bark, moss, other media, pots and baskets, clips and hangers, and so on. Best to get them now instead of when you are up to your ears in orchids needing repotting.

THE GREAT OUTDOORS Although probably too early for the northern reaches of the world, it is certainly time to plan and organize an outdoor growing area for your plants that were contained in the invariably crowded winter greenhouse, windowsill or light room. Find an area that will have dappled light, good air movement and a flat area to put sturdy benches for your potted orchids or stands for your hanging plants. Spring conditions with good day-night temperature differentials and the tonic known as rainwater almost always accentuate the progress of earnestly growing orchids. If you have planted hardy orchids or have native orchids in your garden, they are

likely making their emergence sometime this month or next. Make sure you protect their tender shoots from predation from slugs, insects and other pathogens, as well as the carefree trampling feet of children and pets finally able to cavort freely.

GUNS AND ORCHIDS Although at least one of these is protected by the United States Constitution, we should have equal protection for our plants, as well as the freedom to enjoy our natural world. We have been so dutiful and responsible for so very long. Here is hoping that our sacrifices this past year will pay off with even more wondrous events and fewer necessary restrictions this year. We are, in

a sense, starving. When all of this is finally just a 20/20 memory, I believe the orchid world will be stronger and more exuberant than ever before. Let us use that renewed strength and commitment to be the best growers and conservationists we can be.



Thomas Miranda

— Tom Miranda has been working professionally with orchids for over three decades and is the past chair of the AOS Conservation Committee. He is an AOS accredited judge in the Hawaii Center (email: biophiliak@gmail.com).

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- Dr. Ernesto Mujica Benítez, Scientific Secretary of the Organizing Committee (emujica@upr.edu.cu)
- Ms. C. Esther Liliam Santa Cruz Cabrera, Executive Secretary of the Organizing Committee (lilysacruz@ecovida.cu)

For more information on the Conference, contact Dr. Lawrence W. Zettler (lwzettler@ic.edu) or Dr. Ernesto Mujica Benítez Scientific Secretary (emujica@upr.edu.cu).

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Spring Migration

Text by Sue Bottom/Photographs by Terry Bottom

WE HOPE FOR an early spring whenever Punxsutawney Phil does not see his shadow. If you have ever brought out your plants too early thinking spring has sprung, only to find there is one more cold front on the way, you know you should first channel your spring energy into preparing your growing area.



Sue Bottom

PREPARATIONS There are some chores you can get out of the way while you are debating whether or not it is too early to move your plants out from their winter home. It is not as much fun as playing with your plants,

but it will pay dividends in the long run to have a clean and pathogen-free growing area. Remove all the weeds in your growing area. Rake away leaves, particularly those dropped orchid leaves from last year with the evil dotting on the undersides that are disease spores just getting ready to infect your new leaves. Spread a herbicide containing diuron (Karmex and others) to prevent weeds from sprouting. If you have benches, sterilize them before moving plants out. You can use Physan or pool algaecide to disinfect, or go full-metal-jacket and spray with pool chlorine. If the weather forecast still looks good, you can think about your next dance moves.

TOUGH GUYS We all have those tough guys, the nobile and seminobile dendrobiums that have incredible spring blooms and enjoy a coolish, dryish winter rest to produce them. You may or may not water them during the winter, though once- or twice-a-month watering may mimic the dew they receive naturally. Cymbidiums can live outdoors during most of our winters and require protection only from hard frosts. My coelogynes spent the winter in an unheated hoop house and bloomed incredibly in their wire baskets.

WHICH PLANTS FIRST? It is not quite as simple as last plants in, first plants out. The last ones you brought into the protected area in the fall are the ones that are the most cold tolerant, so logically they are the first ones to move out since they are the most likely to withstand a late-season cold spell. The exception would be your winter-dormant orchids that are not yet ready for Mother Nature to water them lest they develop rots. Check the forecast for the next month to see whether the



nighttime lows are projected to be above 50 F (10 C), realizing the uncertainty in such a forecast and assuming temperatures may really drop down into the 40s F (4.4–9.5 C).

Stanhopea Relatives

The stanhopeas and gongoras are moved from their winter homes first because many of these can tolerate cool nights. Most weathered the close winter quarters fairly well but without great air movement, they are prone to fungal leaf spotting and anthracnose on the leaf tips. Each plant is inspected as it is moved out and infected leaves are removed to prevent

[1] The spring-blooming *Densiflorum* (*Callista*) and *Dendrobium* section dendrobiums spent the entire winter out in the shade structure with no supplemental heat or protection from winter rain, and bloomed profusely after our mild winter.

[2] The coelogynes overwintered in an unheated hoop house, protected from cool winter winds and watered with an automated spray system. They bloomed beautifully in their wire baskets.

the spores from spreading. In the past, I have cut away just the leaf tips, but this leaves a big open wound and it seemed like the remaining part of the leaf showed signs of infection a month later, so now the whole leaf is removed and discarded. No repotting was necessary because in the late summer and early fall the tired sphagnum moss was jetted away and replaced with fresh moss. The *Stanhopea grandiflora* was in bloom and the *Stanhopea nigroviolacea* has four early-season buds emerging from the bottom of the basket.

Zygopetalum Relatives

The zygos love these cool nights so let them enjoy them while they can! Put them in a bright spot for now, but you will have to provide them with more shade as the season progresses to protect them from overheating. This is a good time to repot them. You can consider using the double-potting technique where you pot them in clay in either a Pro-Mix or sphagnum-based mix and then wrap the outside of the pot in some sphagnum moss and drop it into a larger pot. This can help keep the roots a little cooler in the heat of the summer.

Paphiopedilums

Many of the paphs thrive with cooler nights that can drop into the 40s F (4.4–9.5 C). As you move the plants out, check to see whether they need repotting. Try picking up the plant by the vegetation rather than the pot and see if it is wobbly in the pot. If it is wobbly, the roots would probably benefit from being moved into a fresh potting mix. One of our club members has great success with growing in lava rock, but I have been unable to duplicate his regimen. We use a blend consisting of medium bark, sponge rock, charcoal, clay pebbles and maybe 5% Pro-Mix to increase water retention.

Once you have some degree of certainty that temperatures will remain above 50 F (10 C), you can move most of the rest of your plants out: the cattleyas, angraecoids, bulbophyllums, etc. As with all your plants, inspect each plant as you move it to its summer home. Check for signs of pests, particularly scale, mealybugs and mites. Also check leaves for evidence of fungi, including the spores that are often present on leaf undersides. You can spot-treat isolated problems. If you find widespread issues, you may have to rethink your winter care options to eliminate the conditions causing the problem.

Dendrobiums

The dendrobiums are a very diverse group. Your nobile and seminobile (section *Dendrobium*) dendrobiums, often called the soft canes; the callista



dendrobiums with the spring-blooming flowers that look like grape clusters, and the Aussie dendrobiums probably spent most of the winter outdoors enjoying the cooler weather. Your other dendrobiums can be moved out now, except for the phalaenopsis-type dendrobiums, which have long flower sprays emerging from the top of their hard canes. Wait until nighttime lows are going to be reliably above 60 F (15.6 C) so you do not risk leaf drop in these warmth-loving dendrobiums.

Vandas

Vandas too have a wide range of cold sensitivity. The small plants with star-shaped flowers that used to be called *Neofinetia falcata* are very cold tolerant, as are the blue-flowered *Vanda coerulea* and the fragrant *Vanda tessellata*. The large-flowered, two-toned vandas with *Vanda sanderiana* in their backgrounds are the

- [3] The gongoras and stanhopeas were the first plants brought out to the shade house this spring. Fungal leaf blighting had to be removed before the plants were hung in their summer home.
- [4] The stanhopeas started blooming early this year. They are grown in wire baskets with a fairly thin layer of sphagnum moss and get buoyant air movement, protected only by shade cloth.

least cold tolerant, and these should be protected until nighttime temperatures will not drop below 60 F (15.6 C).

Phalaenopsis

Conventional wisdom recommends most phalaenopsis should be kept warm, particularly when in bud and bloom so these should be protected when nighttime lows are below 60 F (15.6 C). We have





seen phals grown by other club members in a shade house with supplemental heat only during the coldest nights. Unless you can duplicate those growing conditions, keep your blooming orchids protected until nights are reliably in the 60s F (>15.6 C). You might also consider keeping them under an overhang or roofed structure to prevent rainwater from accumulating in the crown of the plant.

Catasetinae

Then there are the winter-dormant orchids that endure drought conditions in their natural habitat by avoiding it, dropping their leaves and going into a deep slumber, such as some lycastes, habernarias and catasetum relatives. These may well be able to tolerate cooler conditions if your winter growing area has a roof. If the plants are rained on before the roots have elongated and the leaves unfurled, the new growths may perish as a result of crown rot. Catasetum repotting starts in December and continues through March, after which the plants are kept dry. Only when the roots have grown down to the bottom of the pot and the leaves are 5 inches (12.5 cm) tall or so and open are they moved out to the shade house to happily soak up all the summer sun and rain.

The spring migration should not be a slam-bam move from winter to summer

homes. Look at each plant as you move it. Make an assessment of how well, or poorly, it did and what you might change next year. The stanhopeas did particularly well, so perhaps we have found their happy place. The bulbophyllums, well, perhaps not so much. Growing them under the vandas subjected them to too many rots so we are emulating the approach by some of the fellow members of our St. Augustine Orchid Society. This year we will be growing them out in the shade house with more air movement and less continuous leaf wetness. We also want to learn more about how another club member grows his incredible phalaenopsis, in wooden baskets with almost no potting mix. Who says you cannot teach an old dog new tricks?

— Sue Bottom started growing orchids in Houston in the mid-1990s after her husband Terry built her first greenhouse. They settled into St. Augustine, Florida, Sue with her orchids and Terry with his camera and are active in the St. Augustine Orchid Society, maintaining the Society's website and publishing its monthly newsletter. Sue is also a member of the AOS Editorial Board (email: sbottom15@gmail.com).

- [5] The cattleya seedlings love growing outdoors, drying out rapidly in the low-humidity spring air. They will be moved under cover when the rainy season starts, to avoid rots.
- [6] The warm-growing vandas summer in a shade house with a misting system set on a timer. The big two-toned vandas are less tolerant of cool weather than some of the other vandas.
- [7] Catasetums are repotted from December through March, just as the new growths form. The repotted ones are hanging and the ones awaiting repotting are on the bench; all are kept dry. Only when the new growths of these catasetums are about 5 inches (12.5 cm) tall and the leaves unfurled are they moved out into the shade house (inset) where they are watered every other day when we are without rain.

QUESTIONS AND ANSWERS

AT THE BEGINNING of the February Q&A webinar, I started with a short summary of fungicides because we get so many questions that revolve around what works against what, and their costs. What follows is a synopsis of that discussion. The list of fungicides available is legion but many of the newer ones are both hard to locate and expensive. The list below, although not exhaustive, contains several very effective, rather inexpensive choices and a couple of the most effective newer materials.

Hydrogen peroxide is a simple, inexpensive first defense against minor infections and is effective against both fungal and bacterial pathogens. It should be used straight from the bottle without dilution (3%) and can be applied as both a spray, or a drench for root pathogens.

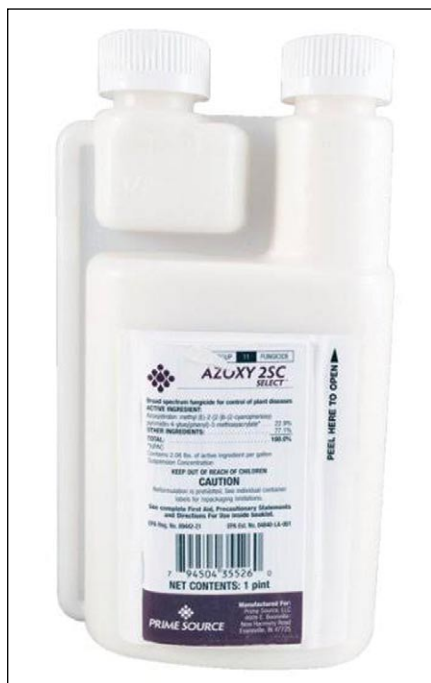
Thiomyl, Clearys 3336, Banrot and other products that contain **thiophanate methyl** as the active ingredient are systemics. The active ingredient in these, thiophanate methyl, is a good, broad-spectrum fungicide applied as a spray or a drench, and effective against leaf spotting fungi such as cercospora, phyllosticta, collectotrichum and anthracnose. This is a good "first try" fungicide due to its low cost. For instance, Thiomyl can be found for about \$17/pound.

Captan, a phthalimide fungicide, can be used as a spray and is effective against leaf spotting fungi. I do not believe it has systemic properties. Many growers use it as a paste for wounds, mixing a small amount with water into a paste and painting it on cut rhizomes, trimmed leaves, etc.

Daconil (chlorothalonil) is effective against leaf spotting fungi used as a spray. It is not systemic. Remember, with leaf spotting fungi, once the leaf damage is done, it is permanent. Your goal is to control the spread so it does not get worse.

Junction is a little more expensive but it is a great fungicide and also has bactericidal properties. It is a proprietary mixture of copper hydroxide and Mancozeb, itself a mixture of a manganese- and zinc-based fungicides. Junction is effective against a broad range of pathogens including *Erwinia* spp., *Pseudomonas* spp., *Xanthomonas* spp., bacterial leaf blight, *Alternaria*, Anthracnose, black spot, botrytis blight, cercospora leaf spot, dothistroma

These questions were part of one or more recent monthly webinar Q&As and compiled by Larry Sexton for inclusion here. Each month, a Q&A webinar is held during the first two weeks of the month. To view recorded Greenhouse Chats (Q&A webinars) or register for a future one, see <https://www.aos.org/orchids/webinars.aspx>. Send questions to greenhousechat@aos.org — Ron McHatton, AOS Chief Education and Science Officer.



Left: A liquid preparation of Azoxy 2SC that is 22% active ingredient; photograph courtesy of Prime Source. Above: The granular preparation of Heritage is only 0.2% active ingredient and far more difficult to apply to potted or mounted epiphytes; photograph courtesy of Syngenta.

needle blight, downy mildew, Leaf Spot, *Phytophthora*, powdery mildew, as well as several rust and scab disease. Because of its bactericidal and fungal efficacy, it is an excellent first-defense following a severe stress to your plants such as hurricanes, a severe cold spell or a severe heat-stress. In these cases you spray and drench plants immediately after the severe stress to prevent secondary pathogens from attacking your stressed orchids.

Kocide and **Champ (hydroxides or oxides of copper)** are old standbys for control of crown rot and leaf blights in many orchids, especially phalaenopsis during hot, wet periods. Many phalaenopsis growers use one or the other of these during hot, humid summers as a preventative foliar spray. Applied as a liquid spray to the foliage, the copper compounds, once dry, act as a barrier to the germination of fungal and bacterial spores. One word of caution; be careful with copper compounds if you have dendrobiums as many are sensitive to copper. Also, acidic water supplies will dissolve copper complexes over time so make sure you flush potting mixes thoroughly to avoid copper build-up.

Aliette (fosetyl aluminum) and **Subdue (metalaxyl)** are most effective against water molds such as *Phytophthora* ssp. and *Pythium* ssp. They are not cheap but they are effective against otherwise very recalcitrant diseases.

Both of these pathogen groups can be devastating to your collection if they get started.

Of the newer, more expensive fungicides, **Pageant** (a mixture of **Pyraclostrobin** and **Boscalid**), **Heritage (Azoxystrobin)** and its generic **Azoxy 2SC** and **Medallion (Fludioxonil)** make up a group of fungicides that are highly effective against a broad array of pathogens including fusarium, Septoria, cercospora, rhizoctonia root rot, southern blight (soil borne), many rusts, botrytis, black rot (Medallion is particularly good), snow mold (Heritage is one of the few things I know that controls snow mold), crown and basal rots and anthracnose.

Lastly, a word about formulations: Many of these products are available in many different forms including wettable powders, liquid concentrations and granular materials designed to be applied to soil. Make sure that the product you purchase is a form that you can use. Granular materials designed to be applied to soil are difficult to use in orchids potting material and often the instructions are to apply a certain number of pounds/acre. Although you may be able to make the mathematical conversion, there is no guarantee that the product will stay in a loose epiphytic potting medium instead of just washing through and out the drainage holes.

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*— Regards, Ronnie Miller
Window Sill Grower*

Psychopsis Mariposa Photo Credit: Ronnie Miller



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The CBR Dilemma

by Jean Allen-Ikeson

To give or not to give. That is the question

JUDGING PRACTICE CAN stimulate lively discussion. Recently, a judge brought to judging a plant labeled *Lepanthes genetoapophantica*. It was passed because the judging team could not find any information about it on the World Checklist for Selected Plant Families (WCSPF) or in other sources. It is apparently a new species sold by Ecuagenera. The team felt that if they could not confirm that the name was valid, that they could not grant it a Certificate of Botanical Recognition (CBR).

A CBR is awarded to a cultivar of a species, subspecies, variety or natural hybrid deemed especially worthy of recognition for rarity, novelty or educational value *previously unrecorded* by AOS. The definition of this award would include newly described species. This award requires confirmation of the identification/name by the Species Identification Task Force (SITF) of the AOS. Recent articles from the SITF blog (which is on aos.org) have been published in *Orchids* magazine to help judges and the public understand how they make determinations of identity. All CBRs and CHMs (Certifications of Horticultural Recognition — another species award) must be confirmed by SITF.

There are various opinions among judges about how to handle these species awards. If the label matches what can be found in the WCSPF, orchidspecies.com, reference books, etc., the decision to vote to award or score the plant is easy. The problem comes when the plant and the label are an apparent mismatch: the plant does not look like what the references describe it as.

More troublesome are newly described species for which there is no readily available information. Many descriptions are published initially in what are, for most growers or judges, relatively obscure botanical journals and they could be in a language other than English. Do you pass the plant or do you award it and send it to SITF?

This situation occurred with the *Lepanthes genetoapophantica*. The Chicago Judging Center chair, Lois Cinert, initiated a question-and-answer session regarding SITF, which expanded into a lengthy discussion by the judges. She then took the questions, suggestions and



1

FROM THE SITF ARCHIVE



2

COURTESY OF ECUAGENERA

concerns to the SITF panel, including Ron McHatton.

There was a lively discussion on the topic of what to award, when it was not permissible to award a CBR, and where it was OK to get information outside of authorized taxonomic authorities.

There are four possible scenarios according to McHatton for a species with no species name or a name on the label that cannot be found or a name that does not seem to match the plant:

- The plant comes to the judging completely unlabeled or labeled only to genus (e.g., *Stelis* sp.). Do we award and describe it and send it in to SITF, even if we have no name for it? This case is handled by the requirement that plants must have a name. Anything that shows up as *Stelis* sp. should be passed simply because there is no way to make any assessment.

- The plant has a name you cannot find on the WCSPF or in IPNI.org. The problem here is how long it takes for new names to appear on the World Checklist and even IPNI.org. This can be sometimes more than *two years*. That was the case with this particular plant. The SITF has a network of taxonomists to rely on to find published information for species that are not yet officially listed in the WCSPF so we would recommend these plants should be awarded if worthy and let the SITF do its job verifying proper naming. If SITF cannot find it and none of the taxonomists in the field have ever heard of the name, it will come back as unidentifiable and be nullified.

- A nice plant, well grown with lots of flowers, comes in with a complete name but the flowers do not look like the pictures found of flowers with the same name. Do you issue the CBR and note the discrepancy? This is a judgment call. If it clearly does not fit the name someone put on it, McHatton would recommend it not be judged *unless* the team believes prior pictures of awarded plants are themselves misidentified. This happens with some old awards and the handbook does allow awards to correct the record.

- A plant comes in properly labeled but consists of one growth, one leaf and one flower that is fading. Do you award it even though it is not established and healthy? Such a plant is not in judging condition and should be screened out. Part of the purpose of a CBR or any award is to create a record — a poorly grown plant would create a misleading record.

All centers have judges who learned to judge at various centers and in various eras, and what the norms were where and



SITF ARCHIVE/INSERT: JAMES MCCULLOCH



CHUN-MING CHEN

when they learned may be very different. This conundrum is not unique to any one center. Lois Cinert sent the formatted scenarios that reflect the questions and discussion within Chicago center; the replies are from Ron McHatton. The replies help clarify how to go forward or not with awards to previously unawarded species. Chicago's reflections from judges represented a range from "well-seasoned judges who will not award anything without a long pedigree, which defeats the purpose of SITF, to the younger, more eager judges who may judge any orchid, even one with no name," according to Cinert. You could find the same discussion in nearly every center.

— *Jean Allen-Ikeson is the Chair of the AOS editorial board, the Education Coordinator for the Toronto judging center and the AOS National Judges Education Coordinator (email: jean.ikeson@gmail.com).*

- [1] Although beautiful, this was presented for judging labeled as *Telipogon* sp. According to the handbook this should not be judged. It is actually *Telipogon hemimelas*.
- [2] *Lepanthes genetoapophantica* is so recently described that it does not yet appear in either the World Checklist or the International Plant Names Index (ipni.org).
- [3] Presented as *Diodonopsis pygmaea*, this is a species of *Dryadella*. A synonym of *Diodonopsis pygmaea* is *Masdevalia erinacea* (meaning hedgehog-like or spined) and even without a picture (insert), this would suggest that the label is incorrect.
- [4] This is where the SITF gets involved. Awarded as *Lepanthes cordeliae*, this turns out to be a very similar species — *Lepanthes sijmii*; differing in number of veins, floral details and the habit of the inflorescence.

Cattleya Wine

By Arthur E. Chadwick/Photographs by Arthur E. Chadwick unless otherwise credited

FINE WINE IS hardly my forte, but when a client handed me two fancy bottles called “Cattleya,” I was intrigued. What could the connection be between the “Queen of the Orchids” and fermented grapes? Certainly, both have an intense and loyal following but there must be something more.

My father was equally curious and had never seen anything like this. He has been involved with all things orchid since the 1940s and noted that the logo on the label was a botanically correct cattleya flower with all the proper parts and orientation. This artwork is refreshing given that graphic designers regularly take artistic liberty when drawing orchids and turn them into something unrecognizable.

Further examination of the bottle revealed a sophisticated design. The creamy white label featured an embossed metallic flower that was color coded such that a red bloom represented a red wine such as Pinot Noir or Syrah and a gold bloom stood for a Chardonnay. Elegantly written in large cursive letters was the word *Cattleya*.

The top of the container was just as refined. Stamped on the foil above the cork was another cattleya flower — also raised and colored — so that many bottles on a rack can be differentiated. This fine detail reinforces the horticultural branding and is reminiscent of the precision with which orchid breeders select and pollinate their hybrids.

I contacted the company, Cattleya Wines, and discovered that the owner and winemaker, Bibiana Gonzalez Rave, was, indeed, inspired by the famed orchid. She is from Colombia, where cattleyas grow wild and were so prevalent in the 1930s, that one species, *Cattleya trianae*, was selected as the national flower of the country. Her entire childhood was spent around orchids.

“I named my wine, Cattleya, to honor my native country, my family, and the experiences of my upbringing,” said Bibiana, who immigrated to the United States in 2007 after obtaining degrees in viticulture and work experience in France. She subtitles her wines with descriptions such as “Call to Adventure,” “Meeting the Mentor” and “The Reward” to coincide with her personal journey in winemaking.





Her private orchid collection is small but growing.

Cattleya trianae is not mentioned by name in any of Bibiana's wine literature but this is the flower that was used on the label. Orchid enthusiasts know of the wonderful qualities of the species — namely, that the flowers are well shaped and long lasting, and come in a wide range of delicate lavender shades. Beginning growers often start out with a phalaenopsis or two but, as their confidence builds, they slowly make their way over to the Cattleya Alliance culminating with species such as *C. trianae*.

Back home, Bibiana's parents grow exclusively cattleyas on their balcony in Medellín, Colombia. "They get rain when it rains, wind all the time, and sunlight in the morning but are protected from the afternoon sun," said her mother. The climate in Colombia is tropical and ideal for raising orchids. Hobbyists can duplicate these conditions by providing temperatures in the 60–90 F (15.6–32.2 C) range and filtered sunlight, such that the leaves are never warm to the touch.

Medellín became a horticultural sensation in the 1970s when it hosted the World Orchid Conference and is well known today for its garden attraction, Jardín Botánico, which features Orquideorama — a unique seven-tiered outdoor venue of tropical plants and orchids. The architectural marvel honors 19th century Colombian botanist, Jose Jeronimo Triana, whose name also graces



the national flower. August is peak tourist month in Medellín, as the city hosts a grandiose orchid display at the annual Feria de las Flores (Festival of Flowers).

Cattleya Wines score very high with sommelier reviews in leading trade magazines, who use phrases such as "luxurious on the palette" and of "incredible elegance and purity." Quite simply, I have found that sitting by the fire and sipping these silken beverages in the company of blooming orchids is a wonderful way to pass the long winter nights (www.cattleyawines.com).

- [1] Cattleya Wine's bottles are color-coded with an embossed metallic flower such that a red bloom represents a red wine and a gold bloom corresponds to a Chardonnay. The flower itself is botanically correct.
- [2] Cattleya Wines use real corks in their bottles which hobbyists can then use to pot their plants.
- [3] Cattleya wine is inspired by *C. trianae*, which grows wild in the jungles of Colombia and is their national flower. The species was discovered by Westerners in 1860. Shown in a group of the variety 'Powhatan'.
- [4] Owner and winemaker Bibiana Gonzales Rave (left) poses with a friend and holds a bouquet of orchids on her wedding day. [Courtesy of Bibiana Gonzales Rave]

— Arthur E. Chadwick is a coauthor of *The Classic Cattleyas*, now in its second printing, that describes the large-flowered species that make up today's hybrids. He is president of Chadwick & Son Orchids, which operates 11 greenhouses in Powhatan County, two retail stores in Richmond, Virginia and boards over 13,000 orchids for local clients. Arthur E. Chadwick along with his father A.A. Chadwick are regular contributors to *Orchids* magazine. His next book, *First Ladies and their Cattleyas: A Century of Namesake Orchids* is due out in November (email art@chadwickorchids.com; Website www.chadwickorchids.com).

Hope in the Aftermath of 2020s Guatemalan Storms

Text and photographs by Silvia and Laura Palmieri

WE REFLECT ON the state of the world as 2021 begins. Many of us may be wondering if our lives will go back to normal. The truth is, normal will never be the same after last year. Looking closer into nature around us and noticing that even though last year was challenging, we will always find a way to thrive under pressure. The world has experienced deep changes for many cycles and after this one we have seen many examples where the natural flow of life has been restored.

As orchid lovers, we have been in close dialogue with nature around us in a beautiful corner of the world called Lake Izabal in northeastern Guatemala on the Caribbean coast. At 31 miles (50 km) from the Atlantic Ocean and almost at sea level, this 148,263 acre (60,000 ha) gem is surrounded by mountains and rivers that feed it with crystal clear water, despite the trash that comes from the villages and destructive mining practices around the lake.

For 15 years we have explored and admired, and in some cases relocated the fallen epiphytes and lithophytes in their natural environment. Compelled to protect this piece of heaven, mother and daughter, and now with the next generation of young kids already interested in these adventures, we kayak every year around the coast, identifying and ensuring that the plants are protected in situ.

At the end of 2020, this area was devastated by two major storms, hurricanes Eta and Iota. The villages and towns were submerged under more than 78 inches (2 m) of water, causing the loss of many homes, crops and belongings. As we arrived in the area we observed the effect on the natural habitat and noticed that all the vegetation that had been hit with strong waves under the water had died. Our concern was for the beautiful orchids, aroids, bromeliads, tillandsias and many other tropical rainforest plants. As we made our way into the waters, the destruction was evident and we set our goal to look for the endemic *Sobralia decora* that inhabits these shores. We legally collected some keikis and a seed capsule to bring back to our greenhouse to reproduce and ensure that we can achieve our goal of preserving



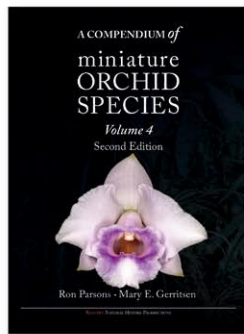
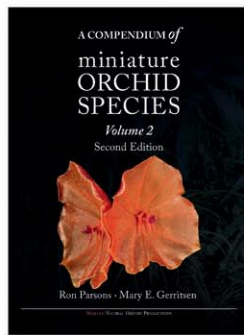
these unique plants. These beautiful plants are variable in purple tones, ranging from a pale lilac to a deep pink.

It was a relief to still find some specimens in the higher rocks and trees and mind-blowing to observe the quick regeneration already taking place. The ferns and mosses survived the flood because they are more closely related to their aquatic ancestors, and they have grown back on the rocks and trees, creating a bed for new seedlings that will come in the next months and years to colonize these now bare spaces. New bromeliad seedlings had already germinated in the higher parts and the orchids had already produced early capsules in their attempt to thrive in these conditions. Many *Brassavola nodosa* and *Nidema boothii* plants were blooming and others such as *Epidendrum nocturnum* and *Sobralia decora* were carrying many seed capsules. We have brought some of these capsules to propagate in our tissue culture lab and hopefully one day we will be able to return them to their habitat. *Laelia superbiens*, *Isochilus linearis*, *Epidendrum stamfordianum*, *Encyclia bractescens* and several *Oncidium* and *Gongora* species that had suffered severely, losing many of their old pseudobulbs are now making new growths. This analogy of our life as we reflect on the end of last year is a gentle reminder to trust nature,



- [1] *Brassavola nodosa* and *Laelia superbiens* surviving in a water loving tree overgrown by a ficus. Notice that there are no plants on the lower 6.6 feet (2 m) of the tree.
- [2] *Laelia superbiens* that remained submerged for two weeks.

even during chaotic times. What we have lost in an alarming way is our relationship with nature, if we want to avoid future pandemics we must redesign not only the way we relate to ourselves but all life on earth. As we look back on the losses of this past year we will find new ways to thrive and adapt in 2021 and beyond. May we all find comfort in our beautiful plant allies.



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Sylvia Strigari

Epidendrum pseudepidendrum

Text by Gustavo Rojas-Alvarado and Franco Pupulin/Watercolor by Sylvia Strigari

Tribe Epidendreae
Subtribe Laeliinae
Genus *Epidendrum* L.

Epidendrum pseudepidendrum Rchb.f., *Xenia Orch.* 1:160, t. 53. 1858. Replaced name: *Pseudepidendrum spectabile* Rchb. f., *Bot. Zeit. (Berlin)* 10(42):733. 1852.

TYPE: Panama. Cordillera von Chiriqui, 4000 ft, [J. Warcsewicz] 16 (holotype, W-49598).

A sympodial, caespitose epiphytic herb, up to 2 m tall. Roots basal, fleshy, thin, to 3 mm in diameter. Stems canelike, erect, not branching, terete at the base and laterally compressed toward the apex, 50–200 × 1.0–1.5 cm. Leaves 6–10, distributed throughout the apical ½ of the stems, articulate, alternate; sheaths tubular, laterally compressed, minutely striated, occasionally tinged purple; blade elliptic, acute, subcoriaceous, margin entire, 5–20 × 1.5–6.0 cm. Inflorescence apical, short, erect to rarely arching, racemose, producing new racemes over several years from the same peduncle, few-flowered, up to 9 cm long; peduncle thin, laterally compressed, 7 cm long, covered by 2–4 imbricating bracts, the lower sometimes similar to a spathaceous bract, tubular, acute, decreasing in size; rachis short, straight, to 1.5 cm long. Floral bracts much shorter than the ovary, narrowly triangular, acute, 4–15 mm long. Ovary terete, long, not inflated, smooth, 4.8–5.0 cm long. Flowers 1–6, simultaneous, resupinate, sepals and petals dark green, lip solid orange, lustrous, of a plastic consistency, column dark green with the apex red to violaceous. Sepals spreading, free, oblanceolate, acute, concave near the apex, 9-veined, fleshy, margin entire, spreading, 22–33 × 3–10 mm; lateral sepals somewhat oblique; petals spreading to slightly reflexed, free, linear-oblanceolate, acute, 3-veined, margin entire, spreading, 22–30 × 2–3 mm. Lip basally fused to the column, fleshy, convex, subquadrate to subrectangular, retuse, base truncate, margin crenate at the base to shortly lacinate at the apex, 14–35 × 15–23 mm; the disc with 3–5 longitudinal rounded keels, from the base to the apex, somewhat rugose. Column straight, to 20 mm long, 1 cm wide at the apex, clavate; clinandrium hood reduced, margin entire; rostellum apical, slit; nectary short, barely penetrating the ovary, not inflated, smooth. Anther

cap narrowly ovoid, 4-celled, whitish to yellowish, 3.7 × 2.3 mm. Pollinia 4, lunate-shape, strongly laterally compressed, 3 × 1 mm, the inner pair smaller, 2.2 × 0.7; caudicles laminar, somewhat shorter than the pollinia, apex tridentate.

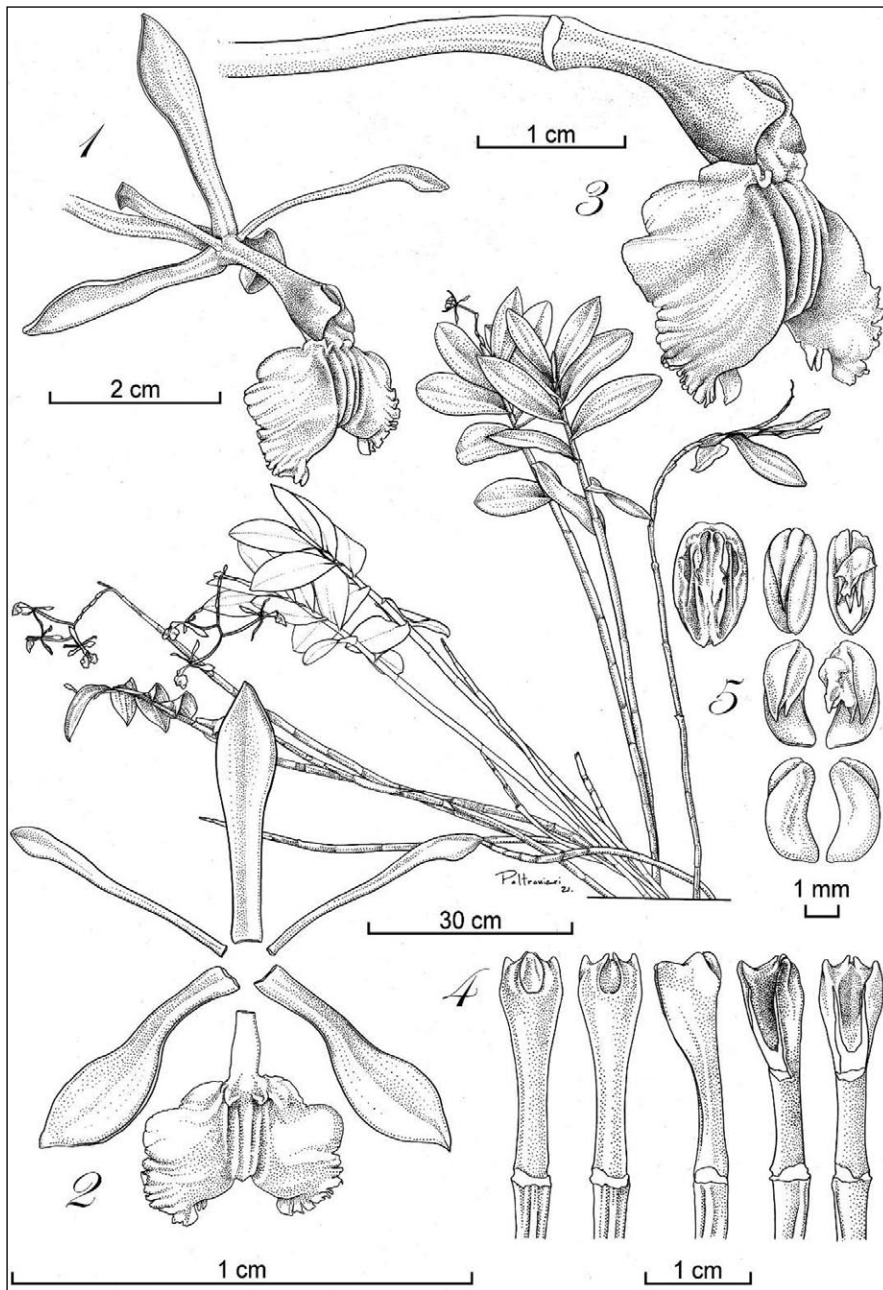
Epidendrum pseudepidendrum is popularly called the “false *Epidendrum*” by the meaning of its name formed from the Greek *pseudo*, false, resembling, and the generic name *Epidendrum*. It is an epiphytic, huge, canelike species endemic to the Central American isthmus, where it has been collected in Costa Rica and Panama from 200 to 1,700 m in elevation. In Costa Rica it is found along the pacific slopes of the Talamanca Cordillera, the southern Fila Costeña, Valle del General and Peninsula de Osa, and in Panama it is apparently restricted to the province of Chiriquí (Dressler 2003). The species has been reported flowering from December to April, producing new racemes over several years from the same peduncle.

Epidendrum pseudepidendrum is recognized by the tall plants and the flowers with a solid, lustrous, orange lip and a colorful column, basally green and apically tinged with red to violet. Within the mammoth genus *Epidendrum*, it belongs to the *Pseudepidendrum* group, which is characterized by caespitose, canelike plants, the leaves acute to acuminate, the usually apical inflorescence, the filiform petals and the lip usually trilobed, with the apical lobe often bifurcate; also characteristic of the group are the “bird-wing” type pollinia, unique to this complex of species. Among them, our species is closely related to others in the *Turialvae* Subgroup, which has racemose and few-flowered inflorescences on an elongate peduncle, producing new racemes over the years and thus becoming pluriracemose (Hágsater 2008).

In 1852, the renowned botanist Heinrich Gustav Reichenbach published an article dedicated to the new orchid species collected by the famous Polish botanist Jozef Warcsewicz during his expedition in Central America from 1845 to 1850 (Ossenbach 2010). In that article, Reichenbach first proposed *Epidendrum pseudepidendrum* under the new genus *Pseudepidendrum*, as *P. spectabile* Rchb.f. A few years later, in 1858, Reichenbach augmented the description of the species and illustrated

it for the first time in the first volume of his *Xenia Orchidacea* (Reichenbach 1858). Here, however, he treated the species under the genus *Epidendrum*, using *pseudepidendrum* as the specific epithet, due to the fact the epithet *spectabile* was already occupied in *Epidendrum* by a species described by Focke. Later, in 1885, Reichenbach described a new variety of this species, apparently from Colombia, as *Epidendrum pseudepidendrum* var. *auratum*. According to the author, this variety could be distinguished by the crimson disc of the semiquadrifid lip, and the broad margins of the lip of a deep orange color. *Varietas auratum* was later found to be a different species, which Eric Hágsater (1993) described as *Epidendrum xanthoanthinum* and that is currently only known from Colombia. It is distinguished from *Epi. pseudepidendrum* by the clearly trilobed lip (vs. subquadrate), with the middle lobe divided into two subquadrate, divaricate lobes, and the lemon-yellow margins of the lip with the disc and apex of the column purple (vs. orange lip, and the column apex purple). The diagnostic characters of *Epi. xanthoanthinum* are well represented in the type color-illustration at the herbarium of the Natural History Museum in Wien (W).

When Reichenbach published *Epi. pseudepidendrum* with its actual name, he illustrated part of the plant, including the stem, leaves and inflorescence, and a colored view of the flower, showing the characteristic solid orange color of the flower’s lip that distinguishes this species. The species was also illustrated in the *Epidendrum*’s volume (with several species now included in the genera *Encyilia* and *Prosthechea*) of Cogniaux’s *Dictionnaire iconographique des orchidées* (1897, pl. 4), with a beautiful watercolor painting made by the Belgian botanical artist Alphonse Goossens. The painting of Goossens is more detailed than the one done by Reichenbach for *Xenia*, and perfectly shows others diagnostic characters of the species, such as its concave sepals and the longitudinal keels of the lip. *Epidendrum pseudepidendrum* was also illustrated in 1967 by Rafael Lucas Rodríguez (2018, pl. 258) from a Costa Rican specimen. In his watercolor, Rodríguez also represented part of the stem and leaves with the terminal inflorescence and the lustrous



CAPTION TO THE B&W ILLUSTRATION

Epidendrum pseudepidendrum. The plant.

1. Flower.
2. Dissected perianth.
3. Column and lip, lateral view.
4. Column views.
5. Anther cap and pollinarium in several views.

All drawn from *Strigari s.n.* by Sara Poltronieri.

orange lip with the column, but he also included details of the anther cap, the pollinarium and a longitudinal section of the column, lip and ovary. The latter shows the typical nectary found in *Epidendrum*, which is concealed within the column and can be botanically defined as a cuniculus. This structure has been more frequently represented in modern days, both in botanical illustrations and photographic plates.

The size of the plant and the lustrous solid orange color present in the flower's lip makes this species very showy and horticulturally attractive. Interestingly, *Epidendrum pseudepidendrum* is frequently found in cultivation, but it is infrequently observed in the wild. The species has been

used in hybridization since the late 19th century, when *Epidendrum Langleyense* was obtained through a cross with *Epidendrum wallisii* in 1899. The next hybrid, *Epidendrum Cleon* (\times *radicans*) was registered in 1906. The popular hybrids *Epicattleya* Gerardus Staal and *Epicattleya* René Marqués were also produced using *Epidendrum pseudepidendrum* in the cross. The first hybrid was produced by crossing our species, as seed parent, with *Cattleya schilleriana*, resulting in a hybrid with very showy orange-yellow flowers tinged with red. *Epicattleya* René Marqués is made by the cross between *Epidendrum pseudepidendrum*, as seed parent, and the hybrid *Cattleya* Claesiana (*intermedia* \times *loddigesii*), resulting in a clear dominance of the *Epidendrum* parent, producing similar but larger plants, and similar green flowers, but with a showy solid yellow lip. Other well-known hybrids with *Epidendrum pseudepidendrum* are *Brassoepidendrum* Pseudosa (\times *Brassavola nodosa*) and *Epidendrum* Plastic Doll (\times *ilense*), registered in 1989. The bright orange color of *Epi. pseudepidendrum*'s shiny lip is apparently recessive and it is usually inherited by its hybrids as a warm and brilliant yellow, but the striking combination of the lip color and the violet-purple apex of the column is also transmitted to third-generation hybrids. An example are the very attractive flowers of *Sergioara* Yokosuka Story, the cross between *Epicattleya* René Marqués and a small-flowered, standard *Cattleya* hybrid with lemon yellow flowers. Even though the cross involves 15 *Cattleya* species, two species of *Rhynchoaelia* and one species of *Guarianthe*, and the contribution of *Epidendrum pseudepidendrum* is reduced to only 25% of the pool, its traits are still significant for the flower shape and color (Brydie 2020).

Van der Pijl and Dodson (1966) reported *Epidendrum pseudepidendrum* to be pollinated by hummingbirds, but no evidence was provided. Actually, the pollinator of *Epidendrum pseudepidendrum* has never been documented, and pollination by hummingbirds in any other species of the genus has not been reported so far.

Epidendrum pseudepidendrum may be grown mounted on cork, but for its tall size it is best planted in shallow, hanging pots or baskets filled with loose substrate, which allows quick root drying after watering. Suited for moderate to warm requirements, the species likes slightly filtered or scattered light, avoiding direct sunlight in the afternoon hours.

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Yellow Sticky Traps



YELLOW STICKY CARDS are widely used to attract and capture the adult life stage (winged) insect pests including fungus gnats, leafminers, shore flies, thrips, winged aphids and whiteflies. If you don't have a ready source of these cards, you can easily make yellow sticky traps using readily available materials. Simply take a yellow plastic cup, cover the outside with Vaseline or Tanglefoot® (sold in most garden centers and big-box stores) and place the cup upside down on a stake tall enough to put the cup opening at just above foliage level. The cups should be replaced periodically because of either trapped insects in the coating or loss of stickiness over time.

Thank you to Laura Newton, AOS Awards Registrar, for bringing this homemade alternative to my attention. — Ron McHatton (rmchatton@aos.org).

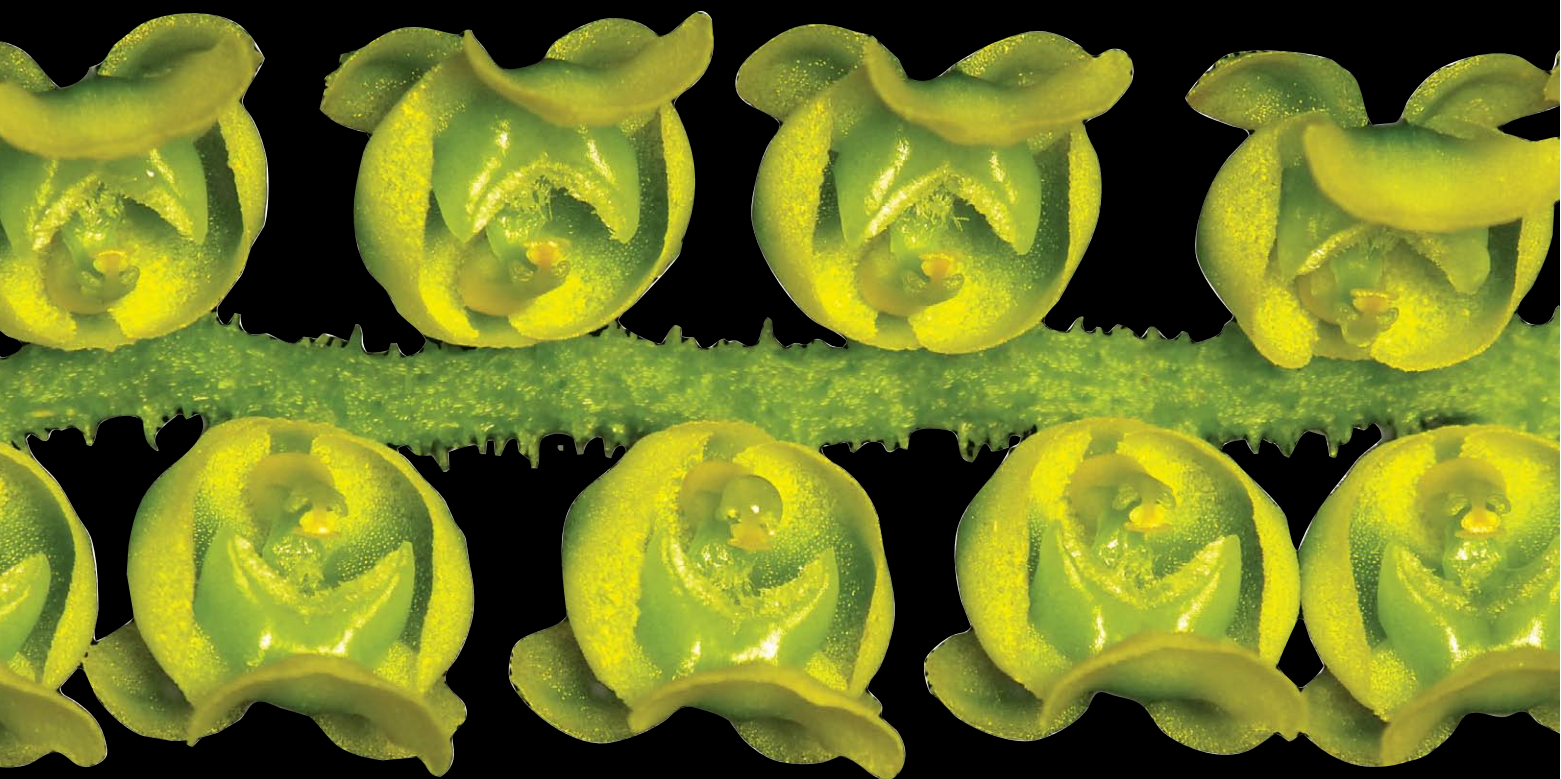
Selected Botanical Terms

acuminate – tapering to a slender point
 acute – pointed
 alternate – first on one side, then on the other in two ranks
 apical – at or from the top
 articulate – having a clear joint between two separable parts
 bidentate – appearing to have two teeth or small points
 bifurcate – forked
 bract – modified or specialized leaf
 caespitose – clumped or clumping
 caudicle – the slender stalklike appendage of pollen masses in orchids
 clavate – club-shaped
 clinandrium – cavity in the apex of the column
 concave – curved inward like the inside of a sphere
 convex – shaped like the outside of a sphere
 coriaceous – leathery
 crenate – scalloped
 cuniculus – tunnel
 divaricate – each internode diverging widely from the one before
 elliptic – oval
 endemic – occurring only in a particular country or area

entire – smooth
 epiphyte – a plant that uses another plant as a means of support
 filiform – like a filament
 imbricate – overlapping or layered as in shingles or scales
 inflorescence – the entire flowering structure including the peduncle and rachis
 lacinate – fringed
 laminar – platelike
 lanceolate – narrow oval tapering to a point at each end
 linear – slender, having the same breadth throughout except at the very ends
 lunate – crescent-shaped
 oblanceolate – broad, rounded apex and tapering base
 oblique – slanted; one side larger than the other
 peduncle – the part of an inflorescence before the rachis or section to which the flowers are attached
 quadrate – four-angled
 quadrifid – divided into four parts
 raceme – an inflorescence with separate flowers attached by short, equal stalks at regular distances along a central stem; racemes can be unbranched

(simple) or have one or many branches (paniculate)
 rachis – the part of the inflorescence to which the flowers are attached
 reflexed – abruptly bent backward
 resupinate – carrying the lip lowermost
 retuse – having a rounded apex with a small central notch
 rostellum – projecting part of the column
 rugose – ridged or wrinkled
 spathaceous – spathe-like; resembling the bract that encloses an inflorescence
 sub – somewhat less than; i.e., subspherical would refer to almost but not quite a sphere
 sympodial – producing new growths at intervals along a more or less horizontal rhizome
 terete – cylindrical or pencil-shaped
 tridentate – having three teeth
 trilobed – having three lobes
 truncate – terminated abruptly as if cut off
 viscidium – sticky pad to which orchid pollinia are attached.

Compendium of
**ORCHID
GENERA**



Peggy Alrich & Wesley Higgins

2020 UPDATES

Apetalanthe

Averyanov & Vuong

Taiwania, 65(4): 479 (2020).

Orchidoideae • Orchidaceae • Orchidinae

ETYMOLOGY: From the Latin for flowers without petals and Greek for lovely. Refers to the petals being absent during flowering.

GENERITYPE: *Apetalanthe gracilis* Averyanov & Vuong

Illustration: *Aetheorhyncha andreettae*



One terrestrial or lithophyte is found in mid to upper elevation among wet mossy, open areas on rocky outcrops in humid evergreen to broad-leaved forests of northwestern Vietnam (Lao Cai).

This slender, erect plant has a few tapering, narrow leaves that are finely papillulose along margin. The widely-spaced, few-flowered inflorescence its widely-opening, white flowers arranged on only one side of the rachis. The erect, boat-shaped dorsal sepal embraces the column, the veined lateral sepals are blunt to rounded at the tip and are papillulate along margins. The almost flat, spurred lip has multiple purple veins and is almost trilobed at the tip. The stout, erect column has short tubes embracing caudicles. Pollinia are club-shaped, consisting of sectile pollinium. ☼

Note: Morphologically close to both *Orchis* Linnaeus and *Ponerorchis* Reichenbach f.

Cymbilabia

D.K. Liu & M.H. Li

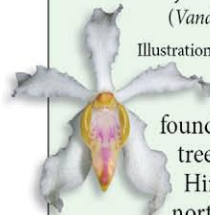
Molec. Phylogen. Evol., 145-106729: 7 (2020).

Epidendroideae • Vandaceae • Aeridinae

ETYMOLOGY: From the Greek *kymbes*, for boat, and *labia*, for labellum. Refers to the boat-shaped lip.

GENERITYPE: *Cymbilabia undulata* (Lindley) D.K. Liu & M.H. Li
(*Vanda undulata* Lindley)

Illustration: *Cymbilabia undulata*



One large sympodial epiphyte or lithophyte found in cool to cold, mid to upper elevation, oak trees to rocky, shrubby slopes from the eastern Himalayas (Sikkim), Nepal, Bhutan, Myanmar, northern Vietnam to southern China (Xizang to Yunnan). These often climbing plants have an elongate, branching stem completely subtended by over lapping, leaf-bearing sheaths. The oblong, unequally bilobed, distichous leaves are leathery. The long, rigid, bright green, few-flowered inflorescence has fragrant, waxy, white flowers. The small, oblong, trilobed lip, hinged to the base of the yellow, short, stout, wingless, footless column, has erect, laterally compressed mid lobes. The compressed or flattened midlobe has several basal calli and an upcurved tip. Pollinia 2, waxy, in unequal pairs, deeply grooved, stipe broadly oblong and has a prominent viscidium. ☼

Note: Taxonomists have known for several years that *Vandopsis undulata* should be moved creating a new genus. This presentation is comprehensive enough to accept *Cymbilabia*.

Blepharoglossum

(Schlechter) Lin Li

Plant Systematics and Evolution, 306 (3, 54): 6 (2020).

Epidendroideae • Malaxideae • Malaxidinae

ETYMOLOGY: Named for the geographic distribution of the species and the generic name *Pectinariella* in which they were previously placed.

LECTOTYPE: *Blepharoglossum latifolium* (Lindley) L. Li

(*Liparis latifolia* Lindley)

designated by van Royen, *The Alpine Flora of New Guinea*, 2: 697 (1979).

Illustration: *Blepharoglossum latifolium*



Twenty-six hot to cool growing, epiphytes or terrestrials are found in low to mid elevation shady hill scrub to rain forests and among rocky crevices of southern China (Hainan), Thailand, Malaysia, Indonesia to the Philippines and New Guinea. These plants have oblong, clustered, somewhat compressed pseudobulbs that are pale green and then age to pale yellow. Each is subtended by a solitary, leathery, oblong leaf that is channelled towards its base. The numerous-flowered inflorescence has spectacular, bright red-orange flowers with a deep cleft or notch lip that is often minutely hairy along its margins. Pollinia 4, in two pairs, bilaterally flattened, hard, waxy, each with a small viscidium. ☼

Note: The situation with *Liparis* and *Malaxis* is problematic. Both genera need to be combined to make all these species into a monophyletic genus; but many botanist today are not in agreement with this solution. At present, WCSP should hold off accepting any new genera in this group (*Blepharoglossum*) until someone publishes an article that covers all the current taxonomic problems.

Cymboglossum

(Schlechter) Rauschert

Feddes Repert. Spec. Nov. Regni Veg., 94: 446 (1983).

Epidendroideae • Podochileae • Eriinae

ETYMOLOGY: From the Latin for boat-shaped (*cymbo*) and lip (*glossus*). Refers to small, boat-shaped lip.

GENERITYPE: *Cymboglossum cymbidiifolium* (J.J. Smith) Rauschert
(*Eria cymbiformis* J.J. Smith)

Illustration: *Cymboglossum cymbidiifolium*



Ten sympodial epiphytes are found in low to upper elevation, mossy hill scrub and montane forests throughout Thailand, Malaysia, Indonesia (Sumatra and Borneo), and the Philippines. These plants have long, slender stems, often swollen at the base, subtended by distichous leaf bases or by pale brown sheaths throughout, each with several narrow leaves toward the tip and often arranged in a fan shape. The one to two, erect or arching, unbranched inflorescences, borne just below the stem tip, are either densely covered with fine hairs or are smooth. The numerous-flowered inflorescence has tiny to minute, white flowers arranged in tight whorls, with each whorl containing up to ten blooms. The outer flora surfaces are densely covered in fine hairs. The boat-shaped, obscurely trilobed or trilobed lip is hinged to the base of the short, club-shaped column foot. The flowers have a short column that is held at a right angle to the ovary. Pollinia 8, in two groups of 4, club-shaped, without caudicles, each group attached to a common viscidium. ☼

Note: Rauschert (1983) pointed out that *Cymboglossum* Brieger was invalid due to the citation of an incorrect and incomplete basionym.

Rauschert therefore corrected Brieger's mistake and validated the generic name *Cymboglossum*. Seidenfaden (1984) was aware of Rauschert's paper but maintained *Ascidieria* as a separate genus on account of its flowers having a very short, seemingly absent column foot and deeply saccate lip (vs. a distinct column foot, and nonsaccate lip). However, molecular analyses of the Tribe Podochileae published by Ng et al. (2018) showed that it is impractical to keep the two genera separate and that they should be merged. These authors overlooked the priority of *Cymboglossum*, so the requisite combinations have been made.

Seidenfaden. A note on the section *Cymboglossum* Schltr. of *Eria* (Orchidaceae), *Nord. J. Bot.*, 4(1): 39-45 (1984). And Ng et al., *Bot. J. Linn. Soc.*, 186: 179-201 (2018).

Espinhassoa

(Cogniaux) Salazar & J.A.N. Batista

Syst. Bot., 44(2): 291 (2019).

Orchidoideae • Cranichideae • Spiranthinae

ETYMOLOGY: Name refers to Serra do Espinhaço (Portuguese for spine or ridge), a mountain chain found in the Brazilian states of Minas Gerais and Bahia, that is renowned for its exceptionally high plant diversity and endemism.

LECTOTYPE: *Espinhassoa glaziovii* (Cogniaux) Salazar & J.A.N. Batista (*Stenorrhynchus glaziovii* Cogniaux) designated by Salazar & J.A.N. Batista, *Syst. Bot.*, 144(2): 291 (2019).

Illustration: *Espinhassoa glaziovii*



Two terrestrial species found in low to mid elevation, sandy, shallow stony ridges and rocky vegetation scrub of the Espinhaço mountain chain (Minas Gerais, Brazil). This erect plant has short to nonexistence stems with thinly textured leaves bunched at the base of the stem and characterized by veins without marginal vein loops. The erect, wiry few-flowered inflorescence has a densely to sparsely hairy rachis. The white flowers open simultaneously and are slightly fragrant during the night. The short, sepals are three-veined with widespread lateral sepals forming a prominent mentum. The erect, recurved petals are white with creamy veins. The strongly recurved entire lip embraces the column but is not attached to it. The tiny, slender column has a long foot. Pollinia 2, deeply cleft or split, brittle with an oblong, channeled viscidium. ☼

Note: This genus is accepted by the World Checklist of Selected Plant Families. WCSP is an international collaborative program that provides the latest peer reviewed and published opinions on the accepted scientific names and synonyms of selected plant families.

Glottisarcon

Szlachetko & Kolanowska

Mater. Orchid Fl. Colombia, 2: 312 (2019).

Orchidoideae • Cranichideae • Spiranthinae

ETYMOLOGY: From the Greek for tongue, lip (*glotta*) and Latin for fleshy (*sarkos*). Referring to the thick, fleshy lip.

GENERITYPE: *Glottisarcon weberbaueri* (Kraenzlin) Szlachetko & Kolanowska (*Spiranthes weberbaueri* Kraenzlin)

Illustration: *Glottisarcon weberbaueri*



Three terrestrial species found in mid to upper elevation, cold to cool growing, in shallow areas and scrub of northwestern Venezuela, and Colombia to Bolivia. These erect plants have short to nonexistence stems with several erect, basal, channeled, petiolate leaves bunched at the base of the stem and with faint green mottling. The erect, wiry numerous-flowered inflorescence has densely to sparsely hairy rachis. The strongly hairy, pale green flowers are slightly fragrant. The oblong sepals are densely coated with dark green spotting and lateral sepals converge forming a hood over the long, slender column. Even the long petals converge forming a shallow cup shape. The recurved, green petals have creamy veins. The short, broad lip is strongly recurved at the tip with a basal coating of strong white hairs. Pollinia 2. ☼

Note: Not currently accepted by World Checklist of Selected Plant Families.

Pridegonia Pupulin

Harvard Pap. Bot., 24(2): 331 (2019).

Epidendroideae • Cymbidieae • Zygopetalinae

ETYMOLOGY: Honors Alec Melton Pridgeon (1949-), a former Sainsbury Orchid Fellow at Jodrell Laboratory, Royal Botanic Gardens, Kew. And in recognition of his outstanding career in scientific orchidology.

GENERITYPE: *Pridegonia insignis* Pupulin

Illustration: *Pridegonia insignis*



One epiphyte found at mid elevation, tropical rain forest region of the Zumbi watershed in southern Ecuador. This erect plant has short stems, subtended by a few overlapping sheaths, each with oblong to narrowly ovate, indistinct petiole, green leaves. The slender solitary-flowered inflorescence borne from axil of the lower sheaths. The large, yellow flower is sparsely spotted pale brown, has an erect dorsal sepal with its lateral margins strongly inrolled and the long, narrow lateral sepals are also strongly inrolled. The petals are inserted along the margins of the column foot. The large obscurely trilobed lip has a tip that is deeply notched, wavy margins and basal disc with a low, flat, thin layered callus. The slightly curved, pale yellow column has a long, distinct foot with inconspicuous wings. Pollinia 4, in two subequal pairs, attached to a viscidium that has two narrow, short teeth. ☼

Note: Not currently accepted by World Checklist of Selected Plant Families.

Paorchis

M.C. Pace • *Brittonia*, 72(3): 262 (2020).

Orchidoideae • Cranichideae • Goodyerinae

ETYMOLOGY: A combination Thai *Pā* (forest) for forest and from the Greek ὄρχις (*órkhis*) for orchid. Referencing the closed forest habitat of this genus.

GENERITYPE: *Paorchis thailandica* (Seidendacen) M.C. Pace
(*Goodyera thailandica* Seidenfaden)

Illustration: *Goodyera thailandica*



One sympodial terrestrial found low to mid elevation seasonal evergreen forests and hill evergreen forests on granite or limestone outcroppings of southern China (Yunnan), Thailand (Khao Yai National Park) to north-western Vietnam. These erect plants have slender, glossy stems, subtended by a few ascending, petiolate, light green leaves with petiolate bases. The erect scape is pale pink-purple and covered with short hairs. The few-flowered inflorescence has tiny to minute, pale green-white flowers slightly roundish and not opening widely. The hairy lateral sepals (slight incurved) and dorsal sepal converge forming a hood over the ax-shaped petals that are united along their upper third. The white, boat-shaped lip has a downward curved tip and covered with numerous yellow, hair-like papillae. The short, club-shaped column foot. The flowers have a short, simple, pale-green column that is stout-footed. Pollinia, no data provided ☼

Note: This proposal is premature. The molecular results are variable and poorly supported. Until there is clarity where these species go, making taxonomic changes now is unwise.

Paraprasopphyllum

M.A. Clements & D.L. Jones

Austral. Orchid Rev., 84(5): 31 (2019).

Orchidoideae • Diurideae • Prasophyllinae

ETYMOLOGY: From the Greek *para* alongside, beside or close by as a prefix to the genus *Prasophyllum*. Refers to a close proximity of the two groups of species.

GENERITYPE: *Paraprasopphyllum patens* (R. Brown)
M.A. Clements & D.L. Jones (*Prasophyllum patens* R. Brown)

Illustration: *Paraprasopphyllum patens*



One hundred twenty-seven terrestrials found in low elevation grassy plains and woodland scrub of southern to eastern Australia with two species in New Zealand. These tall, erect plants have a short, slender stem, subtended by a solitary, hollow leaf that is longer than it is wide. The erect few- to numerous-flowered inflorescence that emergences through a thin area on the distal part of the leaf. The dull colored (green, brown, blackish, white to pastel) flowers are often sweetly fragrant. The dorsal sepal is usually broader than the erect or incurved lateral sepals and the petals are dissimilar in size, shape and color than the sepals. The simple lip is rigidly attached by an immobile claw to the column base. The short, footless column is nearly as long as it is wide. Pollinia 4, in two parts, attached to a terminal visidium, pollen grains in groups or sets of four. ☼

Note: Not currently accepted by World Checklist of Selected Plant Families.

The Botanists

Updated

Averyanov, Leonid Vladimirovich (1955-) (Aver.)

☞ **Vuong**, Truong Ba (1988-) (Vuong)

☼ *Apetalanthe*

Clements, Mark Alwin (1949-) (M.A.Clem.)

☞ **Jones**, David Lloyd (1944-) (D.L.Jones)

☼ *Abaxianthus*, *Achlydosa*, *Acianthopsis*, *Aporopsis*, *Blepharochilum*, *Bouletia*, *Cannaeorchis*, *Carpomorphis*, *Cepobaculum*, *Ceratobium*, *Chromatotriccum*, *Dendrobates*, *Distichorchis*, *Durabaculum*, *Eleutheroglossum*, *Eurycaulis*, *Exochanthus*, *Fruticicola*, *Gastrosiphon*, *Leioanthum*, *Maccraitha*, *Oxyglossellum*, *Papulipetalum*, *Paraprasopphyllum*, *Sarcocadetia*, *Serpenticaulis*, *Tetrabaculum*, *Tetrodon*, *Vappodes*

Dodson, Calaway Homer (1928-2020) (Dodson)

☼ *Benzingia*, *Dressleria*, *Embreea*, *Hirtzia*, *Raycadenco*, *Suarezia*, *Vasquezella*

Dressler, Robert Louis (1927-2019) (Dressler)

☼ *Acrorchis*, *Aetheorhyncha*, *Daiotyla*, *Echinorhyncha*, *Euryblema*, *Ixyophora*, *Salpistele*, *Stenotyla*

Hallé, Nicolas (1927-2017) (N.Hallé)

☼ *Clematepistephium*, *Tartarinorchis*

Joseph, J.E. (1928-2000) (J.Joseph)

☞ **Vajravelu**, Erusappan (1936-2020) (Vajr.)

☼ *Proteroceras*

Li, Lin (1970-) (L.Li)

☼ *Blepharoglossum*

Liu, Ding-Kun (1995-) (D.K.Liu)

☞ **Li**, Ming-He (1985-) (M.H.Li)

☼ *Cymbilabia*

Luer, Carlyle August (1922-2019) (Luer)

☼ *Aberrantia*, *Acinopetala*, *Alaticaulia*, *Ancipitia*, *Andinia*, *Andreettaea*, *Antilla*, *Apoda-Proreptentia*, *Arelidia*, *Arthrosia*, *Atopoglossum*, *Barbrodria*, *Brachycladium*, *Buccella*, *Byrsella*, *Condylago*, *Cucumeria*, *Didactylus*, *Dondodia*, *Draconanthes*, *Dracontia*, *Dracula*, *Dresslerella*, *Dryadella*, *Effusiella*, *Elongatia*, *Empusella*, *Epibator*, *Expedicula*, *Fissia*, *Fronitaria*, *Gerardoa*, *Incaea*, *Jostia*, *Lalexia*, *Lindleyalis*, *Loddigesia*, *Lomax*, *Luzama*, *Madisonia*, *Megema*, *Mixis*, *Muscarella*, *Niphantha*, *Ogygia*, *Ophidion*, *Orbis*, *Panmorphia*, *Petalodon*, *Proctoria*, *Pteroon*, *Regalia*, *Reichantha*, *Restrepiopsis*, *Ronaldella*, *Rubellia*, *Sarcinula*, *Sarracenella*, *Spectaculum*, *Spilotantha*, *Streptoura*, *Sylphia*, *Teagueia*, *Tigivesta*, *Triaristella*, *Tribulago*, *Trichosalpinx*, *Tridelta*, *Triotosiphon*, *Trisetella*, *Unciferia*, *Unguella*, *Vestigium*, *Xenosia*, *Zahleria*, *Zootrophion*

Pace, Matthew C. (1999-) (M.C.Pace)

☼ *Paorchis*

Pupulin, Franco (1960-) (Pupulin)

☼ *Pridgeonia*

Rauschert, Stephan (1931-1986) (Rauschert)

☼ *Amblyanthe*, *Cymboglossum*, *Cyrtidiorchis*, *Deiregynopsis*, *Evrardianthe*, *Herpetophytum*, *Herschelianthe*, *Loxomorphis*, *Pachystelis*, *Pinelianthe*, *Pseudorleanesia*, *Triaristellina*

Salazar, Gerardo Adolfo (1961-) (Salazar)

☞ **Batista**, João Aguiar Nogueira (1962-) (J.A.N.Bat.)

☼ *Espinhasos*

Szlachetko, Dariusz Lucjan (1961-) (Szlach.)

☞ **Kolanowska**, Marta (1986-) (Kolan.)

☼ *Glottisarcon*, *Valdiviesoa*

Dated December 30, 2020

The Year That Gave Us Pause

The 2020 First Class Certificates

BY CAROL KLONOWSKI



DORMANCY, IN THE world of orchids, refers to a pause in the growth cycle. Many genera pause their growth until the return of rain, warmer temperatures, or longer daylight. While these orchids rest, others keep growing and flowering, allowing orchid shows and society meetings to have a splash of color and fragrance all year round. In 2020, we had a reversal of this process: our orchid world went dormant while our plants kept growing and blooming, even as their owners waited for their own world to reawaken.



Carol Klonowski

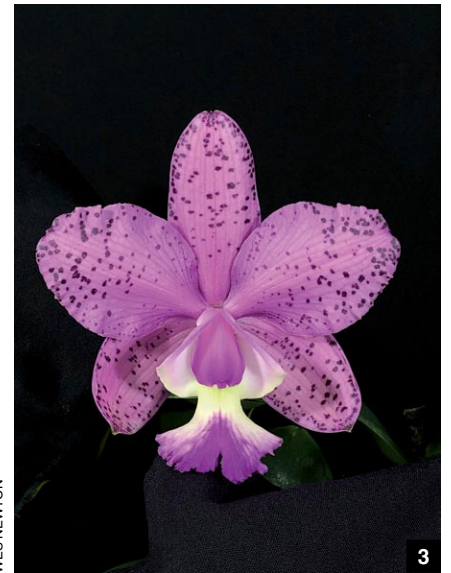
Monthly judging sessions and shows scheduled early in 2020 were the last time we saw normalcy in the orchid world. From locked-down meeting venues and postponement of the 23rd World Orchid Conference in Taiwan, to the cancellation of the Santa Barbara Orchid Show literally as judging was poised to start, mid-March became the start of the dormancy that changed our orchid world.

Judges explore that world by evaluating a flower for form and conformation: fullness, flatness and balance between the flower segments. Is the color clear, without breaks, and any markings distinct? The overall habit, floriferousness, size and substance and texture of the flower also contribute to a total score for the flower's quality. The average of the team's scores must be 89.5 points or higher on a scale of 100 to receive a First Class Certificate, the AOS's highest flower quality award.

In our OrchidPro gallery, we see that only 37 FCCs were granted in 2020, a 55% decrease from 2019. Twenty-six of these were awarded during the "before times" of orchid normalcy, from January 11 up to March 14. From mid-March through June 13, there were no flower quality awards at all, the largest drought in recent memory.

Zoom meetings became our way of gathering but precluded the entry and judging of individual plants. Then signs of renewal began. Here and there, judging centers slowly reopened, and with them, in the last half of 2020, came the remaining 11 FCCs.

Two plants tied for the highest point score of 94 points. The first is *Cattleya* Brabantiae 'Frank Smith', a bifoliate cattleya primary hybrid of *Cattleya aclandiae* and *Cattleya loddigesii*. Exhibited by Krull-Smith, it got the nod from the judges at the Tampa Bay Orchid Society Show in early March. Two large, full, evenly spotted, pink flowers



pleasantly contrast with the bright fuchsia lip from the *aclandiae* parent. Two other cultivars from this grex, 'Jordon Winter' and 'Drey Winter', also received FCCs, 92 points each, in the same show.

The other high scorer is *Papilionanda* Ben Fragrance 'Garrett's Gold Medal' (*Vanda Memoria* Thianchai × *Papilionanda* Mimi Palmer). It received 94 points for 12 full, flat flowers perfectly spaced along a single inflorescence. The natural spread of (6.4 × 6.0 cm) speaks to the roundness of the bright-yellow flowers, with cordovan stippling evenly spread on the sepals and

- [1] *Cattleya* Brabantiae 'Frank Smith' FCC/AOS (*aclandiae* × *loddigesii*); exhibitor: Krull-Smith; photographer: Wes Newton.
- [2] *Cattleya* Brabantiae 'Jordon Winter' FCC/AOS; exhibitor: Krull-Smith.
- [3] *Cattleya* Brabantiae 'Drey Winter' FCC/AOS; exhibitor: Krull-Smith.
- [4] *Papilionanda* Ben Fragrance 'Garrett's Gold Medal' FCC/AOS (*Vanda Memoria* Thianchai × Mimi Palmer); exhibitor: Sharon and David Garrett.

petals. It was exhibited by Sharon and David Garrett at the Ridge Orchid Society Show in Lakeland, Florida.

Slipper orchids landed nearly a third of the FCCs: five paphiopedilums and six phragmipediums. Paphiopedilums tend to attract many awards due to robust hybridization and distinctive characteristics in the flowers among the many sections of the genus. And in 2020, we have several multifloral hybrids, an elegant Maudiae type, and a sequential bloomer among the winners. By contrast, the phragmipediums here are all hybrids having one species, *Phragmipedium besseae*, comprising half of the parentage in each cultivar.

Highest score in this group goes to *Phragmipedium* Jason Fischer (Memoria Dick Clements \times *besseae*) 'World on Fire', 93 points, exhibited by Orchids Limited at the Orchid Society of Minnesota show. This cross is legendary; since 1998, AOS records show 20 FCCs and over 60 Awards of Merit (an Award of Merit is given to point scores between 79.5 and 89.4). 'World on Fire' continues the quality with deep-red color saturation and well-balanced flower segments in a single flower with extremely firm substance.

Another stunning red phragmipedium on our list is *Phragmipedium* Rosalie Dixler 'Poe Creek' (*besseae* \times *kaieteurum*), with a score of 92 points from the National Capital Judging Center. This is a less commonly seen primary cross with its first FCC. The *kaieteurum* parent (found in Suriname and Guyana and considered by some to be a synonym of *Phragmipedium lindleyanum*) has a greenish flower with red stripes and blotches in the lip. It contributes the stripes that can be seen through the dark-red color on the flower and the heavy spotting within the pouch. It was exhibited by Woodstream Orchids.

For paphiopedilums, top score of 92 points went to *Paphiopedilum victoria-regina* 'Margaux' at the Pacific Orchid Exhibition in San Francisco. Its single flower on this sequentially blooming species measured an impressive 10.0 \times 9.5 cm, and the judges also liked the pleasingly twisted petals and clear markings. The first FCC for this species, it was exhibited by David Sorokowsky of Paph Paradise.

Paphiopedilum Tristar Mabo 'Crystelle' (Macabre \times Hsinying Web), a Maudiae type, received 90 points for its spectacular vinicolor/coloratum flower on a tall, 32.5-cm stem. This is also the first FCC for this cross of two popular parents, both with great color, shape and size, exhibited by Krull-Smith.



5

BRYAN RAMSAY



6

BILL JOHNSON



7

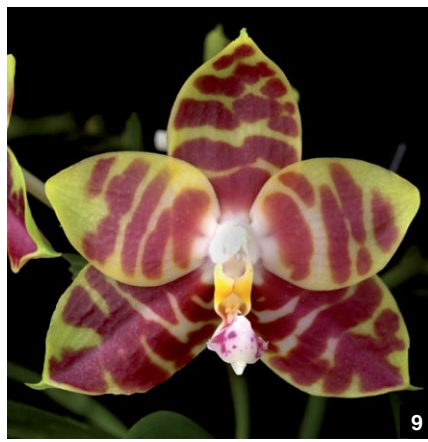
WES NEWTON



8

KAY CLARK

From the *Coryopedilum* section of the genus, *Paphiopedilum* *Crowning Glory 'Nike'*, 91 points, carries only four flowers, but they are not your usual multifloral hybrid blooms. Exhibited by Ernie Barham, this cross of *Paphiopedilum* (Johanna Burkhardt × *sanderianum*) has dark, rich-mahogany color in the dorsal, pouch and markings, showcasing *Paphiopedilum anitum* in the background of Johanna Burkhardt. But it is the 41-cm-long, well-held, pleasingly twisted petals from the *sanderianum* parent that catches your eye. They give a vertical natural spread of 47 cm and lend an intriguing overall display.



DAVID GOULD

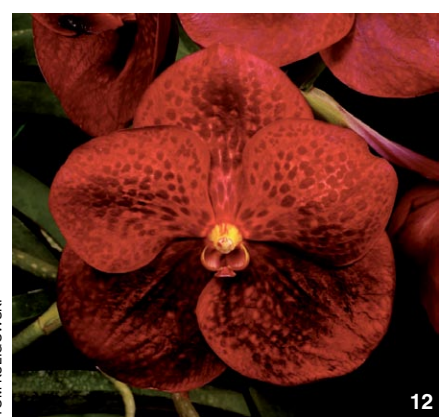


KEN JACOBSEN

Normally a genus that has multiple FCCs in any given year, *Phalaenopsis* had just one: *Phalaenopsis* *Yaphon Sir 'Yaphon'*, 92 points, exhibited by Big Leaf Orchids at the Greater North Texas Orchid Society Show in Dallas. With six flowers and four buds on five sequentially bloomed inflorescences, this cross of *Phalaenopsis* *Gelblieber* × *Phalaenopsis* *Macassar* has 50% *Phalaenopsis amboinensis* in its background, accounting for the prominent, clearly defined concentric markings on the flowers.



CARMEN JOHNSTON



TOM KULIGOWSKI

Nearly as good as it gets: *Cymbidium* *Geno's Gem 'Emerald Fire'* (Mad Hatter × *Kalimpong*) received not only an FCC of 91 points but a Certificate of Cultural Excellence of 97 points (CCEs are awarded to the exhibitor for a point score of 89.5 to 100).



TOM KULIGOWSKI

The first FCC for a non-Jensoa (Asian)-type cymbidium in 5 years, it was, surprisingly, awarded in Florida and not on the West Coast. The plant, upgraded from an AM in 2019, carries 680 flowers on 30 inflorescences in a 14.2-inch (36-cm) pot. How did this large plant arrive intact at the judging table at the Florida North-Central judging in Tampa? Ask the exhibitor, Krull-Smith.

An Award of Quality is given to a cross entered with at least a dozen plants that have been granted at least one flower-quality award. *Vanda* *Nanette Zapata* (*Vanda* *Barbara Prozillo* × *Adelaide Skoglund*) overachieved with this requirement by winning not only two FCCs, but three AMs as well. Exhibited by RF Orchids, Inc. at the West Palm Beach Judging Center, the cultivar 'Crownfox Cabernet' received 92 points and 'Crownfox Carmine' received 90 points. Both carried eight round, richly colored, red flowers on 15.75-inch (≥40-cm) inflorescences with dark, wine-red markings.

for 2020. Enjoy them and know that quality orchids are still out there, waiting for the return of our shows, society meetings and judging sessions. And waiting for the orchid world to awaken from dormancy!

— Carol Klonowski (email: cklonowski@aol.com).

- [5] *Phragmipedium* *Rosalie Dixler 'Poe Creek'* FCC/AOS (*besseae* × *kaieteurum*); exhibitor: Woodstream Orchids.
- [6] *Phragmipedium* *Jason Fischer 'World on Fire'* FCC/AOS (Dick Clements × *besseae*); exhibitor: Orchids Limited.
- [7] *Paphiopedilum* *Tristar Mabo 'Crystelle'* FCC/AOS (*Macabre* × *Hsinying Web*); exhibitor: Krull-Smith.
- [8] *Cymbidium* *Geno's Gem 'Emerald Fire'* FCC-CCE/AOS (Mad Hatter × *Kalimpong*); exhibitor: Krull-Smith.
- [9] *Phalaenopsis* *Yaphon Sir 'Yaphon'* FCC/AOS (*Gelblieber* × *Macassar*); exhibitor: Big Leaf Orchids.
- [10] *Paphiopedilum* *victoria-regina 'Margaux'* FCC/AOS; exhibitor: Dave Sorokowski, Paph Paradise.
- [11] *Paphiopedilum* *Crowning Glory 'Nike'* FCC/AOS (Johanna Burkhardt × *sanderianum*); exhibitor: Ernie Barham.
- [12] *Vanda* *Nanette Zapata 'Crownfox Cabernet'* FCC/AOS (*Barbara Prozillo* × *Adelaide Skoglund*); exhibitor: R.F. Orchids, Inc.
- [13] *Vanda* *Nanette Zapata 'Crownfox Carmine'* FCC/AOS; exhibitor: R.F. Orchids, Inc.



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WES NEWTON



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WES NEWTON



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WES NEWTON



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WES NEWTON



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WES NEWTON



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TOM KULIGOWSKI



WES NEWTON

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WES NEWTON

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KAY CLARK

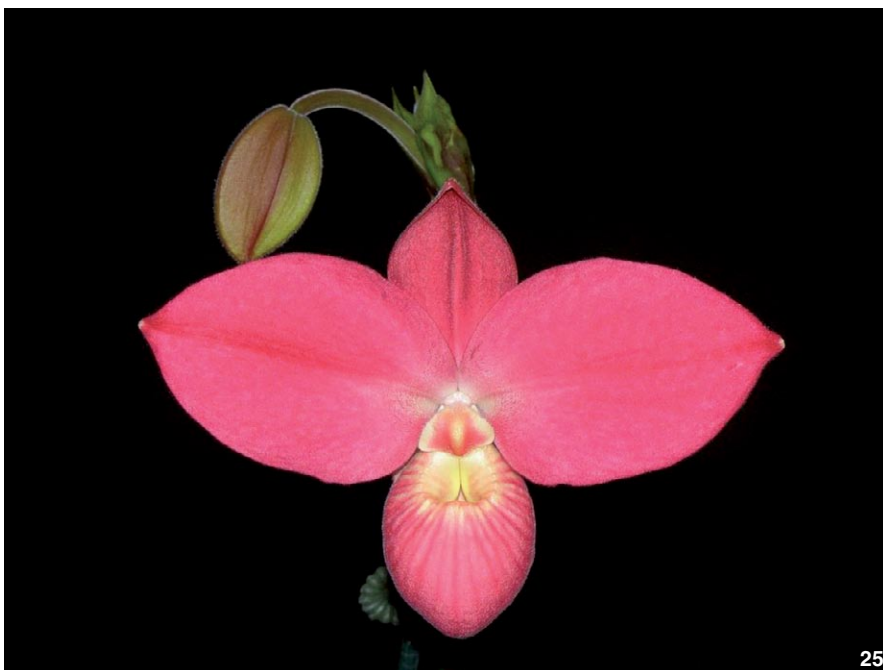
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- [14] *Rhynchostylis gigantea* 'Frank Smith' FCC-CCM/AOS; exhibitor: Krull-Smith.
- [15] *Rhynchostylis gigantea* 'Jim Krull' FCC-CCM/AOS; exhibitor: Krull-Smith.
- [16] *Catasetum* Joseito's Moonlight 'Crystelle' FCC/AOS (tenebrosum x Double Down); exhibitor: Krull-Smith.
- [17] *Paphiopedilum* Krull's Lady 'Theresa Hill' FCC/AOS (Lady Isabel x Booth's Stone-Lady); exhibitor: Krull-Smith.
- [18] *Cattleya* Lacey Michelle Matherne 'Crystelle' FCC/AOS (*aclandiae* x *tigrina*); exhibitor: Krull-Smith.
- [19] *Vanda* Matthew Majewski 'Sharon Garrett' FCC/AOS (Onomea x Peggy Foo); exhibitor: Sharon and David Garrett.
- [20] *Rhynchostylis gigantea* 'Crownfox Confetti' FCC/AOS; exhibitor: R. F. Orchids, Inc.
- [21] *Fowlieara* Rhizome Cowgirl 'Little Heifer' FCC/AOS (*Brassocatanthe* Jack Sloniker x *Rhyntonleya* Sugita Spots); exhibitor: Bill Nunez.
- [22] *Vanda christensoniana* 'MV Pink Clouds' FCC-CCE/AOS; exhibitor: Stuart Henderson.
- [23] *Bulbophyllum* Wes Newton 'Big Bear' FCC/AOS (Laura Newton x *echinolabium*); exhibitor: Ryan Kowalczyk.
- [24] *Paphiopedilum* Leonard's Pride 'Petrus' FCC/AOS (Leonard Smith x *rothschildiana*); exhibitor: Dave Sorokowski, Paph Paradise.
- [25] *Phragmipedium* Fritz Schomburg 'Nicole Ashley' FCC/AOS (*kovachii* x *bessae*); exhibitor: Roy and Lauren Lenz.



KATHY BARRETT

24



CHERYL ERINS

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TOM KULIGOWSKI



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GLEN BARFIELD

[26] *Vanda* Kristina Gossman Ducanes 'Crownfox Golden Yellow' FCC/AOS (Bronze Butterfly × Memoria Thianchai); exhibitor: R. F. Orchids, Inc.

[27] *Masdevallia* O'Brien's Passion 'Only One' FCC/AOS (Annette Hall × *coccinea*); exhibitor: Okika Ltd., Glen Barfield.

[28] *Cattleya walkeriana* (Flamea group) 'Orchid Eros Flare' FCC/AOS; exhibitors: Ben Oliveros and Orchid Eros.

[29] *Aerides lawrenceae* 'Crownfox Velvet' FCC/AOS; exhibitor: R. F. Orchids, Inc.

[30] *Laelia anceps* 'SanBar Marble King' FCC/AOS; exhibitor: William Rogerson.

[31] *Aerides lawrenceae* 'Crownfox Tropical Delight' FCC/AOS; exhibitor: R. F. Orchids, Inc.

[32] *Phragmipedium* Fox Valley Fireball 'Wacousta' FCC/AOS (Barbara LeAnn × Rosalie Dixler); exhibitor: Dorothy Potter Barnett.

[33] *Dendrobium* Memoria Arnaldo Astacio-Diaz 'J.A.R.R.' FCC/AOS (Mah Boh Tan × Christabella); exhibitor: José Román.

[34] *Cattleya dowiana* var. *aurae* 'You Are My Sunshine' FCC/AOS; exhibitor: Ben Oliveros, Orchid Eros.



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GLEN BARFIELD





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[35] *Phragmipedium* Fritz Schomburg
'Eulachon Moon' FCC/AOS (*kovachii*
× *besseae*); exhibitor: John McCallen;
photographer: Chaunie Langland.

[36] *Phragmipedium* Bloody Mary
'Chuck's Happy Hour' FCC/AOS (An-
dean Fire × China Dragon); exhibitor:
Chuck Acker; photographer: Scott
Weber.

[37] *Guarianthe skinneri* 'Alejandro Ro-
driguez Cheung' FCC/AOS; exhibitor:
Alejandro Rodriguez; photographer:
Jorge Enrique Cespedes.

Virtual Judging

An Educational Exercise

BY SERGEY SKOROPAD

LAST YEAR WAS unprecedented — global pandemic, social distancing.... Who would have thought we would be in virtual mode for such a long time!

I started the virtual orchid judging educational exercise (VOJEE) after monthly judging at the Mid-Atlantic Judging Center in Philadelphia was canceled in March 2020 due to the COVID-19 pandemic. I came up with an idea to “judge” virtually via email using plant pictures and measurements. Like many people, I was stuck at home and missed our monthly meetings, judging events and, most importantly, constant interaction with fellow orchidists. I started with a simple communication via email — exhibitors would send three to four pictures of a blooming orchid along with flower measurements and ask participating judges their opinions about the featured plant. Obviously, such judgments cannot count, but they provide an opportunity for us to maintain our skills and continue to see plants. At the time, I did not realize that this virtual exercise would continue for such a long time. I thought it would only be a few months!

So, to recap, the VOJEE was created to accomplish the following:

- help maintain the skills of certified AOS judges and students by learning and practicing using a variety of resources including but not limited to OrchidPro, the Royal Horticultural Society International Orchid Register and the World Checklist of Selected Plant Families (sponsored by the Royal Botanical Gardens, Kew);
- unite AOS judges by allowing them to participate regardless of the judging center location and to invite orchid experts and orchid judges from around the world;
- serve the local and remote orchid communities by allowing nonjudge exhibitors and interested parties to submit plants and participate in all discussions and
- virtually judge plants with short-lived flowers that could be difficult to display at in-person orchid judgments.

The exercise has the following



Virtual Orchid Judging Exercise

Welcome to Virtualorchids.org!

Virtual Judging is an educational exercise and is not considered AOS official judging.

View current candidate and latest plants (please click on plant's picture to see full details)

Click on Archive to see previously exhibited plants.



Week 43 Plant 3

Paphiopedilum insigne
var. *sanderiae*



Week 43 Plant 2

Paphiopedilum villosum



Week 43 Plant 1

Paphiopedilum fairrieianum



Week 42

Angraecum eburneum subsp. *superbum*



Week 41

Phalaenopsis Friend's Princess



Week 40

Catasetum Russ Wood



Week 39

Maxillaria sophronitis



Week 38

Cattleya Cornelia (1893)

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1

guidelines: First, the exhibitor sends at least three pictures, a video and plant measurements and all required information via email. The new candidate is then posted on virtualorchids.org on Monday of each week and all participants are notified via email. Participants then review all plant information using appropriate tools and send their

[1] The home page of virtualorchids.org.

comments via email by Sunday of that week. Certified judges and students include their recommendation for nomination, if any, of the award type and point range (if applicable). Finally, comments are summarized and posted on virtualorchids.org each Sunday night.

It is a fairly involved process: selecting plants, collecting multiple images to view the flower and plant from multiple angles, posting videos, checking all measurements and comparing plants against published records, and gathering descriptions of the plants. Selecting potential plants is one of the integral parts of this exercise. The quality and variety of the plants is very important to keep interest in the exercise and provide an opportunity for students to develop their skills.

The first plant, *Chysis bractescens*, was distributed by email on March 25, 2020, to all the certified judges and students of the Mid-Atlantic Judging Center. As of the first of February 2021, the VOJEE is in its 44th week (10th month) having examined over 60 plants and it is still going strong! In December of 2020, I launched virtualorchids.org, where we display new plants submitted for this exercise, comments from all participants and an archive for previously submitted plants, replacing the original limited email distribution. In the past 10 months, 20 different genera have been submitted for this exercise with the *Cattleya* Alliance (20 plants) and *paphiopedilums* (13 plants) dominating. Over 40 percent (28 out of 63) of the plants have been species, some of which rarely seen at judging tables (*Sobralia*, *Isochilus*, *Zootrophion*).

As I mentioned before, having a large variety of exhibited plants is very important. I am always trying to cover all major orchid genera and select only the best “award quality” plants. Additionally, some plants may be selected for educational reasons. For example, *Rhyncholaeliocattleya* Thorntonii (*Rhyncholaelia digbyana* × *Cattleya gaskelliana*) was exhibited in week 10 (May 26, 2020). This primary hybrid was originated and registered by T.W. Thornton in 1897 but has no AOS awards. Another example is *Epicattleya* A.M. Gentle (*Cattleya labiata* × *Epidendrum ciliare*). There was an interesting discussion by participants on how to judge these types of plants, including possibly creating a new type of AOS award in the future to recognize these beautiful flowers.

The high quality of submitted plants is supported by the number ultimately nominated. Out of the 63 plants submitted for this exercise, 45 plants (71 percent) were ultimately nominated for an award. Although flower-quality award nominations dominated (34 awards), all types of awards were considered — cultural, horticultural and even a Judges’ Commendation. Finally, over 90 percent



DAVID ROSENFELD



WILLIAM STENDER

of awards have been scored within a six-point spread; a very impressive feat.

One of the main goals of this exercise is to serve our local orchid communities (orchid societies). Anyone can exhibit a plant regardless of judging center location or if you are a judge, an expert or just an interested grower. Out of 24 exhibitors, 11 have been nonjudge exhibitors and the remaining 13 either AOS or Australian Orchid Council (AOC) judges. The number of participants has grown from 12 (Mid-Atlantic judging center only) to over 100 by end of 2020, including accredited, associate and student judges as well as world-recognized orchid experts and nonjudge exhibitors. Thirty-seven AOS

- [2] Week 1 — *Chysis bractescens* submitted by David Rosenfeld.
- [3] Week 10 — *Rhyncholaeliocattleya* Thorntonii (*Rhyncholaelia digbyana* × *Cattleya gaskelliana*) submitted by William Stender.
- [4] Week 24 — *Sobralia atropubescens* f. *aurea* submitted by Sergey Skoropad.
- [5] Summary by plant genus.

judges, one accredited judge from the AOC and students from 15 AOS judging centers, plus several orchid experts have actively participated and commented. Approximately 600 total comments have been logged. The average number of comments per plant is 10 and the most comments received for a single plant is 15 for *Cattleya sincorana* in Week 5.

One of the most intensive parts of my work has been working with the exhibitors and preparing plants for virtual judging. Because I have experience as an exhibitor and a judge, I have found that bringing plants with beautiful award-quality flowers to judging does not guarantee an award. The plant should be staged to show its best characteristics with properly oriented and staked inflorescences; foliage should be cleaned, and the plant placed in a nice pot which can create a proportional presentation. This is truly an art and even more important because judges cannot see the plant in person. The guidelines for exhibitors are posted on the website as to how they should prepare and photograph their plants before submitting them.

During the pandemic, when most of our judging centers have been closed, this exercise has been helping students and associate judges practice how to evaluate flower form and color, and learn about the nomination process, award types and scoring criteria. A unique feature of this exercise is that participants can provide their comments without the influence of their peers. No one can see another participant's comments until they have been posted. This gives participants the opportunity to do their own research and create an unbiased opinion about the plant. There are many other additional benefits: variety of plants that are not always available in one location, being able to see opinions from multiple judging centers and world-recognized experts, more time to research the plant as compared to an actual judging (6 days vs. less than an hour at a judging center) and additional discussions even after comments have been posted.

So what does the future of the VOJEE look like? Due to its great success over the past 10 months, this exercise has expanded to include more detailed award descriptions as an educational tool. Additionally, a new feature called "Grower's Advice" on virtualorchids.org will bring more value to the exercise.

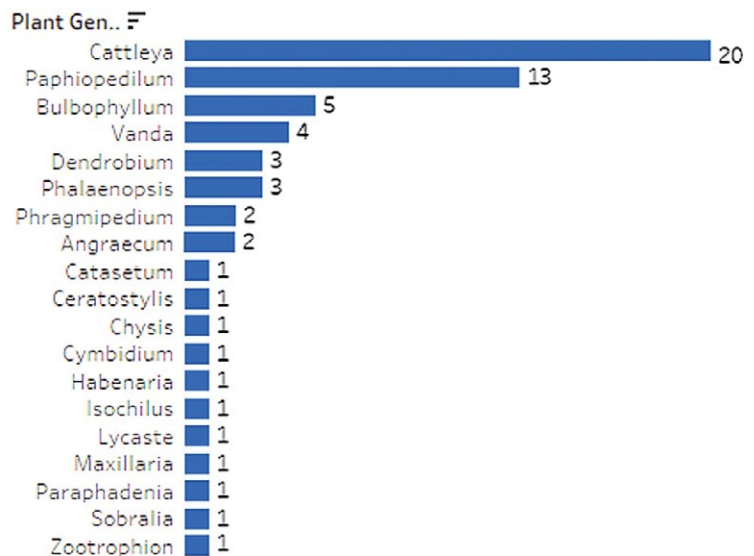
Judging displays virtually creates new challenges because displays are always three-dimensional and require multiple photos and videos. Finally, "live" virtual



SERGEY SKOROPAD

4

Summary by Plant Genera



5



Selected plants submitted as part of the virtual judging educational exercise: 1) *Cymbidium* Corinthian Splash (Minuet × Enzan Champagne) exhibitor and photographer: Deb Bodei; 2) *Cattleya sincorana*, exhibitor and photographer: Bayard Saraduke; 3) *Lycaste* Dainty (*brevispatha* × *campbellii*), exhibitor and photographer: David Rosenfeld; 4) *Phalaenopsis* Miro Hime (Hannover Passion × Ya-Yi Qin), exhibitor and photographer: Laura Newton; 5) *Cattleya purpurata* (f. *sanguinea* × f. *rubra*), exhibitor and photographer: Deb Bodei; 6) *Habenaria medusa*, exhibitor and photographer: Sarah Hurdel; 7) *Ceratostylis retisquama*, exhibitor and photographer: Laura Newton; 8) *Paphiopedilum* Noah Franklin Buckley (Olympic Emerald × *charlesworthii* f. *sandowiae* [album]), exhibitor and photographer: Sergey Skoropad; 9) *Bulbophyllum* Cherial A. Foxall (*rothschildianum* × Witch Anna), exhibitor and photographer: Laura Newton.

judging via Zoom on a monthly basis would allow judges from different centers to participate and lead to great discussions. For these interactive meetings, special pages will be created for each plant and will be posted a day prior to the meeting on virtualorchids.org.

The website, virtualorchids.org,

has become one of the key tools of this educational exercise. Participants can see current and previously exhibited plants ("Archive" section), participant comments, award descriptions and "Grower's Advice." Also, many new features have become available that could not be previously done over email (enhanced

plant pictures, videos, measurements and plant descriptions for "live" virtual judging Zoom meetings).

I reached out to a few active participants and here are their comments:

Laura Newton (AOS Award Registrar, accredited judge, Florida North-Central Judging Center: "I have had the pleasure

of joining in on the virtual judging platform and find the interaction with judges from around the country eye-opening and enlightening. This system has evolved from a few photos and descriptions with measurements, to the newly added video feature. As the scope widened on participants to encompass judges from all parts of the country, it is amazing how consistent the evaluations are on each particular plant. Sergey has put his heart and soul into this project and it truly shows. Although the other judges in my center have not yet participated, at our recent business meeting several of them spoke highly of the value that is derived from an educational perspective. Through this process I think everyone who has participated can see the great value in this project.”

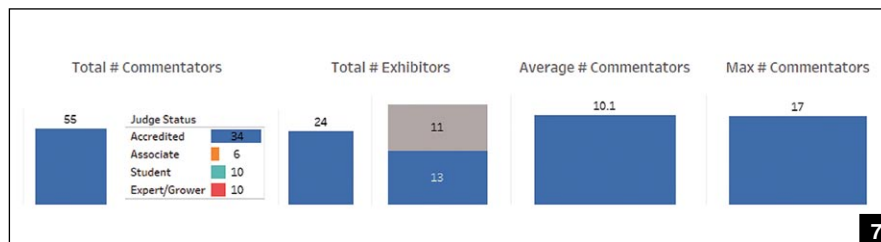
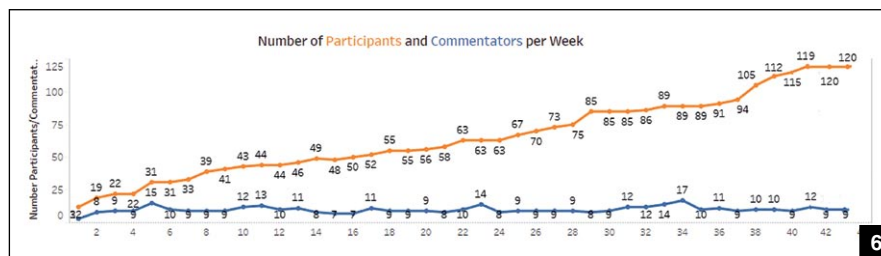
Mark Werther, accredited judge and Chair, Mid-Atlantic Judging Center:

“With much work and coordination Sergey has displayed approximately 60 virtual examples of orchids for a continuing and expanding audience of orchid judges and aficionados in a 10-month time frame.

Independent comments are generated by interested reviewers resulting in a broad and fascinating range of opinions. Each exercise has been a learning experience. The consistency of most of the comments has proved to be quite amazing considering that they are being generated from judges from distant locations with different training regimes.”

Tom Mirenda, accredited judge, Hawaii Judging Center:

“While we are sometimes able to judge in person here in Hilo, even during the pandemic restrictions, having a virtual forum and a weekly judging ‘exercise’ has been invaluable as a way to maintain and hone our judging skills. Indeed the participation of so many respected orchidists, and the ability to access their comments and insights in print, has been most illuminating. Many important ideas and long-standing issues are regularly discussed and I feel this forum may lead to the resolution of many long-standing questions. It is also fun to keep in touch with friends all across the judging world that we rarely see anymore due to our current travel restrictions. I believe the forum is a great asset to the orchid judging community and should even continue when COVID restrictions are no longer necessary. Over time, the VirtualOrchids website promises to be a terrific resource, not just for the judging community, but for anyone interested in orchid breeding



issues. The images and comments from a multitude of experienced judges elucidate the qualities that make for exceptional orchids. I believe it will become a major source of wisdom and reference as it grows and flourishes over time.”

Deb Boersma, student judge, Great Lakes Judging Center:

‘I am a first-year student judge with nowhere to judge, as is likely the case for many of you. The virtual judging exercises have been an extremely valuable for me and have helped improve my judging skills; the judges’ comments have been of tremendous educational value. I particularly like how it has been organized with all judges’ comments distributed to the participants after all comments have been submitted, at which point, I can compare my comments with others without being biased by what someone else has said. Without on-site judging, there is an absence of communication and discussion between students and accredited judges in regards to the judging process and standards. This program has been beneficial in that regard and has filled the gap; it has been a great learning experience. The organizers have done an outstanding job in creating this program.

The virtualorchids.org website is very well designed and easy to navigate. It includes so much information about the plants that are to be judged along with the judges’ comments, growers’ advice and award descriptions.’

David Rosenfeld (New Jersey), nonjudge exhibitor with 100 AOS awards:

‘As an accomplished orchid hobbyist with many AOS awards I found the format enjoyable and educational.

It has been very interesting to see and hear opinions by orchid judges outside of my region and to appreciate the logic they use to evaluate the merits of each orchid

[6] Number of participants and commentators per week.

[7] Numbers of commentators and exhibitors.

candidate.

I have been fortunate to have nine or 10 of my orchids included in the judging process. This has, and will, help me grow my plants more optimally and give me added insight into which orchids are worthy of submitting for judging.

I think there is merit to continuing the virtual judging after COVID is over especially if the judges are from many judging centers. This would be educational for both the exhibitors and judges.’

We look forward to possibly seeing you at a future virtual judging exercise.

Acknowledgments

My thanks to all of you who are actively participating in the VOJEE. I give a special thank you to Deb and Bill Bodei for their continued support of the exercise. As always, a special thanks to my wife Elena and daughter Olga.



— Sergey Skoropad has been growing a wide variety of orchids without a greenhouse for over 15 years. His skills are exemplified by over 50 cultural and professional flower quality awards; he is an associate judge in Northeast Judging Center. Sergey is a professional jeweler and designer, and the president of S & E Design Corp. He loves traveling around the world searching for the finest gems and orchids growing in their natural habitat (follow on Instagram @orchid.magic ; email: sergeskrpd@yahoo.com).

2019 AOS Special Awards

Super, Superior, Superlative, Sublime

BY NILE S. DUSDIEKER

FOUR WORDS CAN only begin to describe the spectacular beauty of these 22 Special Annual Awards. All 2,587 AOS awards received in 2019 were eligible. Each regional judging center nominated their best candidate for each special award category. The judging centers later voted on all the nominated entries and forwarded their final selections to the Board of Trustees to bestow the awards. Clear, well-composed, representative photographs of the entries are a major component in determining the final choices. Compliments are given to our many fine photographers! Each special award goes to the exhibitor and consists of a trophy or monetary reward plus publication in this issue of *Orchids* magazine. Both the exhibitor and the photographer receive a plaque with the award picture. The history behind the origin and namesakes honored by these special awards was discussed in the recent centennial issue of *Orchids*, February of 2021. Each award is now highlighted with some descriptive information and anecdotal comments from the exhibitors.

The Ann and Phil Jesup Botanical Trophy for the Most Outstanding Orchid Species

Bulbophyllum dhaninivatii 'Sue's Royal Tassels' CHM/AOS; exhibitors: Chuck and Sue Andersen; photographer: Robert Hesse. Northeast Judging Center.

This plant had 38 fascinating, micro-miniature flowers arranged circumferentially on three pendent rachises on three upright inflorescences blooming on a deciduous plant. This was the Andersen's' first attempt with a cool-growing bulbophyllum. They move the plant to high light in the fall with nighttime temperatures near 50 F (10 C). Chuck said, "We purchased it as *Bulbophyllum tripaleum*. There seemed to be a bit of debate within the Species Identification Task Force about the nomenclature and they changed the name to *Bulb. dhaninivatii* based on a recent publication at Kew. I foresee publishing this article in *Orchids* will potentially start the debate



again and would not be surprised if the name is changed yet again (I think that is fun)!"

The Butterworth Prize for the Most Outstanding Orchid Culture

Cattleya pumila 'Dark Star' CCE/AOS; exhibitor: Santa Barbara Orchid Estate; photographer: Wayne Ferrell. Pacific South Judging Center.

This immaculate specimen plant had 90 dark-lavender flowers on 45 inflorescences. The species, formerly known as *Laelia pumila*, is native to southern Brazil growing on tree trunks in open, humid forests. It is important

- [1] *Bulbophyllum dhaninivatii* 'Sue's Royal Tassels' CHM/AOS, winner of the Ann and Phil Jesup Botanical Trophy for the Most Outstanding Orchid Species.
- [2] *Cattleya pumila* 'Dark Star' CCE/AOS, winner of the Butterworth Prize for the Most Outstanding Orchid Culture.
- [3] *Phragmipedium* Fritz Schomburg 'Eddy Lick Run' FCC/AOS., winner of the W. W. Wilson Cyripedioideae Award for the Best Slipper Orchid.
- [4] *Cattleya* Raspberry Smoke 'Raspberry Diesel' FCC/AOS, winner of the Masatoshi Myamoto Cattleya Alliance Award.

DUSDIEKER

in breeding mini-cattleyas with over 200 primary hybrids and 4,000 hybrid progeny to date.

The W. W. Wilson Cypripedioideae Award for the Best Slipper Orchid

Phragmipedium Fritz Schomburg 'Eddy Lick Run' FCC/AOS; exhibitor: Woodstream Orchids; photographer: William Ammerman. National Capital Judging Center.

Bill and Lynn Goldner, Woodstream Orchids, own their orchid nursery in Huntingtown, Maryland, and commented about the circuitous acquisition of this plant. The seedlings were bred by Terry Root (California), purchased by Frank Smith (Florida), sold to June's Orchid Estate, and their phragmepedium collection was purchased by Woodstream in 2015. "A good number of Fritz Schomburgs were in the collection. Woodstream bloomed out 'Eddy Lick Run' and showed it at the Central Pennsylvania Orchid Society Show in 2019 where it received a First Class Certificate."

The Masatoshi Miyamoto Cattleya Alliance Award

Cattleya Raspberry Smoke 'Raspberry Diesel' FCC/AOS; exhibitor: Waldor Orchids; photographer: Bayard Saraduke. Mid-Atlantic Judging Center.

This bifoliate *Cattleya* had 23 spotted, rose-brown flowers on two inflorescences set well above the plant foliage. Waldor Orchids is a family-owned nursery founded by George Allen Off as Brighton Florists in 1925 to supply blooming orchids for his two Atlantic City hotels. His sons, Walt and Bill, now operate the business in Linwood, New Jersey, and still have a number of classic cattleya hybrids in their collection.

The Herbert Hager Phalaenopsis Award

Phalaenopsis bellina 'Frank Smith' FCC/AOS; exhibitor: Krull-Smith; photographer: Wes Newton. Florida North-Central Judging Center.

The awarded plant had two large, flat, perfectly presented, exquisitely colored flowers and two buds on two sequentially blooming inflorescences. Frank Smith tells us, "This *bellina* is out of the grex that received the Motes AQ Award last year (2018). This grex is the seventh generation of line breeding that started in 1980 with my first *bellina* that was awarded as *Phal. violacea* 'Ponkan' AM/AOS." Nine FCCs and several AMs have been given to this grex.



2



3



4

The Carlyle A. Luer Pleurothallid Award

Pleurothallis gargantua 'Timbucktoo' AM/AOS; exhibitor: Sarah Pratt; photographer: Bryon Rinke. Great Plains Judging Center.

This flower is giant sized by pleurothallid standards. Sara says this is the only one she has ever taken to the Oklahoma Orchid Society Show and relates her conversation with another pleurothallid grower, who said "I do not know why you grow things that not only nobody has ever heard of, but that you need a magnifying glass to see the flowers." Sara's response: "I can grow 10 plants in the space you need for one cattleya! And I never am in danger of throwing my back out when I have to pick up the pot. What an honor to receive this award!"

The Roy T. Fukumura Vandaceous Award

Robiquetia cerina 'Donna's Treasures' AM/AOS; exhibitor: Oakwood Orchids; photographer: Richard Noel. Cincinnati Judging Center.

This unusual orchid from the Philippines develops pendent racemes with numerous closely spaced small flowers varying from purple to yellow that often do not open fully. Jim France, owner of Oakwood Orchids in Dayton, Ohio, acquired this plant a couple years earlier and said that it has grown 5 feet (1.5 m) tall with a vining habit. His keys to culture are "hot, bright, and humid."

The James and Marie Riopelle Award for Species or Hybrid Miltonia or Miltoniopsis

Miltonia moreliana 'Beule's Big One' FCC/AOS; exhibitor: Richard Rothschild; photographer: Arthur Pinkers. Pacific South Judging Center.

This plant had three exceptionally well-formed, brilliantly colored flowers. The species was previously known as *Miltonia spectabilis* var. *moreliana*; both named descriptions date to 1848 and 1851, respectively. Richard commented, "When this plant first bloomed, I immediately noticed the symmetry of the flower. I knew the flower size was exceptional, but hardly expected it to win an award. I give half the credit to the 4n breeding accomplished by RF Orchids [sic] and the other half to the plant culture possible in my unique growing microclimate in the Los Feliz hills, directly under the Griffith Park Observatory in Los Angeles."

The Robert Dugger Odontoglossum Award

Oncidopsis Mont des Louannes



[5] *Phalaenopsis bellina* 'Frank Smith' FCC/AOS, winner of the Herbert Hager Phalaenopsis Award.

[6] *Pleurothallis gargantua* 'Timbucktoo' AM/AOS, winner of The Carlyle A. Luer Pleurothallid Award.

[7] *Robiquetia cerina* 'Donna's Treasures' AM/AOS, winner of the Roy T. Fukumura Vandaceous Award.

[8] *Miltonia moreliana* 'Beule's Big One'

FCC/AOS, winner of the James and Marie Riopelle Award for Species or Hybrid Miltonia or Miltoniopsis.

[9] *Oncidopsis* Mont des Louannes 'Kaleidoscopic Vision' AM/AOS, winner of the Robert Dugger Odontoglossum Award.

[10] *Dendrobium thyrsiflorum* 'Waialele' CCE/AOS, winner of the Benjamin Kodama Award for the Dendrobium Alliance.

'Kaleidoscopic Vision' AM/AOS; exhibitor: New Vision Orchids; photographer: Mei Ling Clemens. Great Lakes Judging Center.

This plant had six well-formed, flat flowers on one inflorescence showing remarkable color contrast between the brilliant red markings and the pristine white background. Russ Vernon said, "The pattern of marks on the flowers, fantastic even for an 'Odont', suggested the clonal name." The hybrid was made by the Eric Young Foundation. Russ got the plant from a friend who could not seem to master the culture. "Never look a gift horse in the mouth!"

The Benjamin Kodama Award for the Dendrobium Alliance

Dendrobium thyrsiflorum 'Waialele' CCE/AOS; exhibitor: Andrew Okada; photographer: Michael Blietz. Hawaii Judging Center.

This amazing specimen plant was presented at the Maui Orchid Society Show with 1,672 flowers on 44 pendulous inflorescences. Andrew is a retiree who started growing orchids in 2015. The plant was recommended for his outside culture habitat on the slopes of Haleakala where it blooms every spring. "A big problem was how would I get my plant to the orchid show in my small Honda Fit. I asked Michael Blietz (photographer, AOS judge) if he could transport my plant. I had to construct a stretcher so Mike and I could carry the plant into his van." It was worth it!

The Fred Hillerman Award for the Angraecoid Alliance

Aerangis modesta 'Gabriel Amaru' CCE/AOS; exhibitor: Ben Oliveros, Orchid Eros; photographer: Glen Barfield. Hawaii Judging Center.

Ben says, "In 2009, this plant was first awarded a CCM and an HCC on the day my son was born, hence named 'Gabriel Amaru' after him. So, 10 years later and many more flowers, the same plant received this CCE (470 sparkling-white flowers, 230 buds on 32 inflorescences). By then, the plant had completely covered the pot that it was growing in for over a decade. And like a good plant, it always is in bloom for Gabe's birthday!"

The Benjamin C. Berliner Award for the Genus *Lycaste* and Closely Allied Genera

Lycaste Abou Sunset 'Amitabha' FCC/AOS; exhibitor: Japheth Ko; photographer: Chaunie Langland. Pacific Central Judging Center.



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Lycaste Abou Sunset was hybridized by Mr. Abou in Japan. Japheth purchased a total of four seedlings from James Rose (Cal-Orchids) with his 'guarantee' they would be superb. "In 2019 all the stars aligned and (one) bloomed with full, flat flowers, and a rich red color without color break. So out of four seedlings, I got two FCCs, and an AM of 84 points" and this wonderful special award!

The Milton Carpenter Intergeneric Oncidiinae Award

Brassidomesa Golden Stars 'Sierra City' AM/AOS; exhibitor: Gold Country Orchids; photographer: Ramon de los Santos. California Sierra Nevada Judging Center.

This plant had 28 yellow-green flowers with remarkably uniform shape on two arching inflorescences. Alan Koch made this cross, and said, "I have always had the goal to reduce plant size so that they are more manageable." This *Brassidium* × *Gomesa* cross was a success, blooming sometimes in 2-inch (5-cm) pots. "The only thing I didn't achieve was branching inflorescences." He recently received an AQ for this grex in August of 2020.

The Ernest Hetherington Cymbidium Award

Cymbidium Cali Night 'Geyserland' AM/AOS; exhibitors: Dick and Carol Doran; photographer: Duane Erdmann. Mid-Atlantic Judging Center.

This remarkable plant had 237 flowers of intense dark-mahogany color with velvety lips on 11 pendent inflorescences. Dick Doran is a hobby grower of cool-growing orchids in Hillsdale, New Jersey. He is especially fond of hybrids of *Cymbidium devonianum*. "I got this plant from George Hatfield and I find it grows and blooms best in 50 percent shade." He has received five AOS Special Awards.

The Bill Thoms Award for Bulbophyllinae
Bulbophyllum medusae 'Pacific Heights' CCE/AOS; exhibitor: Katherine Leonard; photographer: Alan Maii. Hawaii Judging Center.

With over 6,000 flowers, this plant looks like a fluffy snowball; hard to believe it could turn the casual gazer to stone as the name implies! Kate related, "I have had this plant for well over 20 years. It was mounted on a small piece of cork bark, which has long since been buried in the plant itself. It now grows under shade cloth but is otherwise exposed to the elements. I am just a humble hobbyist, so I'm sure this will be a once-in-a-lifetime experience!" She lives in the hills above



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- [11] *Aerangis modesta* 'Gabriel Amaru' CCE/AOS, winner of the Fred Hillerman Award for the Angraecoid Alliance.
- [12] *Lycaste* Abou Sunset 'Amitabha' FCC/AOS, winner of the Benjamin C. Berliner Award for the Genus *Lycaste* and Closely Allied Genera.
- [13] *Brassidomesa* Golden Stars 'Sierra City' AM/AOS, winner of the Milton Carpenter Intergeneric Oncidiinae Award.
- [14] *Cymbidium* Cali Night 'Geyserland' AM/AOS, winner of the Ernest Hetherington Cymbidium Award.

Honolulu, Hawaii.

The Frank Sr. and Elizabeth Jasen Stanhopeinae Award

Aciopea Ecuagenera Passion 'Aidan' AM/AOS; exhibitor: William Jasen; photographer: Ross Leach. Pacific Northwest Judging Center.

Aciopea is a cross between the triangularly shaped *Acineta* flower and the more convoluted, *Stanhopea*-complex flower; both with dependent inflorescences. William says, "This grex (created by Ecuagenera) is a fantastic result to control the sometimes inconsistently reflexed petals from *Stanhopea* into a fuller, flat, round progeny." He has been growing *Stanhopea* for 50 years and has endowed the Jasen Award along with his siblings.

The Fuchs Family Award for the Genus *Vanda* (Excluding Intergenerics)

Vanda John De Biase '4N Orchids' CCE/AOS; exhibitor: 4N Orchids; photographer: Yeh, Jen-Chieh, Orchid Research and Development Center Show at National Chen Kung University in Taiwan, sponsored by Pacific Central Judging Center.

This was described as a stupendous specimen plant with over 250 purple flowers on multiple flowering crowns with many keiki branches yet to bloom. 4N Orchids also received the Butterworth Prize in 2018 for *Angraecum eburneum* subsp. *giryamae* '4N Nursery' CCE/AOS.

The Merritt W. Huntington Award for the Most Outstanding First Class Certificate

Catamodes Darkonium 'Ebony Beauty' FCC/AOS; exhibitor: Rick Wells; photographer: Arnold Gum. Pacific South Judging Center.

Dark-colored flowers seem to be all the vogue this year and these 18 nearly black flowers on one inflorescence are magnificent. Rick lives in San Clemente, California, and shares his awarded plants with Fred Clarke (SVO Orchids) for breeding purposes. He has a small "hot house"; the ideal climate for Australian dendrobiums, Catesetinae and *Sarcochilus*. This was his first FCC.

The Walter Off Award is for the Most Outstanding Show Trophy, Silver, Gold Certificate or Educational Orchid Exhibit

American Orchid Society ST, GC/AOS, "What a Society Can Do;" exhibitor: Orchid Society of Coral Gables; photographer: Carmen Johnston. Florida-Caribbean Judging Center.



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the Orchid Society of Coral Gables Show in conjunction with the Fairchild Tropical Botanic Garden Orchid Festival, March 2019. Jim Davison was the creative lead and was fortunate to have wonderful plants from many of the 200 members of his society to work with. He says, "putting in a display is six (sometimes more) hours of chaos followed by one hour of magic!" This was the first ever Gold Certificate received by the society.

[15] *Bulbophyllum medusae* 'Pacific Heights' CCE/AOS, winner of the Bill Thoms Award for Bulbophyllinae.

[16] *Aciopea* Ecuagenera Passion 'Aidan' AM/AOS, winner of the Frank Sr. and Elizabeth Jasen Stanhopea Alliance Award.

[17] *Vanda* John De Biase '4N Orchids' CCE/AOS, the Fuchs Family Award for the Genus *Vanda* (Excluding Intergenerics).





The Paul and Mary Storm Award for the Most Outstanding Hybrid with at Least One Member of the Former Genus *Schomburgkia* (Now *Myrmecophila* or Certain *Laelia*) in the Genetic Background

Myrmecocattleya Erin Courtney's Suncoast 'Soulful' AM/AOS; exhibitor: Jim Roberts Florida Suncoast Orchids;

photographer: H.A. Russell III. Florida North-Central Judging Center.

Jim said, "I have a 'need' to make orchid hybrids, and my hope and challenge is to make very good ones that people can enjoy. Fast forward several years and first-bloom seedlings were not flowering until they were in 6-inch (15-cm) pots. Thank you for the joy I get making these hybrids;

[18] *Catamodes* Darkonium 'Ebony Beauty' FCC/AOS, winner of the Merritt W. Huntington Award for the Most Outstanding First Class Certificate.

[19] American Orchid Society ST, GC/AOS, "What a Society Can Do," winner of the Walter Off Award is Given to the Most Outstanding Show Trophy, Silver, Gold or Educational Orchid Exhibit.



more so the joy for those adventuresome enough to grow them!"

The Martin Motes Breeder's Award for the Best Award of Quality or Award of Distinction

Paphiopedilum *Leucofroyae* AQ/AOS; exhibitor: Krull-Smith; photographer: Wes Newton. Florida North-Central Judging Center.

This new primary hybrid between *Paphiopedilum godefroyae* 'Krull's Black Cherry' AM/AOS and *Paphiopedilum leucochilum* 'Ponkan' AM/AOS showed an intense color contrast with symmetric markings. This group received two AMs and three HCCs. When Frank Smith was asked about the breeding, he responded with "Both the *godefroyae* and *leucochilum* lines used in this grex, I had been improving over the last 30 years here at Krull-Smith."



The Mario and Conni Ferrusi Award for Most Outstanding *Masdevallia*, *Dracula* or *Dracuvallia*

Masdevallia *Anochecher* 'Max & Bryon' FCC/AOS; exhibitors: Max Thompson and Bryon Rinke; photographer: Bryon Rinke. Great Plains Judging Center.

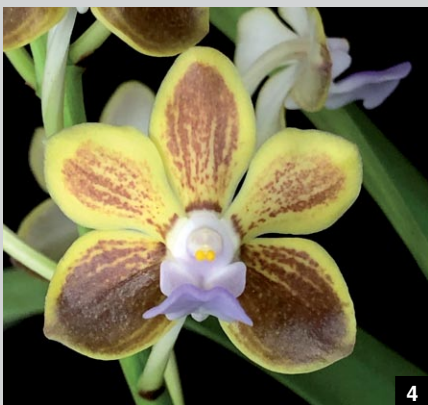
This plant had one massive, perfectly shaped flower. The plant originally came from Ecuagenera labelled [sic] as an intermediate grower. "We grow the plant down by our wet wall in the summer to keep it cooler. The plant is never out of bloom and the flowers last for about 3–4 weeks. The flowers really dwarf the plant in size."

— Nile Dusdieker is a retired physician and an accredited American Orchid Society judge associated with the Chicago judging center. He and his wife, Lois, grow around 900 orchids of varied genera in a greenhouse atop their third garage at their North Liberty, Iowa home. Most of the orchids move to an outside pergola for the summer months. Nile enjoys giving presentations on a wide variety of orchid topics and has presented at international meetings (email: niledusdieker@gmail.com).

[20] *Myrmecocattleya* Erin Courtney's Sun-coast 'Soulful' AM/AOS, winner of the Paul and Mary Storm Award for the Most Outstanding Hybrid with at Least One Member of the Former Genus *Schomburgkia* (Now *Myrmecophila* or Certain *Laelia*) in the Genetic Background.

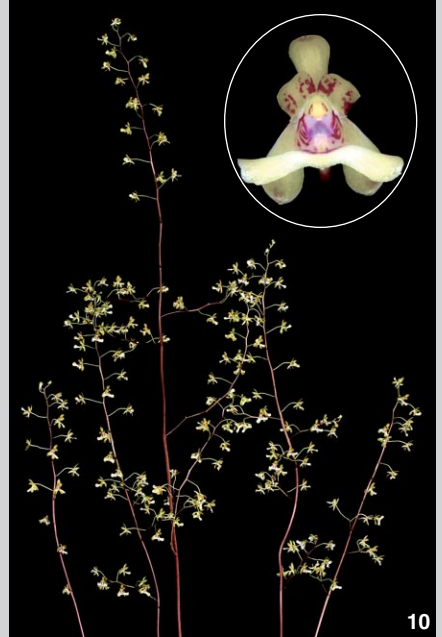
[21] *Masdevallia* *Anochecher* 'Max & Bryon' FCC/AOS, winner of the Mario and Conni Ferrusi Award for *Masdevallia*, *Dracula* or *Dracuvallia*.

[22] *Paphiopedilum* *Leucofroyae* AQ/AOS, winner of the Martin Motes Breeder's Award for the Best Award of Quality or Award of Distinction.





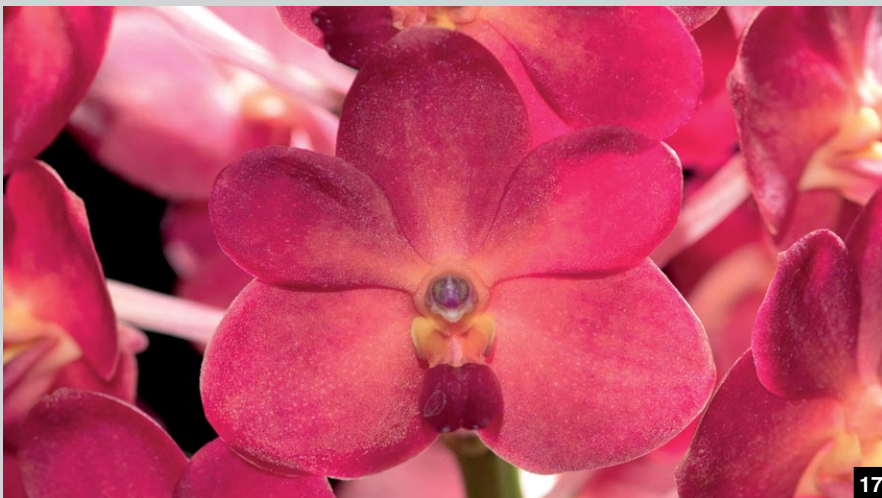
- [1] *Paphiopedilum helenae* 'Deerwood' AM/AOS 84 pts. Exhibitor: Ross Hella; photographer: Nile Dusdieker. Chicago Judging
- [2] *Rhyncholaeliocattleya* Haruko Kanzaki 'Volcano Queen' AM/AOS (Jeremy Island x Fred Stewart) 82 pts. Exhibitor: New Vision Orchids; photographer: Richard Noel. Cincinnati Judging
- [3] *Vandachostylis* Christine Joan 'Emilia Luna Motes' AM/AOS (Mishima Lime x *Vanda vietnamica*) 88 pts. Exhibitor: Martin Motes; Photographer: Carmen Johnston. Florida-Caribbean Judging
- [4] *Vanda* M. V. Tannins 'Garrett's Picotee' HCC/AOS (*lamellata* x Memoria Thianchai) 79 pts. Exhibitor: Sharon and David Garrett; Photographer: Wes Newton. Florida North-Central Judging
- [5] *Paphiopedilum* Spring Midori 'Sunprarie' HCC/AOS (Hilo Midori x Spring Wolf) 78 pts. Exhibitor: Bill Nelson; Photographer: Nile Dusdieker. Chicago Judging
- [6] *Phalaenopsis* Daybreak 'Christian's The Wall' HCC/AOS (Yungho Gelb Nosa x Hawaii Dragon Girl) 75 pts. Exhibitor: Thad Bielecki; Photographer: Carmen Johnston. Florida-Caribbean Judging
- [7] *Dendrobium* Hibiki 'Springwater' CCE/AOS (*bracteosum* x *laevifolium*) 95 pts. Exhibitor: Springwater Orchids & Thanh Nguyen; Photographer: Wes Newton. Florida North-Central Judging
- [8] *Aeridovanda* Pramote 'Emilia Luna Motes' HCC/AOS (*Aerides houlettiana* x *Vanda flabellata*) 79 pts. Exhibitor: Martin Motes; Photographer: Carmen Johnston. Florida-Caribbean Judging
- [9] *Vanda* Motes Purple Rain 'Emilia Luna Motes' AM/AOS (Blue Tahourdin x *tessellata*) 82 pts. Exhibitor: Motes Orchids; Photographer: Carmen Johnston. Florida-Caribbean Judging
- [10] *Lesueurara* Dick Pippen's SunCoast 'Lemon Yum Yums' CCM-FCC/AOS (*Brassocatanthe* Little Mermaid x *Encyclia* Lorraine Smith) 85-92 pts. Exhibitor: Jim Roberts- Florida SunCoast Orchids; Photographer: Wes Newton. Florida North-Central Judging
- [11] *Cattlianthe* California Cherry 'Bobby' HCC/AOS (*Cattleya walkeriana* x Porcia) 79 pts. Exhibitor: Harriet & Mike Wright; Photographer: Wes Newton. Florida North-Central Judging
- [12] *Papilionanda* Arjuna 'Electric Blue' AM/AOS (Mimi Palmer x *Vanda tessellata*) 82 pts. Exhibitor: Sharon and David Garrett; Photographer: Wes Newton. Florida North-Central Judging
- [13] *Cattleya* Cella Bella 'Bielecki's Purple Leopard' HCC/AOS (Mrs. Mahler x *aclandiae*) 76 pts. Exhibitor: Thad Bielecki; Photographer: Carmen Johnston. Florida-Caribbean Judging
- [14] *Papilionanda* James Craig Adamson 'Amy and Jim, Jim' AM/AOS (Arjuna x *Vanda insignis*) 83 pts. Exhibitor: Martin Motes; Photographer: Carmen Johnston. Florida-Caribbean Judging
- [15] *Paphiopedilum* Hudson Hyde 'McHutton-Young' HCC/AOS (Wayne Booth x *lowii*) 75 pts. Exhibitor: Ron McHutton and Randy Young; Photographer: Wes Newton. Florida North-Central Judging
- [16] *Vanda tessellata* 'Emilia Luna Motes' HCC/AOS 77 pts. Exhibitor: Martin Motes; Photographer: Carmen Johnston. Florida-Caribbean Judging





- [1] *Phalaenopsis bellina* 'Ed Gilliland' AM/AOS 87 pts. Exhibitor: Krull-Smith; Photographer: Wes Newton. Florida North-Central Judging
- [2] *Phalaenopsis bellina* 'Marjorie Scarlet' AM/AOS 89 pts. Exhibitor: Krull-Smith; Photographer: Wes Newton. Florida North-Central Judging
- [3] *Cattleya aelandiae* 'Alaia' HCC/AOS 77 pts. Exhibitor: Ben Oliveros and Orchid Eros; Photographer: Glen Barfield. Hawaii Judging
- [4] *Phragmipedium* QF Leina'ala 'Gregory Filter' AM/AOS (Conchiferum x Incan Treasure) 80 pts. Exhibitor: Sandra Dixon; Photographer: Katie Payeur. Great Lakes Judging
- [5] *Guaricyclia* Rosy Ochoa 'Doris Ruth' HCC/AOS (Plicaboa x *Guarianthe bowringiana*) 79 pts. Exhibitor: Paul Keller; Photographer: Wes Newton. Florida North-Central Judging
- [6] *Aeridovanda* Somsri Sunlight 'Garrett's Lipstick' AM/AOS (*Aerides lawrenceae* x *Vanda Rasri Gold*) 82 pts. Exhibitor: Sharon and David Garrett; Photographer: Wes Newton. Florida North-Central Judging
- [7] *Phalaenopsis* *Valentinii* 'Bryon' CCM-AM/AOS (*cornu-cervi* x *violacea*) 87-81 pts. Exhibitor: Bryon K. Rinke; Photographer: Bryon Rinke. Great Plains Judging
- [8] *Vanda* Lim Guan Cheo 'MV Sadie's Rose' AM/AOS (Kultana Oriental Aroma x *luzonica*) 85 pts. Exhibitor: Stuart Henderson; Photographer: Wes Newton. Florida North-Central Judging
- [9] *Rhynchostylis coelestis* 'Sweet Linda' AM/AOS 83 pts. Exhibitor: Krull-Smith; Photographer: Wes Newton. Florida North-Central Judging
- [10] *Oeceoclades cordylinophylla* 'Wacousta' CHM/AOS 83 pts. Exhibitor: Dorothy Potter Barnett; Photographer: Katie Payeur. Great Lakes Judging
- [11] *Catasetum* Sandra Dixon 'Honoli'i Tiger' HCC/AOS (Susan Fuchs x *tigrinum*) 77 pts. Exhibitor: Sandra Dixon; Photographer: Katie Payeur. Great Lakes Judging
- [12] *Encyvola* Arubiana 'Victor Elliott' HCC/AOS (*Brassavola nodosa* x *Encyclia cordigera*) 78 pts. Exhibitor: Paul Keller; Photographer: Wes Newton. Florida North-Central Judging
- [13] *Vanda* Green Light 'MV Gavin's Green Terror' AM/AOS (*vietnamica* x *falcata*) 81 pts. Exhibitor: Stuart Henderson; Photographer: Wes Newton. Florida North-Central Judging
- [14] *Sobralia atropubescens* 'Cottage Orchids - Glen Gary' CBR/AOS. Exhibitor: Glen Gary; Photographer: Kay Clark. Florida North-Central Judging
- [15] *Bulbophyllum* Eileen's Fairy Tails 'Bill's A-doribil Gift' AM/AOS (A-doribil Collin x *echinolabium*) 87 pts. Exhibitor: Julio and Eileen Hector; Photographer: Kay Clark. Florida North-Central Judging
- [16] *Vanda vietnamica* 'M & B' CCM/AOS 86 pts. Exhibitor: Max Thompson & Bryon Rinke; Photographer: Bryon Rinke. Great Plains Judging





- [1] *Grammatocymbidium* Memoria Nathan Newman 'NN' AM/AOS (Star Festival x *Grammatophyllum multiflorum*) 83 pts. Exhibitor: Sarah Pratt; Photographer: Bryon Rinke. Great Plains Judging
- [2] *Cattleya jenmanii* (Alba) 'OrchidFix Islinger' AM/AOS 80 pts. Exhibitor: The OrchidFix Nursery Jurahme Leyva; Photographer: Glen Barfield. Hawaii Judging
- [3] *Rhynchoaeliocattleya* Siam Pacific Delight 'Showgun's Miracle' AM/AOS (Haadyai Delight x Asia Pacific) 81 pts. Exhibitor: Showgun Hawaii, Matthias Seelis; Photographer: Glen Barfield. Hawaii Judging
- [4] *Cycnoches barthiorum* 'Jungle Mist Freckles' AM/AOS 80 pts. Exhibitor: Jungle Mist Orchids; Photographer: Glen Barfield. Hawaii Judging
- [5] *Cattleya aelandiae* 'Apollo' AM/AOS 84 pts. Exhibitor: Ben Oliveros and Orchid Eros; Photographer: Glen Barfield. Hawaii Judging
- [6] *Cattleya sanguiloba* 'Orchid Eros' AM/AOS 84 pts. Exhibitor: Ben Oliveros and Orchid Eros; Photographer: Glen Barfield. Hawaii Judging
- [7] *Cycnoches cooperi* 'Mirtha Isabel' AM/AOS 86 pts. Exhibitor: Ben Oliveros and Orchid Eros; Photographer: Glen Barfield. Hawaii Judging
- [8] *Peristeria elata* 'David's Dove' AM/AOS 81 pts. Exhibitor: David and Joan Rosenfeld; Photographer: Bayard Saraduke. Mid-Atlantic Judging
- [9] *Cattleya pumila* 'Mirtha Isabel' AM/AOS 80 pts. Exhibitor: Ben Oliveros and Orchid Eros; Photographer: Glen Barfield. Hawaii Judging
- [10] *Rhynchoaeliocattleya* Harriet Brickell 'Red Sky in Morn' AM/AOS (Sydney Southwick x *Cattleya bicolor*) 82 pts. Exhibitor: Ben Oliveros and Orchid Eros; Photographer: Glen Barfield. Hawaii Judging
- [11] *Stanhopea jenischiana* 'Okika' AM/AOS 81 pts. Exhibitor: Okika, Ltd.; Photographer: Glen Barfield. Hawaii Judging
- [12] *Cattleya aelandiae* 'Melpomene' AM/AOS 84 pts. Exhibitor: Ben Oliveros and Orchid Eros; Photographer: Glen Barfield. Hawaii Judging
- [13] *Rhynchoaeliocattleya* Memoria Buranapan Nikom 'Bangkok Yellow' HCC/AOS (Haadyai Delight x *Cattleya* Tainan City) 77 pts. Exhibitor: Shogun Hawaii-Matthias Seelis; Photographer: Glen Barfield. Hawaii Judging
- [14] *Rhynchoaeliocattleya* Amazing Thailand 'Shogun Hawaii' AM/AOS (Haadyai Delight x *Cattleya* Brazilian Treasure) 80 pts. Exhibitor: Shogun Hawaii- Matthias Seelis; Photographer: Glen Barfield. Hawaii Judging
- [15] *Rhynchoaeliocattleya* Harriet Brickell 'Sebastian Ferrell' AM/AOS (Sydney Southwick x *Cattleya bicolor*) 82 pts. Exhibitor: Ben Oliveros and Orchid Eros; Photographer: Glen Barfield. Hawaii Judging
- [16] *Dendrobium heterocarpum* 'Makawao Sunburst' CCE/AOS 91 pts. Exhibitor: Andrew Okada; Photographer: Michael Blietz. Hawaii Judging
- [17] *Vanda* Laksi 'Duchess' AM/AOS (Thonglor x *curvifolia*) 81 pts. Exhibitor: Laurie and Sheila Skov; Photographer: Malcolm McCorquodale. Houston Judging

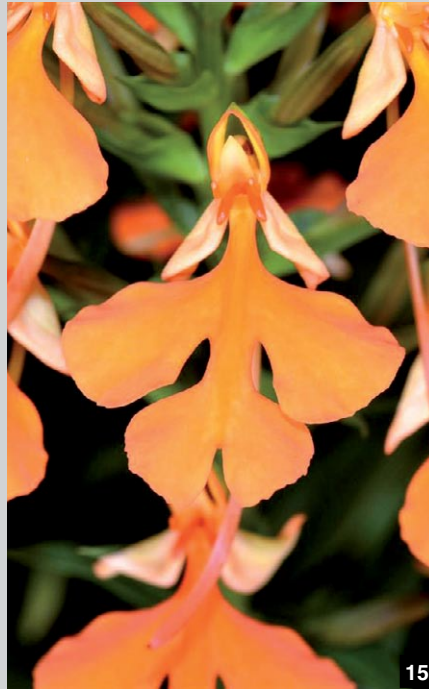




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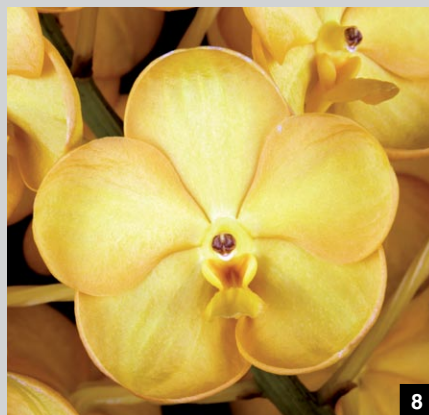


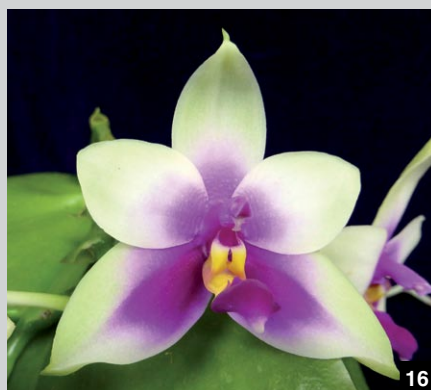
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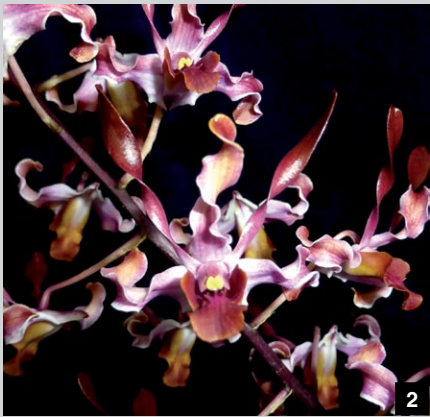
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- [1] *Vandachostylis* Sasicha 'Azure' HCC/AOS (*Vanda Varut Fuchsia* x *Rhynchostylis coelestis*) 76 pts. Exhibitor: Laurie and Sheila Skov; Photographer: Malcolm McCorquodale. Houston Judging
- [2] *Cattleya* Breautiana 'Tyler Davis' AM/AOS (*Ioddigesii* x *violacea*) 87 pts. Exhibitor: Waldor Orchids, Inc.; Photographer: Bayard Saraduke. Mid-Atlantic Judging
- [3] *Paphiopedilum* Carolyn Butcher 'Bubbles' AM/AOS (*Fanaticum* x *delenatii*) 81 pts. Exhibitor: Sarah Hurdell; Photographer: Bryan Ramsay. National Capital Judging
- [4] *Jumellea fragrans* (cf.) 'Irene' CHM/AOS 84 pts. Exhibitor: Al & Irene Messina; Photographer: Maurice Garvey. Northeast Judging
- [5] *Paphiopedilum* Magic Lantern 'Windy Hill' HCC/AOS (*micranthum* x *delenatii*) 78 pts. Exhibitor: Marilyn LeDoux; Photographer: Matthew Nutt. Mid-America Judging
- [6] *Phalaenopsis equestris* f. *aurea* 'Cooper' HCC/AOS 76 pts. Exhibitor: Steven Schneider; Photographer: Bryan Ramsay. National Capital Judging
- [7] *Cattleya* Raspberry Smoke 'Sarah Off' AM/AOS (*Allen Condo* x *Maui Plum*) 82 pts. Exhibitor: Waldor Orchids, Inc.; Photographer: Bayard Saraduke. Mid-Atlantic Judging
- [8] *Paphiopedilum* Fred's Moment 'Chancellor' AM/AOS (*Odette's Moment* x *President Fred*) 83 pts. Exhibitor: Dave Sorokowsky; Photographer: Japheth Ko. Pacific Central Judging
- [9] *Habenaria carnea* var. *nivosa* 'Tuscola' HCC/AOS 78 pts. Exhibitor: James Heilig; Photographer: Chaunie Langland. Pacific Central Judging
- [10] *Rhyncattleanthe* Cherry Suisse 'Rhodolite 2' HCC/AOS (*Cattlianthe Chocolate Drop* x *Rhyncholaeliocattleya* Oconee) 79 pts. Exhibitor: Mark Nelson Werther; Photographer: Bayard Saraduke. Mid-Atlantic Judging
- [11] *Paphiopedilum* Worthy Fred 'Slipper Zone Not Quite Worthy' HCC/AOS (*President Fred* x *charlesworthii*) 79 pts. Exhibitor: Lehua Orchids; Photographer: Ken Jacobsen. Pacific Central Judging
- [12] *Cattleya* Raspberry Smoke 'Put Me In The Zoo' JC/AOS (*Allen Condo* x *Maui Plum*). Exhibitor: Waldor Orchids, Inc.; Photographer: Bayard Saraduke. Mid-Atlantic Judging
- [13] *Robiquetia bifida* 'Irene' CBR/AOS. Exhibitor: Al & Irene Messina; Photographer: Maurice Garvey. Northeast Judging
- [14] *Cynorkis gibbosa* 'Newago' AM/AOS 80 pts. Exhibitor: James Heilig; Photographer: Ken Jacobsen. Pacific Central Judging
- [15] *Habenaria* Tanager 'Munising' AM/AOS (*xanthocheila* x *rhodocheila*) 80 pts. Exhibitor: James Heilig; Photographer: Ken Jacobsen. Pacific Central Judging
- [16] *Cyrtorchilum serratum* 'Casuka' HCC/AOS 75 pts. Exhibitor: Masaki Asuka; Photographer: Ken Jacobsen. Pacific Central Judging





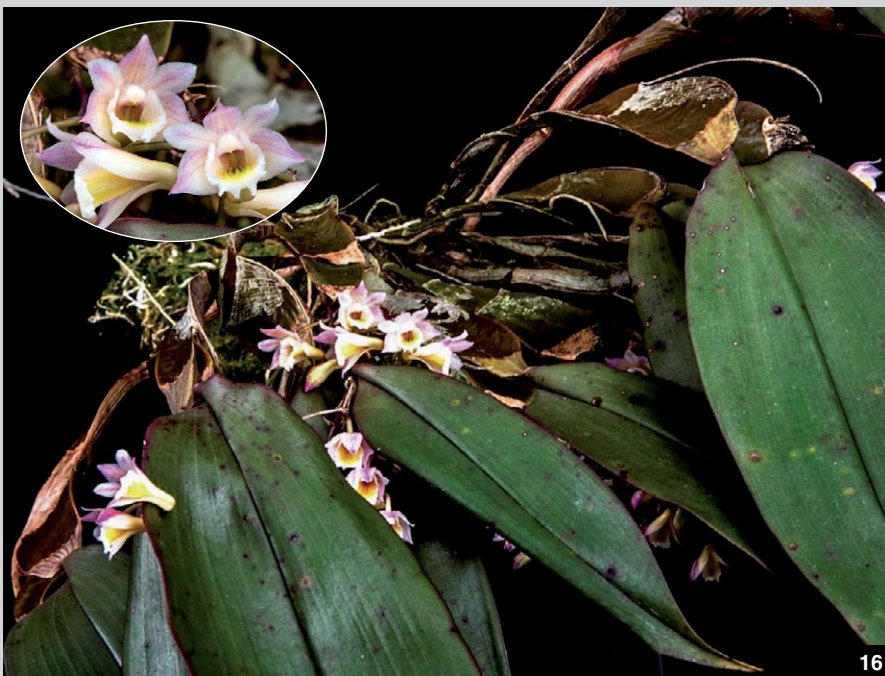
- [1] *Coelogyne odoardi* 'Irene' CHM-HCC/AOS 89-79 pts. Exhibitor: Al & Irene Messina; Photographer: Maurice Garvey. Northeast Judging
- [2] *Sarcochilus* Kulnura Taser 'Sebastian' JC/AOS (Kulnura Need x Kulnura Kaleidescope). Exhibitor: Kevin Hill; Photographer: Chaunie Langland. Pacific Central Judging
- [3] *Phragmipedium* Tall Tails 'Huntington's Ladder' AM/AOS (*caudatum* x *warszewiczianum*) 80 pts. Exhibitor: Huntington Botanical Gardens; Photographer: Arthur Pinkers. Pacific South Judging
- [4] *Phalaenopsis equestris* f. *alba* 'Dove' AM/AOS 82 pts. Exhibitor: Norman's Orchids; Photographer: Arthur Pinkers. Pacific South Judging
- [5] *Bulbophyllum hamelinii* 'Chasus' CHM/AOS 86 pts. Exhibitor: Charles and Susan Wilson; Photographer: Ross Leach. Pacific Northwest Judging
- [6] *Dendrobium sanderae* (Luzonicum) 'Geneva's White Diamond' AM/AOS 82 pts. Exhibitor: Thornton Conservatory; Photographer: Arthur Pinkers. Pacific South Judging
- [7] *Mormodes andicola* 'Humming Bird' CHM/AOS 80 pts. Exhibitor: Michelle Dobard-Anderson; Photographer: Arthur Pinkers. Pacific South Judging
- [8] *Vanda* Ladda Gold (2003) 'Linda Jean' AM/AOS (Tubtim Velvet x Bangkhuntian Gold) 83 pts. Exhibitor: James B. Wheeler; Photographer: Arthur Pinkers. Pacific South Judging
- [9] *Phragmipedium* QF Leina'ala 'Arnie' AM/AOS (Conchiferum x Incan Treasure) 80 pts. Exhibitor: Arnold Gum; Photographer: Arnold Gum. Pacific South Judging
- [10] *Phragmipedium* Don Wimber 'Corky' HCC/AOS (Eric Young x *besseae*) 76 pts. Exhibitor: James B. Wheeler; Photographer: Arthur Pinkers. Pacific South Judging
- [11] *Phalaenopsis tetraspis* 'Dr. Roger Lee' AM/AOS 85 pts. Exhibitor: Norman's Orchids; Photographer: Arthur Pinkers. Pacific South Judging
- [12] *Vandachostylis* Dragon's Tongue 'Diamond Orchids' AM/AOS (Pinky x *Vanda longitepala*) 86 pts. Exhibitor: Peter T. Lin; Photographer: Arthur Pinkers. Pacific South Judging
- [13] *Dendrobium* Fire Wings 'Linda' HCC/AOS (Big Alex x Silver Wings) 76 pts. Exhibitor: James B. Wheeler; Photographer: Arthur Pinkers. Pacific South Judging
- [14] *Catasetum* Greg Scott 'Nax Dark Chocolate' AM/AOS (Donna Wise x *pileatum*) 80 pts. Exhibitor: Thornton Conservatory; Photographer: Arthur Pinkers. Pacific South Judging
- [15] *Phalaenopsis bellina* 'Paraíso Tropical 1' AM/AOS 84 pts. Exhibitor: Carlos Fighetti; Photographer: Irma Saldaña. Puerto Rico Judging
- [16] *Phalaenopsis bellina* 'Paraíso Tropical 2' AM/AOS 82 pts. Exhibitor: Carlos Fighetti; Photographer: Irma Saldaña. Puerto Rico Judging



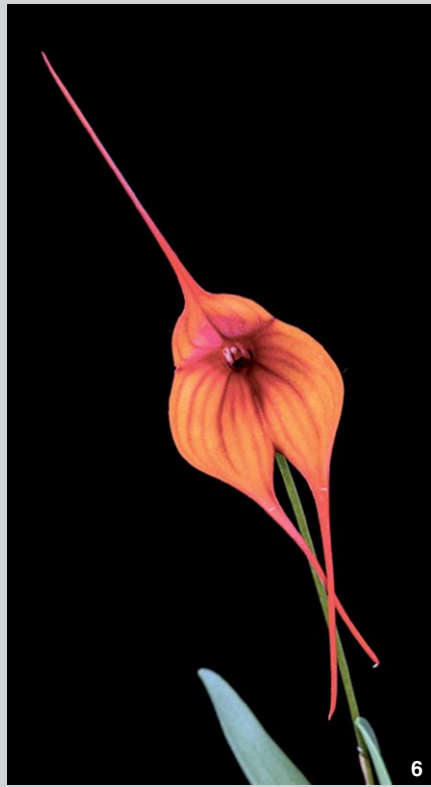


- [1] *Bromecanthe* Garnet Glory 'Machiavelli' AM/AOS (*Guaritionia* Why Not x *Myrmecophila thomsoniana*) 82 pts. Exhibitor: René E. García; Photographer: Irma Saldaña. Puerto Rico Judging
- [2] *Dendrobium* Jairak Fire Horn 'Machiavelli' AM/AOS (Jairak Little Gem x *tangerinum*) 84 pts. Exhibitor: René E. García; Photographer: Irma Saldaña. Puerto Rico Judging
- [3] *Phalaenopsis equestris* f. *cyanochila* 'Paraiso Tropical' AM/AOS 80 pts. Exhibitor: Carlos Fighetti; Photographer: Julio D. Rios. Puerto Rico Judging
- [4] *Cattleya* Ana Meribeth 'Ana Lucía' HCC/AOS (*quadricolor* x *aclandiae*) 76 pts. Exhibitor: Magdalena Ledezma; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging
- [5] *Warrea costaricensis* (Aurea) 'Pablo Loria' JC/AOS. Exhibitor: Jeannette Loria; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging
- [6] *Tolumnia* Jairak Firm 'Red Devil' HCC/AOS (Rainbow x Plush) 79 pts. Exhibitor: Julio David Rios; Photographer: Irma Saldaña. Puerto Rico Judging
- [7] *Cattleya schilleriana* (1857) 'Alejandro Rodríguez Cheung' FCC/AOS 90 pts. Exhibitor: Alejandro Rodríguez Cheung; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging
- [8] *Laelia lyonsii* 'J A R R' AM/AOS 81 pts. Exhibitor: José Román; Photographer: Irma Saldaña. Puerto Rico Judging
- [9] *Brassocattleya* Memoria Vida Lee 'Madeline Soto' AM/AOS (*Binosa* x *Cattleya* Brazilian Treasure) 84 pts. Exhibitor: Madeline Soto; Photographer: Irma Saldaña. Puerto Rico Judging
- [10] *Laeliocattleya* Oscar Suarez 'Julio David' AM/AOS (*Cattleya schilleriana* (1857) x *Laelia undulata*) 84 pts. Exhibitor: Julio D. Rios; Photographer: Irma Saldaña. Puerto Rico Judging
- [11] *Barkeria lindleyana* (Coerulescens) 'Memoria Denis Edén' AM/AOS 88 pts. Exhibitor: Carmen Flores; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging
- [12] *Barkeria lindleyana* 'Mila' AM/AOS 88 pts. Exhibitor: Erick Arce; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging
- [13] *Cattleya* Victoria-Regina 'Doña María' AM/AOS (*labiata* x *tigrina*) 83 pts. Exhibitor: Erick Arce; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging
- [14] *Habenaria* Regnier 'Guillermo/La Amistad' AM/AOS (*carnea* x *rhodocheila*) 86 pts. Exhibitor: Emanuel Quesada; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging
- [15] *Rhyncholaeliocattleya* Suzuki's Preciosa 'Memoria Germán Aguilar' HCC/AOS (*Goldenzelle* x *Chunyeah*) 78 pts. Exhibitor: Grace Vasquez; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging
- [16] *Rhyncholaeliocattleya* Carioca Girl 'Abuelo Victor Vasquez' HCC/AOS (*Pastoral* x *Cattleya* Sierra Blanca) 75 pts. Exhibitor: Grace Vasquez; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging
- [17] *Catasetum* Louise Clarke 'Alejandro Rodríguez Cheung' AM/AOS (*Susan Fuchs* x *Donna Wise*) 83 pts. Exhibitor: Alejandro Rodríguez Cheung; Photographer: Jorge Enrique Céspedes Trigueros. Puerto Rico Judging





- [1] *Catasetum* Jumbo Longan 'Fuzzy Nubbins' AM/AOS (*atratum* x *fimbriatum*) 82 pts. Exhibitor: Brittany Lowery; Photographer: Mark Van der Woerd. Rocky Mountain Judging
- [2] *Rhynchoaeliocattleya* Old Faithful 'Louisiana' HCC/AOS (*Cynthia* x *Cattleya* Casitas Spring) 78 pts. Exhibitor: Al Taylor; Photographer: Wilton Guillory. Shreveport Judging
- [3] *Paphiopedilum* Hung Sheng Pink 'Velikay' HCC/AOS (*moquetteanum* x *emersonii*) 77 pts. Exhibitor: Terry Kowalczyk; Photographer: Jay Norris. Toronto Judging
- [4] *Vanda* My Twin Brother Ron 'Westway Farms' HCC/AOS (Tubtim Velvet x Nakorn Sawan) 77 pts. Exhibitor: Don Ghiz; Photographer: Wilton Guillory. Shreveport Judging
- [5] *Paphiopedilum* Jacob's Knight 'Slipper Zone Venus Rises' HCC/AOS (Memoria Jacob Jake Piloto x Venus Knight) 78 pts. Exhibitor: Lehua Orchids; Photographer: Wilton Guillory. Shreveport Judging
- [6] *Phalaenopsis* Crystal Surprise 'Cad's Solar Flare' AM/AOS (Lioulin Venus x LD's Bear Queen) 81 pts. Exhibitor: David Bryan; Photographer: Jay Norris. Toronto Judging
- [7] *Catasetum* Spot Me 'B-C' AM/AOS (John C. Burchett x *denticulatum*) 81 pts. Exhibitor: B. Butts- C. Lefaive; Photographer: Jay Norris. Toronto Judging
- [8] *Clowesetum* Lydia Pan 'Westway Farms' HCC/AOS (*Catasetum* Frilly Doris x Upper Echelon) 77 pts. Exhibitor: Don Ghiz; Photographer: Wilton Guillory. Shreveport Judging
- [9] *Vandachostylis* Janice Allison 'Benin Blue' HCC/AOS (*Vanda* Phairots Sand x *Rhynchostylis* *coelestis*) 77 pts. Exhibitor: Mary Mancini; Photographer: Wilton Guillory. Shreveport Judging
- [10] *Catasetum* B-C Pioneer 'Quest' AM/AOS (Dark Odyssey x Dreamboat) 81 pts. Exhibitor: B. Butts- C. Lefaive; Photographer: Jay Norris. Toronto Judging
- [11] *Catasetum* Kleberbarb 'Golden Marchers' HCC/AOS (*kleberianum* x *barbatum*) 76 pts. Exhibitor: Doug and Terry Kennedy; Photographer: Jay Norris. Toronto Judging
- [12] *Cattleya* Allen Condo 'Paula' FCC/AOS (Summerland Girl x Mrs. Mahler) 91 pts. Exhibitor: Joseph Grezaffi, III; Exhibitor 2: Joe Grezaffi; Photographer: David Nickerson. West Palm Beach Judging
- [13] *Cattleya* *violacea* (Semi-alba) 'Memoria Annie Wong' HCC/AOS 77 pts. Exhibitor: Calvin Wong - Tropical Gardens Orchids; Photographer: Judith Higham. Western Canada Judging
- [14] *Cattleya* Jerry Hoyt 'Waldor's Peppermint' JC/AOS (*Intermediette* x *guttata*). Exhibitor: Waldor Orchids, Inc.; Photographer: David Nickerson. West Palm Beach Judging
- [15] *Rhynchoaeliocattleya* Crowfield 'Indian River' AM/AOS (Castle Mill x *Cattleya* *bicolor*) 81 pts. Exhibitor: Victor J. Elliott; Photographer: David Nickerson. West Palm Beach Judging
- [16] *Dendrobium* *pseudolamellatum* 'Orquivalle' CCM/AOS 86 pts. Exhibitor: Orquideorama Cali; Photographer: Nicolas Gomez Rios. West Palm Beach Judging





- [1] *Phragmipedium x roethianum* 'Chrysalis Ileana Morales' CHM/AOS (*hirtzii x longifolium*) 83 pts. Exhibitor: Christine Morales and Alex Rodriguez; Photographer: Tom Kuligowski. West Palm Beach Judging
- [2] *Episcatanthe* Volcano Trick 'Chrysalis Memoria Mariela Vasquez' AM/AOS (*Cattlianthe* Trick or Treat x *Epidendrum stamfordianum*) 81 pts. Exhibitor: Christine Morales and Alex Rodriguez; Photographer: Tom Kuligowski. West Palm Beach Judging
- [3] *Cattlianthe* Elephant Drops 'Cherry Bomb' AM/AOS (Chocolate Drop x *Cattleya* Pink Elephants) 84 pts. Exhibitor: Gigi Louis; Photographer: Tom Kuligowski. West Palm Beach Judging
- [4] *Rhyncholaeliocattleya* Virginia Sourry-Tzimas 'Orquifollajes' AM/AOS (Apricot Flare x Goldenzelle) 82 pts. Exhibitor: Francisco V. Villegas; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [5] *Platystele densiflora* 'Montecarmelo' CCE/AOS 91 pts. Exhibitor: Gloria Norena; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [6] *Masdevallia Paramuna* 'Orquifollajes' AM/AOS (Highland Monarch x Kimballiana) 80 pts. Exhibitor: Francisco V. Villegas; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [7] *Polycynis lehmannii* 'Jaime' HCC/AOS 79 pts. Exhibitor: Colomborquideas Ltda.; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [8] *Masdevallia* Panama Stripes 'Entreflores' AM/AOS (*calocodon x decumana*) 80 pts. Exhibitor: Daniel Piedrahita; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [9] *Rhyncholaeliocattleya* Serengeti Sands 'Hackneau' AM/AOS (Teresa's Smile x *Cattleya tigrina*) 83 pts. Exhibitor: Courtney Hackney; Photographer: David Nickerson. West Palm Beach Judging
- [10] *Oncidium* Cassandra 'Montecarmelo' HCC/AOS (*alexandrae x Urania*) 78 pts. Exhibitor: Gloria Norena; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [11] *Cattleya dowiana* 'Orquifollajes' AM/AOS 84 pts. Exhibitor: Francisco V. Villegas; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [12] *Masdevallia* Paramuna 'Ana Patricia' AM/AOS (Highland Monarch x Kimballiana) 85 pts. Exhibitor: Francisco V. Villegas; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [13] *Miltoniopsis vexillaria* 'Rosalba' AM/AOS 80 pts. Exhibitor: Gustavo A. Aguirre; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [14] *Rhyncholaeliocattleya* Travolta 'Arangos' HCC/AOS (George King x Lynchess River) 77 pts. Exhibitor: Olga Lucia Arango; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [15] *Masdevallia* Luciernaga del Paramo 'Auravelez' AM/AOS (Highland Monarch x Charisma) 82 pts. Exhibitor: Francisco V. Villegas; Photographer: Nicolas Gomez Rios. West Palm Beach Judging
- [16] *Platystele compacta* 'Orquifollajes' CCM/AOS 84 pts. Exhibitor: Francisco V. Villegas; Photographer: Nicolas Gomez Rios. West Palm Beach Judging

Angraecum idae

A New Orchid from Madagascar

BY JOHAN HERMANS, ANTON SIEDER, LANDY RAJAOVELONA AND JACKY ANDRIANTIANA



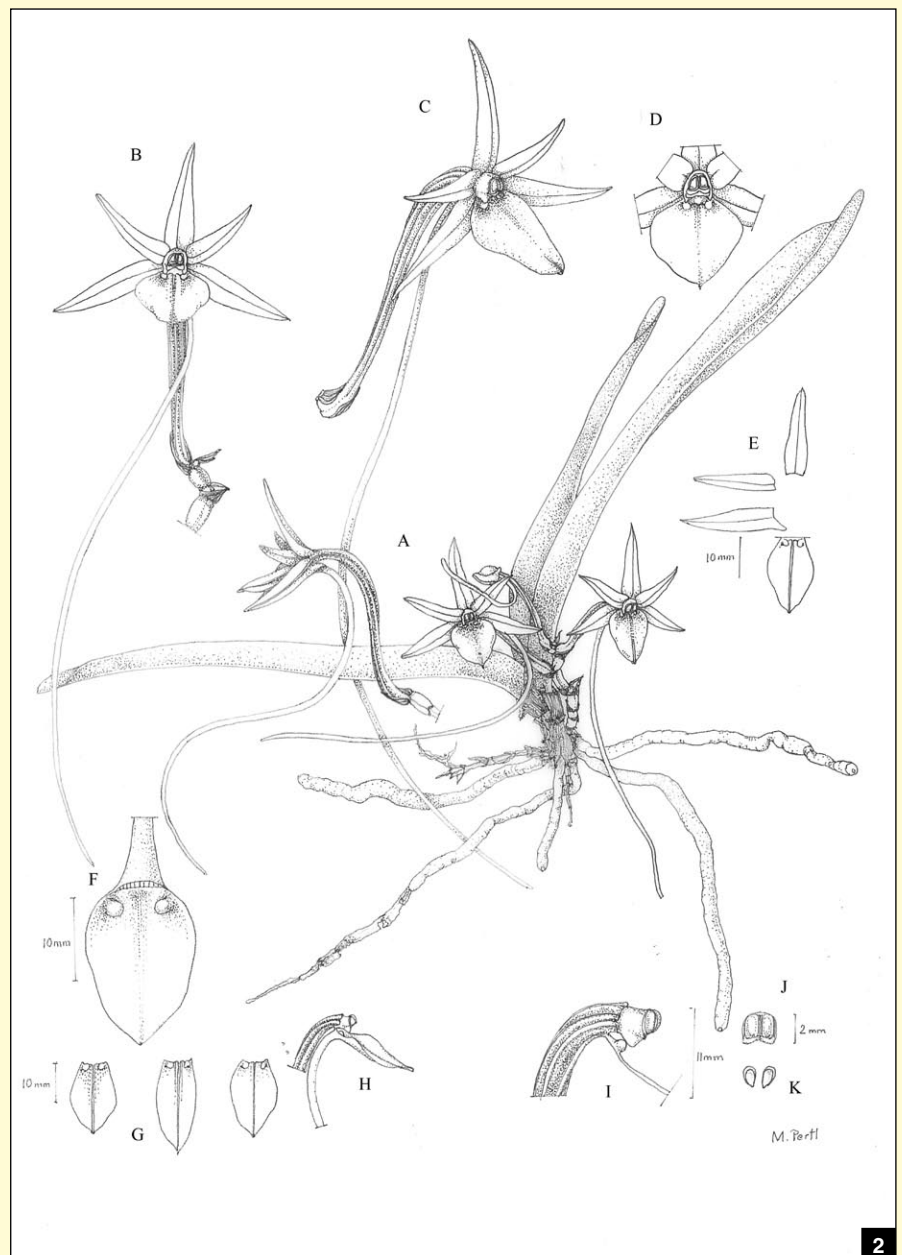
ABSTRACT A new orchid species from Madagascar, *Angraecum idae*, in section *Humblotiangraecum*, is described and illustrated for the first time. It is compared with similar species from the area. A preliminary conservation assessment is provided.

INTRODUCTION *Angraecum* Bory (sub-family Epidendroideae: tribe Vandeeae: subtribe Angraecinae), as currently accepted by most recent authors, is a large genus of around 225 species occurring mainly in Africa, Madagascar and adjacent islands of the Indian Ocean; but it is notably rich in Madagascar, with 149 different species, two subspecies, and four varieties. Just over 10 percent of these taxa also occur on the Mascarenes and the Comoros (Hermans, in press).

Garay (1973) developed Finet's (1907), Schlechter's (1918, 1925) and Perrier de la Bâthie's (1938, 1941) treatments of the genus and produced a key to the 19 sections of *Angraecum* then recognized. Several investigations of the phylogeny and biogeography of the genus, based on morphological and DNA analysis, have recently been made (Micheneau et al. 2008, Mytnik et al. 2010, Szlachetko et al. 2013, Andriananjanantsoa et al. 2016, Simo-Droissart et al. 2018); they suggest the genus is paraphyletic. None has been comprehensive enough to accept the potential segregates. In addition, Senghas (1964, 1997), Bosser (1970, 1988, 1989a, 1989b, 2007), Hermans and coauthors (Hermans and Cribb 1997, 2005; Hermans and La Croix 2001; Hermans, Cribb, et al. 2002, Hermans et al. 2017, Hermans, Verlynde, et al. 2020) and Verlynde et al. (2016) have all described novelties in the genus from the island in recent times.

During the last decade, while exploring an area in Mahajanga Province in northern Madagascar, a team from the Botanical Gardens of the University of Vienna and the Parc Botanique et Zoologique de Tsimbazaza, Antananarivo, Madagascar, has discovered several eye-catching new orchids, including the new species described below.

The conservation status of the new species given here is a summary of the full International Union for Conservation of Nature (IUCN) Red List assessments which will be completed and submitted for review and publication once the species name is validly published. The assessment has been compiled based on current knowledge of the taxon, by one of the authors (Landy Rajaovelona), who is an IUCN Red List assessor, using the IUCN Red List Categories and Criteria (2012).



Angraecum idae Hermans and Sieder sp. nov. Type: Madagascar, Mahajanga Province between Antsohihy and Anlalava, February 2020, 120 m, A. and C. Sieder and Andriantiana 8137 (WU) (holotype WU!).

Erect to arching, epiphytic or lithophytic *herb* up to 16 cm high. *Roots* basal, thick, slightly flattened against the substrate, more or less verrucose, 3–8 mm in diameter, silvery green when young, becoming silverygrey with age. *Stem* stout, short, very rarely branching, up to 5 cm long, 2–3 cm wide, more or less flattened, completely covered by overlapping leaf sheaths, the base carrying persistent, dark brown corrugate leaf sheath remnants. *Leaves* 3 to 5, basal, erectly spreading, articulate to and confluent with the leaf

[1] *Angraecum idae*. Plant habit and inflorescence. Photographs by Anton Sieder.

[2] *Angraecum idae*. A, plant habit; B, flower front view; C, flower side view; D, detail of column and lip; E, dissection of flower; F, detail of lip; G, different shapes of lip; H, side view of lip and column; I, side view of column; J, pollen cap; K, pollen. From A. and C. Sieder and Andriantiana 8137 (WU). [Drawn by Margareta Pertl]

sheaths, succulent, narrowly elliptic, lorate, strongly conduplicate, 8.5–15 × 0.5–1.6 cm, V-shaped in cross-section, roundly ridged underneath, unequally roundly bilobed at the apex, pale to glaucous green. *Inflorescence* from the axis of the leaf sheaths, spreading, short,

2- to 3-flowered plus an embryonic bud. *Peduncle* short, angular in cross-section, distinctly keeled, slightly thickened at the join with the pedicellate ovary, circa (c.) 0.9–1.5 × 3–5 mm, persistent, with 1–2 thin, amplexant, reddish brown sterile bracts at the base. *Floral bracts* thin, ovate, conduplicate, dorsally ridged, attenuate, 5–6.4 × 1.2–1.5 mm, reddish brown. *Flowers*, overall 28–40 × 33–37 mm not including the spur; sepals and petals pale greenish-yellow becoming almost white on maturity, often pale green towards the base, lip white, all segments becoming pale ochre when fading, column, spur and ovary pale green, anther cap and pollen pale yellow. *Pedicel* and *ovary* angular-keeled, somewhat twisted longitudinally, curved towards the base of the flower, glabrous, 23–29 × 1.8–2.9 mm. *Dorsal sepal* narrowly ovate, 14.8–16.5 × 4.5–5.3 mm, attenuate, concave, slightly recurved; *lateral sepals* lanceolate, attenuate, 17.2–18.1 × 3.8–4.1 mm, the base overlapping the base of the spur. *Petals* lanceolate attenuate, 16.1–17.3 × 3.5–4.1 mm. *Lip* elliptic to obovate, anterior margin mucronate, 18–19.2 × 10.1–10.7 mm, flat, the margins slightly curved, with a central raised area and two distinct calli at the base by the entrance of the spur; spur incurved or sigmoid, slender, filiform, 85–92 mm long, 1.1–1.5 mm in diameter, narrowing towards the apex. *Column* c. 4 mm in diameter, wings oblong-truncate; lobule of the rostellum indistinct; *anther cap* galeate, with a raised rounded ridge on the exterior, auricular at the base, 2.1–2.3 × 2.5–2.7 mm; *pollinia* 2, pyriform, c. 1.1 × 1.3 mm, stipes indistinct with a small viscidium c. 0.5 mm long.

DIAGNOSIS *Angraecum idae* fits well in section *Humblotiangaecum* Schltr. (1925, p. 310), which is characterized by the short stem, several-flowered raceme, fleshy flowers with a short pedicel and a long thin spur. The species is distinct by the succulent lorate leaves that are strongly conduplicate; the short few-flowered inflorescence, angular peduncle and ovary carrying short scarios sheathing bracts; medium-sized flowers for the genus with a long spur, elliptic to obovate lip with a mucronate anterior margin and two round calli at the base.

DISTRIBUTION Endemic to the Antsohihy area in Mahajanga Province, northern Madagascar.

SPECIMENS EXAMINED: MADAGASCAR Mahajanga Province, near Antsohihy, March 2019, c. 600 m, A. & C. Sieder, Knirsch, Prehler and Andriantiana 7811 (WU); between Antsohihy and



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Anlalava, February 2020, 120 m, A. & C. Sieder and Andriantiana 8137 (WU); between Antsohihy and Mandritsara, February 2020, A. & C. Sieder and Andriantiana 8182 (WU).

HABITAT Epiphyte in forest remnants, on wet rock in pockets of humus. Altitude 120–630 m.

PHENOLOGY February to March.

ETYMOLOGY The epithet refers to Ida, the nymph of Greek mythology and to the name of the granddaughter of Christa and Anton Sieder, cofinders of the new species.

CONSERVATION STATUS *Angraecum idae* is endemic to Madagascar, restricted to the Sofia region (Mahajanga Province). A total of three “threat locations” (sensu IUCN 2012) are identified with respect to the main threats, which are the shifting agriculture and wood harvesting. The species is not recorded in any

protected area, which infers that it will face a continuous decline in the area of occupancy, the extent of occurrence, the habitat quality and the number of subpopulations and mature individuals in the next 10 years. *Angraecum idae* is therefore assessed as Endangered under criteria B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv) (IUCN 2012).

RECOGNITION In section *Humblotiangaecum*, the new species is related to *Angraecum mahavavense* H.Perrier (1938, p. 131), which has a similar plant and has been found just farther north in Antsiranana Province but differs by the slightly smaller flowers, shorter spur (5–6 cm vs. 8–9 cm), a consistently lanceolate lip with an attenuate tip (vs. elliptic to obovate) and lacking the basal lip calli. It is most closely related to *Angraecum potamophilum* Schltr. (Schlechter 1913, p. 199), which has been recorded from an

area farther south in Mahajanga Province and has a similar plant and flower but differs by the somewhat narrower leaves, longer inflorescence with 3–5 flowers (vs. 1–3), a lanceolate lip (vs. elliptic to obovate) which also lacks the mucronate tip and basal calli. It shares the basal lip calli with the poorly documented *Angraecum bicallosum* H.Perrier (1938, p. 111) in section *Perrierangraecum* Schltr. (1925, p. 309) but in that species the plant is much smaller, with the peduncle and pedicel covered by several overlapping bracts, and the flower is almost twice as large.

Acknowledgments

We are very grateful to Margareta Pertl for the detailed drawing; Michael Kiehn, Professor of Botany and Director of the Department of Biogeography and the Botanical Garden, University of Vienna for his support; Solo Rapanarivo, head of the flora department at Parc Botanique et Zoologique de Tsimbazaza, (PBZT) Antananarivo, for his permission to use the collection at the PBZT herbarium and to provide all the necessary collecting authorization; and especially Jacky Andriantiana for his guidance and help in the field. The relevant authorities in Madagascar are thanked for providing the export permits. Field work was carried out in the context of a Memorandum of Understanding between PBZT Antananarivo; Missouri Botanical Garden, St. Louis; and the Botanical Garden of the University of Vienna, Austria.

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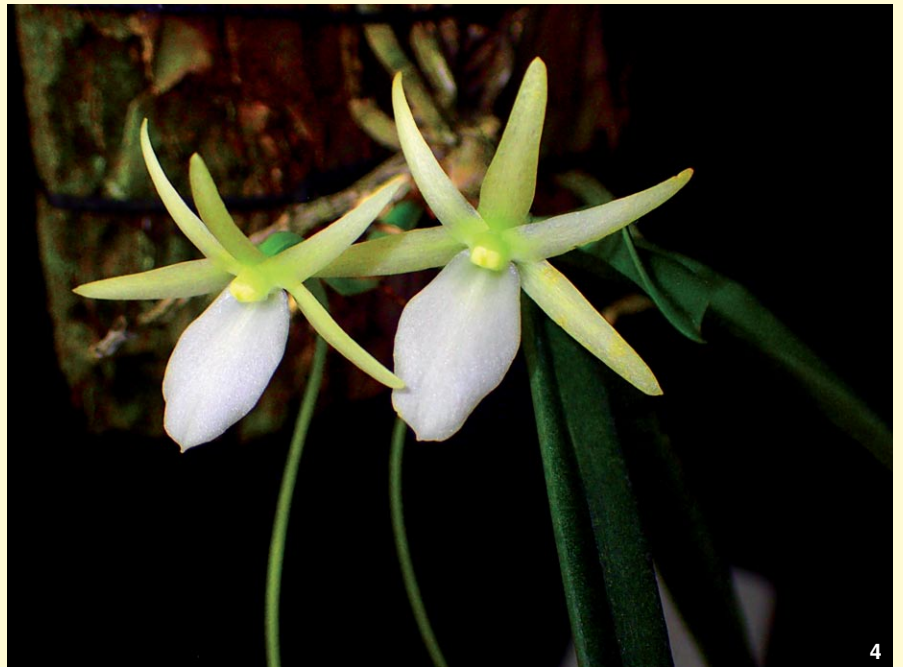
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— Johan Hermans, Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AE, UK, and Core Facility, Botanical Garden, University of Vienna, Rennweg 14, 1030 Vienna, Austria (email: j.hermans@kew.org). Anton Sieder, Core Facility, Botanical Garden, University of Vienna, Rennweg 14, 1030 Vienna, Austria. Landy Rajaovelona, Kew Madagascar Conservation Centre, Lot II J 131 Ambodivoanjo, Ivandry, Madagascar. Jacky Andriantiana, ex Parc Botanique et Zoologique de Tsimbazaza, Rue Fernand Kasanga, Tsimbazaza, Antananarivo, Madagascar.

COVID CONCERNS AND RESTRICTIONS CONTINUE TO SEVERELY IMPACT SHOWS. LISTED BELOW ARE THOSE CURRENTLY SCHEDULED. CANCELATIONS CAN AND DO OCCUR WITH LITTLE OR NO WARNING. SEE THE AOS WEBSITE FOR CURRENT INFORMATION

APRIL

3-4—Flamingo Gardens Orchid Society Show, Flamingo Gardens, 3750 S Flamingo Rd., Davie, FL. Contact: Jan Amador; 954-347-2738, jbamador@bellsouth.net

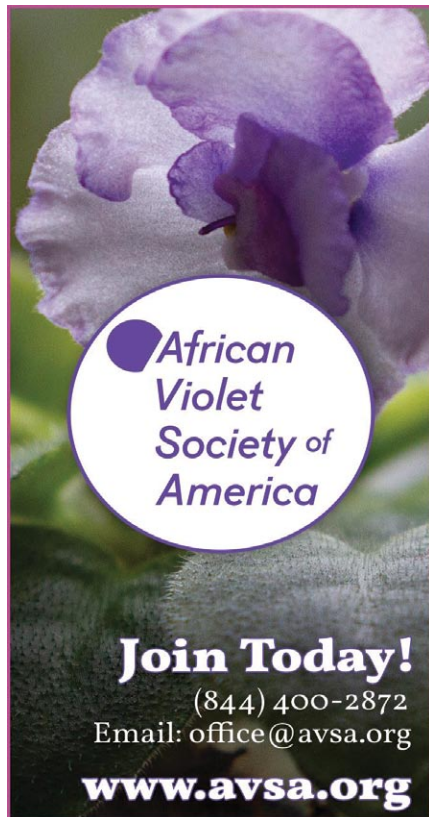
9-11—The Apopka International Orchid Festival, Krull-Smith, 2800 W Ponkan RD, Apopka, FL. Contact: Frank Smith; 407-886-4134; orchidfrank@aol.com

10-11—Desert Valley Orchid Society Show, Berridge Nurseries, 4657 E Camelback Rd, Phoenix, AZ. Contact: Gloria Zemla; 480-216-5883, zemizz@cox.net

CANCELED

As of press time, the following judging centers are holding monthly judging events. Because of covid restrictions, this is subject to change without notice. Please contact the appropriate judging center chair before taking plants (<https://www.aos.org/orchid-awards-judging/aos-judging-centers.aspx>)

Alamo, Atlanta, California-Sierra Nevada, Carolinas, Chicago, Dallas, Florida Caribbean, Florida North-Central, Great Plains, Hawaii (at least the Hilo site), Houston, Louisiana, Pacific Central (Historic Filoli House), Puerto Rico, Rocky Mountain, West Palm Beach



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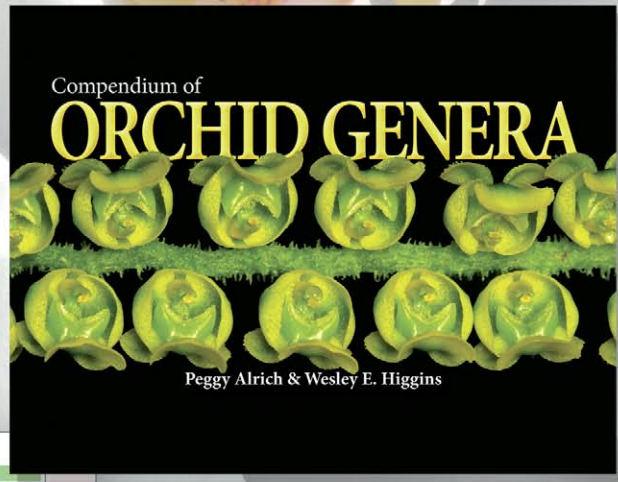
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Angraecum Bey

Voy. Ins. Afrique, 1: 376, t. 19 (1861).

Epithet: *Angraecum* Thunberg *Angraecum*

ETYMOLOGY: From the Latinized form of the Malay word (*Angrak* or *Angrak*) for the epiphytic orchids that resemble *Ardisia* and bind in habit. The name *Angraecum* was given by George Eberhard Rumphius (1628-1702), who coined it from the word *Angrak*, a name or title given by the Malays to "parrot-like" plants, the meaning of which has not been discovered. From Engelbert Kaempfer (1681-1716) we learn that *Angrak* or *Angrak* is also the name used by the Javanese for these plants.

GENETIVE: *Angraecum* obscurem *bey*

Illustration: Angraecum bey

More than two-hundred twenty-one, very small to very large monopodial epiphytes, a few lithophytes or rare terrestrials have a wide range of distribution in humid, low to mid elevation, coastal to hill scrub, savanna to montane evergreen forests of mainly tropical Africa (Guinea to Somalia, Gabon to Zimbabwe and South Africa), Madagascar, Mauritius to Réunion, although one species is found as far away as the Seychelles and Sri Lanka. These miniature to large, rambling to clump-forming, warm to cool growing plants are vegetatively and florally quite diverse. The short to long, sometimes branched stems are leafy throughout with fleshy to leathery, channelled, unequally bilobed, usually distichous leaves. The one to several, short to long, solitary to few-flowered inflorescences have long-lasting, small to large flowers in shades of white, ivory or green with sepals and petals free, usually spreading. The flowers are noted for their spurs of widely varying lengths from quite long to short. The flowers have a thick, almost leathery texture, an exceptionally long flowering period, and an extraordinarily heavy nocturnal fragrance (usually within the long-spurred species) and the lip is larger than the other segments. The shell or boat-shaped, simple or obscurely lobed lip is usually quite concave, its base more or less encloses the column, and it has a central callus. The flowers have a very short, footless column with deeply divided lobes.

Pollinia 2, waxy, each attached to its own narrow or elliptic viscidium.

Culture: Growing conditions and habitat options vary widely from species to species. Generally they do best mounted on a firm slab with good drainage and most of the species benefit from a resting period of reduced watering. Provide intermediate conditions, bright to diffused light, high humidity and good air movement.

Valid Angraecum Synonyms

Aerobion Kaempfer ex Sprengel
Syst. Voy. (Sprengel), ed. 16, 8: 679, t. 716 (1826).
Erroresque: Greek for air and life, referring to the epiphytic habit of the plants.
Lectotype: *Aerobion asperifolium* (Thunberg) Sprengel (*Angraecum asperifolium* Thunberg) designated by C. G. Hill, 2001 (2001).

New recognized as belonging to the genus *Angraecum*, *Aerobion* was previously considered to include twenty-four epiphytes found in warm, mid elevation, montane forests of Madagascar and the Mascarene Islands.

Angraecoides (Candolle) Schachler, Mytnik & Goodrich
Biodivers. Res. Conservation, 29: 11 (2011).

Erroresque: *Angraecum*, a genus of orchids, and Greek for likeness or form. Refers to a similarity to *Angraecum*.

Ten Sees Angraecoides pinguis (Sprengel) Schachler, Mytnik & Goodrich (*Angraecum pinguis* Sprengel)

New recognized as belonging to the genus *Angraecum*, *Angraecoides* was previously considered to include twenty-five epiphytes found in cool, mid elevation, hill scrub and montane forests in northwestern Madagascar, Mauritius and Réunion.

Arachnangraecum (Schlachter) Schachler, Mytnik & Goodrich
Biodivers. Res. Conservation, 29: 11 (2011).

Erroresque: Greek for spider and *Angraecum*, a genus of orchids. Refers to the long, spider-like segments.

Ten Sees Angraecangraecum rufum (Thunberg) Schachler, Mytnik & Goodrich (*Angraecum rufum* Thunberg)

New recognized as belonging to the genus *Angraecum*, *Angraecangraecum* was previously considered to include thirteen epiphytes found in cool, mid elevation, hill scrub and montane forests in found in northwestern Madagascar, Mauritius and Réunion.

Bonniers Cochinchina

Rev. Gén. Bot., 11: 616, t. 10-11 (1899).

Erroresque: In appreciation of Eugène Marie-Gaston Bonnier (1853-1922), a French botanist, editor of *Revue Générale de Botanique* and publisher of Candolle's notes on the orchids of Réunion.

Ten Sees None designated

New recognized as belonging to the genus *Angraecum*, *Bonniers* was previously considered to include two epiphytes found in mid to upper elevation, bushy montane rain forests of Réunion.

Boryangraecum (Schlachter) Schachler, Mytnik & Goodrich
Biodivers. Res. Conservation, 29: 12 (2011).

Erroresque: Named for Jean Baptiste Bory de Saint-Vincent (1778-1848) a French naturalist and author of *Voyage dans les îles d'Afrique*. And *Angraecum*, a genus of orchids.

Ten Sees Boryangraecum parviflorum (Schlachter) Schachler, Mytnik & Goodrich (*Angraecum parviflorum* Schlachter)

New recognized as belonging to the genus *Angraecum*, *Boryangraecum* was previously considered to include thirteen epiphytes found in cool, mid elevation, hill scrub and montane forests in found in Madagascar, Mauritius and Réunion.

A



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Carmen Soto

A True Jewel of the Andes

OF ALL THE amazing cast of characters in the orchid world, there may be none as memorable and beloved as Carmen Soto. I am proud to call her a dear friend, and it literally viscerally pains me to convey the news of her passing from COVID-19 on February 10, 2021. When her brother, Gerardo, a chemist working on orchid fragrances, contracted the virus, Carmen went daily to the hospital to care for him, and contracted it herself, perishing only a few days later. All her thousands of friends in Peru and around the world are truly devastated by this untimely and unexpected loss. Indeed, she had many ambitious plans she was working toward, and personally, I was looking forward to many new orchid adventures with her well into the future.

As the chief biologist at Inkaterra, one of the premier ecotourism destinations in the world, Carmen, in her sweet-voiced, soft-spoken way, reached out one-by-one to a great multitude of people in the orchid world and passionately advocated for the protection and conservation of Andean flora and fauna. A graduate of University of San Antonio Abad in Cuzco, Carmen was recruited by visionary entrepreneur and philanthropist Jose Koechlin to create an education and conservation program within his incredible properties and resources at Inkaterra. Totally committed to utilizing the spectacular Peruvian native species as well as cultivating native talent, Carmen was given the reins to create what is possibly the greatest native orchid garden on planet Earth. In achieving this, she developed an encyclopedic knowledge of all the incredible biodiversity at Inkaterra, including the 372 orchids native to the region. She freely shared this knowledge and inspired commitment with her young staff of biologists and gardeners as well as tens of thousands of visitors and scientists from around the world that have worked with her to describe myriad newly discovered species in the region around Macchu Pichu. One of which, an incredibly rare and lovely *Brachionidium*, was named in her honor.



I was honored to work with Carmen in 2015 when she came to the Smithsonian Institution to develop a strategy at the National Zoo for the conservation of the Andean bear, and spent time with me in the orchid collection. How wonderful it was to have someone so full of knowledge

and experience and yet humble enough to work with me at the potting bench for hours each day. I am grateful that I got the opportunity to present jointly with Carmen at the Andean Orchid Conference in Medellín, Colombia about circa situm orchid conservation (conservation and

MIRENDA

cultivation of orchids in gardens and reserves within a species' natural range), using the orchid gardens of Inkaterra as a successful and viable model for other conservation organizations around the world. She provided a mind-blowing array of images of newly discovered orchids that she had a hand in describing with her many taxonomist friends.

Although her physical presence will certainly be mourned and missed by so many of us, especially the young local children she taught about their native heritage with special programs she developed, with friends such as Angela Mirro, and new orchid specialists she has mentored such as Daxs Herson Coayla, she will never be gone or forgotten. I suspect that she will always be a part of Inkaterra, not just because of her massive contributions to that place and the orchid world in general, but because her spirit is now free to roam the magical Andes mountains about which she was so passionate. I envision her embodied in one of the tiny but spectacularly beautiful hummingbirds she was always so thrilled to see, no longer restricted by physical limitations of the human body, but rather,



nimbly gliding and hovering through steep, unscalable mountains, pollinating the rarest and still undiscovered orchids on her daily journeys through the vast wilderness, ensuring they survive well into the future. Godspeed Carmen, I hope to join you there one day in that noble endeavor.



- [1] Carmen Soto at Inkaterra.
- [2] Carmen along with Angela Mirro (right) during a workshop held for children.
- [3] Carl Luer named this *Brachionidium carmeniae* to honor Carmen Soto.
- [4] One of the many species of hummingbirds known to frequent Inkaterra.

— Tom Mirenda has been working professionally with orchids for over three decades and is the past chair of the AOS Conservation Committee. He is an AOS accredited judge in the Hawaii Center (email: biophiliak@gmail.com).

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