

Orchiflora

VOS Newsletter

Volume 7 : **Issue 2**

O c t o b e r

President's Message

Now that fall is here—with the weather to prove it—our orchids should be safely sheltered from the elements. Take care of your growing conditions as most orchids are settling into the rest phase. The damp and cold are a recipe for rot and infection. To help prevent this, water early in the day, don't leave standing water in crowns, let media dry out a little longer in between your normal watering routine, consider using much less fertilizer, and provide good air movement.

Speaking of fall, it's the season of orchid shows! I want to thank everyone who volunteered their plants for the CVIOS show. It was a great display. Well done all. If your orchids weren't quite ready and you missed out on showing your plants, perhaps they'll be all set for FVOS show. I'm going to book large tables, and I'm counting on you to bring your blooming plants so we'll have a fantastic display.

I would like to ask you all to consider volunteering for small duties and really get engaged with our society. It's a great way to meet members and get to know one another better. And, as the saying goes, "many hands make light work". Perhaps you would like to help with kitchen tasks or assist with plants for photography? We may have some opportunities for you to do so in the near future. In the meantime, keep up the good growing and see you at the next meeting!

The damp and cold are a recipe for rot and infection.

Ryan Young



Vancouver Orchid Society

SEPTEMBER 28, 2016

Vandusen Floral Hall

Meeting was called to order at 7:05 and chaired by Ryan Young.

Minutes from the Last Meeting

It was moved by Barb Cable to accept the minutes from the last meeting and seconded by Eugene Banziger. The motion was passed by the members.

Treasurer's Report

Judy Buttress presented the year end treasurer's report. The year's financial statements were reviewed prior to the AGM by Erik Nilsen and Barbara Cable.

GIC - \$17,753

Chequing account \$16,020

The August sale brought in \$750 in table rentals and \$114 in the raffle.

Membership Report

Two new members and two guests were welcomed.

Facebook

Visit the VOS Facebook page at: www.facebook.com/VancouverOrchidSociety
You don't have to belong to Facebook to view the page, where we post photos and current information. Please send contributions to Jennifer Pell:
VOS_Secretary@outlook.com

Speaker Update

Pepe Patilla from Ecuagenera will be speaking at our October 26 meeting about the upcoming World Orchid Congress in Ecuador. The November meeting will be our Christmas Social. Speakers for 2017 will be announced once finalized.

Culture Class

The October Culture Class will be on how to rescue sick (rootless) orchids led by Ingrid Pike. November will be on deflasking orchids (hands on demonstration) led by Bev Hansen. Culture Classes are open to members only (and one of the huge perks of becoming a member!)

Upcoming Shows

CVIOS Show on September 30–October 2, Nanaimo
Margaret Prat will be taking plants and doing table set up at this show.

Fraser Valley Show—October 28–30

George Preston Recreation Centre, located at 20699 42nd Avenue, Langley, BC.
Plants need to be preregistered on line for this show. Ingrid Pike is the away show coordinator.

Northwest Orchid Society (Seattle) Fall 2016

AOS Judged Show— November 5–6, Swanson's Nursery, 9701 15th Ave BW, Seattle WA, 98117.

Raffle

The Raffle Committee thanks all those who contributed to the raffle.

Speaker

Calvin Wong gave us an excellent talk on his trip to Korea and Cymbidium goerengii, with lots of great images and culture tips!

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M I N U T E S

Speaker Series

8:30-9:30pm Floral Hall, VanDusen Gardens

October 26

2017 World Orchid Conference in Ecuador

Jose Portillo

Ecuagenera Orchids, Ecuador

Culture Class

6:30-8:30pm Cedar room, VanDusen Gardens

MEMBERS ONLY

October 10

Rescuing rootless orchids

Ingrid Pike

November 8

Deflasking orchids

Bev Hansen

Upcoming Events

October 15, 2016

2016 Fall Meeting

BC COUNCIL OF GARDEN CLUBS

Firefighters Banquet & Conference Center

6515 Bonsor Avenue, Burnaby, BC

Doors open at 8:15am, Meeting starts at 9am

Early Bird registration of \$35 ends October 2

October 19-23

Fall 2016 Members Meeting

AMERICAN ORCHID SOCIETY

The Huntington Library, Arts Collections & Botanical Gardens, San Marino, California.

October 28

Pacific Northwest Judging Center

No monthly judging in October. However, judging will be held at the FVOS Show.

Shows and Sales

October 21-23

2nd Annual International Orchid Show and Sale

AMERICAN ORCHID SOCIETY

The Huntington, 1151 Oxford Rd.,
San Marino, CA

October 28-30

The Allure of Orchids

FRASER VALLEY ORCHID SOCIETY

George Preston Recreation Centre, 20699-42nd
Avenue, Langley, BC

The show will be one day shorter than usual.

Set up will start at 10am on Friday with judging to follow at 1pm.

We will be having our regular banquet starting at 6:30pm that evening.

November 5-6

Fall Show and Sale

NORTHWEST ORCHID SOCIETY (SEATTLE)

AOS Judged, Swanson's Nursery

9701-15th Ave BW, Seattle WA, 98117

If you'd like information of sales further afield, check out this Facebook Group:

www.facebook.com/groups/1608642239350212/

A N N O U N C E M E N T S

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VANCOUVER ORCHID SOCIETY

JUNE 22, 2016



Bulbophyllum arfakianum
Unusual Species
Exhibitor: Calvin Wong

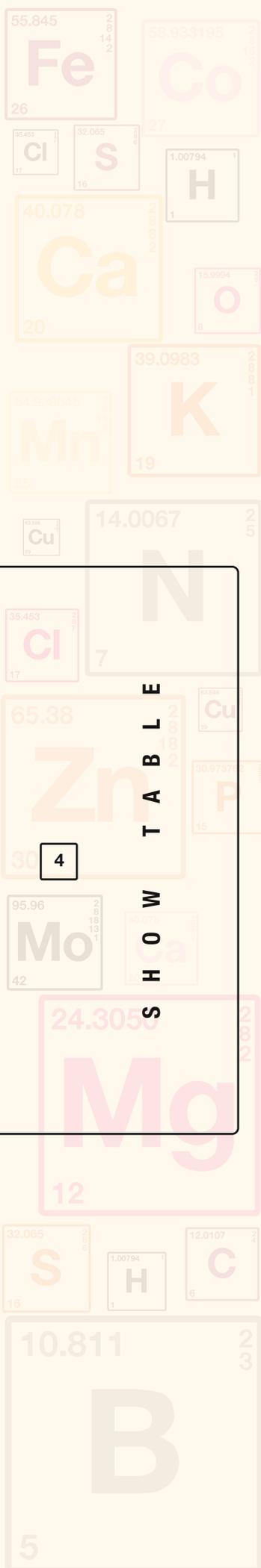


Paphiopedilum Gloria Naugle 'Sheila-Jean'
AM/AOS

Flower Quality
Exhibitor: Wayne Riggs



Coelogyne fimbriata 'Yellow'
Plant Culture
Exhibitor: Calvin Wong





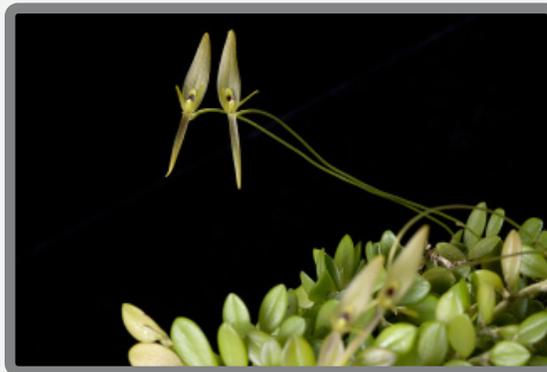
Miltonia Anne Warne
Plant Culture
Exhibitor: Calvin Wong



Dendrobium cuthbertsonii
Flower Quality
Exhibitor: Calvin Wong



Dendrobium falconeri
Display
Exhibitor: Hoa Truong

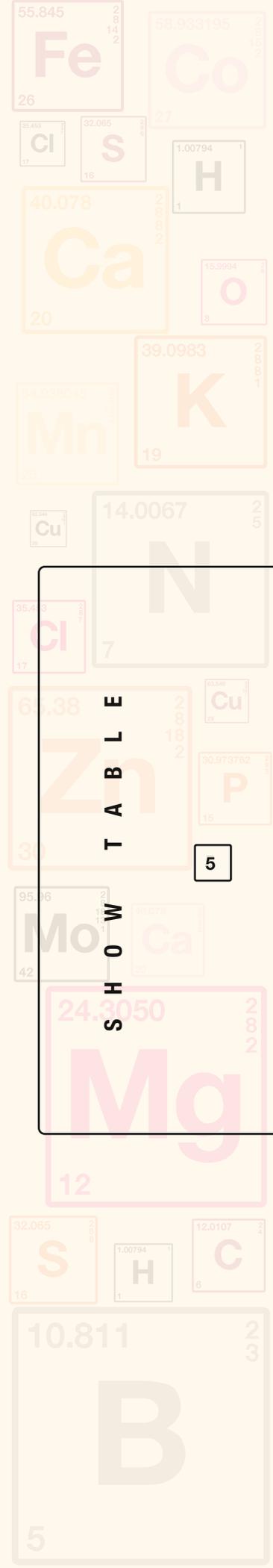


Barbosella australis
Unusual Species
Exhibitor: Gideon Singer

Judges
Jonathan Easey
Adam Ludlow
Elissa Schmidt

Photographer
Judith Higham
Higham@shaw.ca

If you would like a picture of your plant, please email Judy and she will gladly send you the file.



CENTRAL VANCOUVER ISLAND ORCHID SOCIETY SHOW

30 SEPT 2016



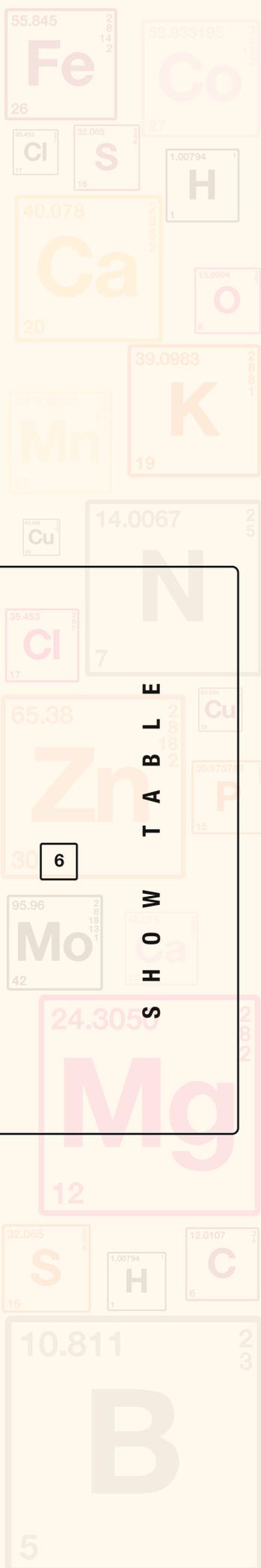
Cattleya maxima
Reserve Champion
Exhibitor: Alexey Tretyakov



Phragmipedium Cardinale
Best Orchid Grown Under Artificial Light Only
Exhibitor: Daniel Kwok



Coelogyne fimbriata 'Yellow'
Best in Coelogyne Grouping
Harry Johnson Award—Best Specimen Plant
Exhibitor: Calvin Wong





Best Visiting Society (COC)
Vancouver Orchid Society



Dendrobium laevifolium
Best in Show
Exhibitor: Paramount Orchids

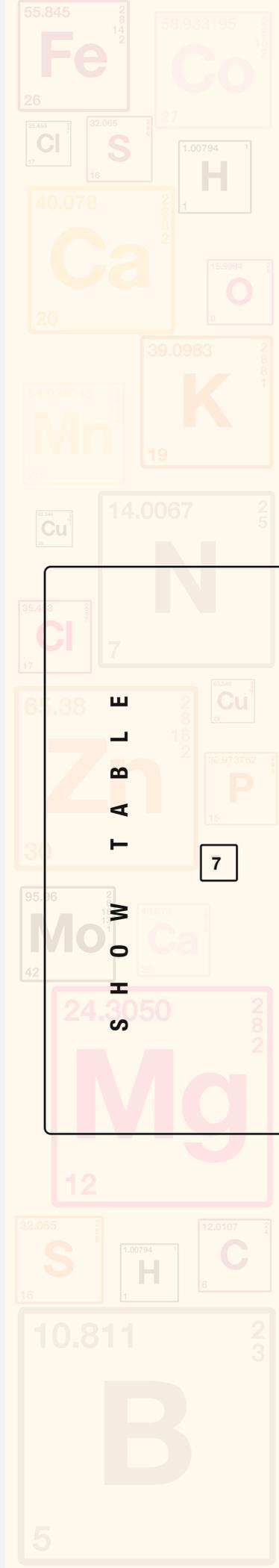


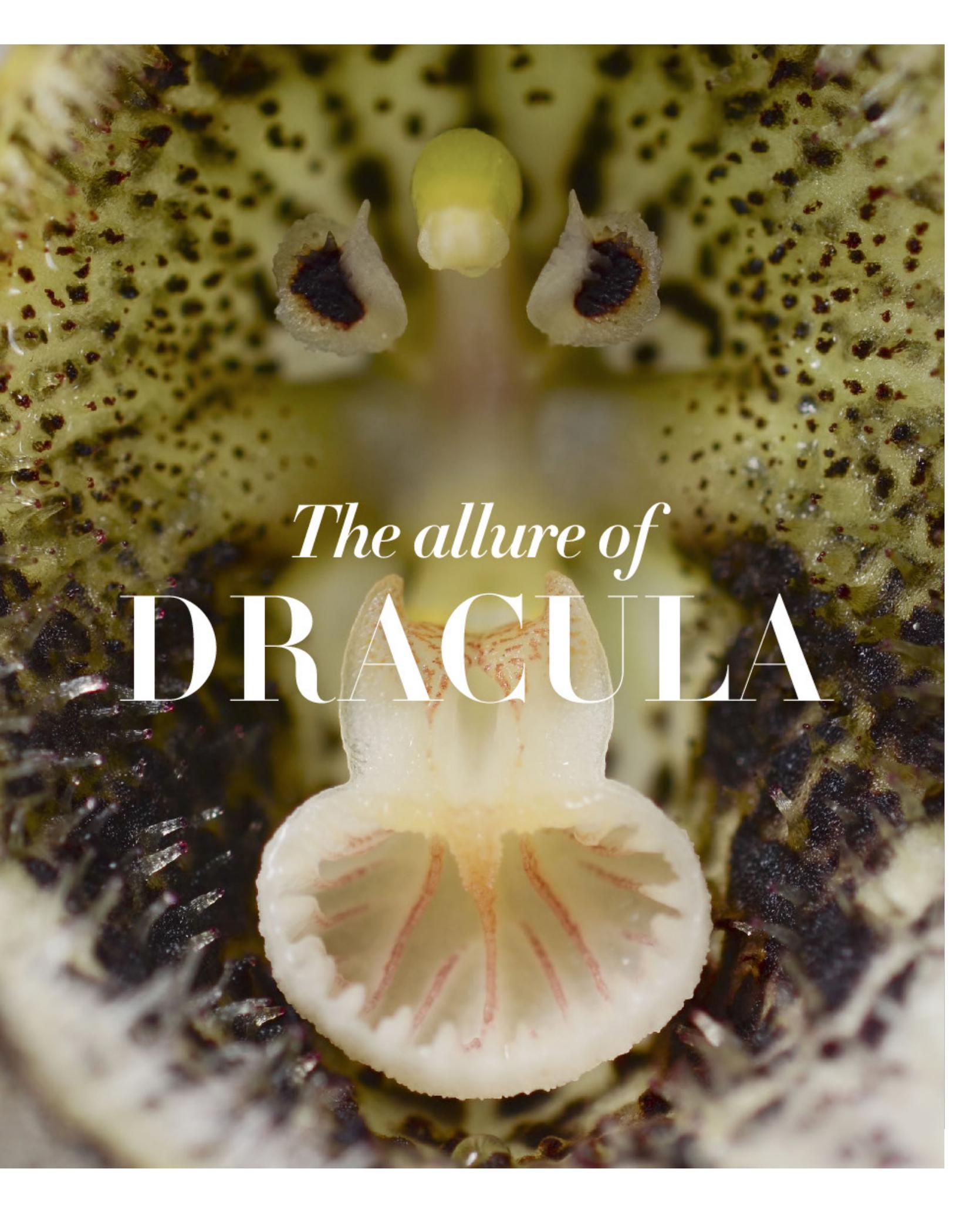
Habenaria erichmichaelii 'pink'
Best in All Others Not Listed Above
Exhibitor: Calvin Wong

Photographer

Judith Higham
Higham@shaw.ca

If you would like a picture of your plant, please email Judy and she will gladly send you the file.





The allure of
DRACULA

KEW SCIENCE

Mycologist Bryn Dentinger follows his nose into the Andean cloud forest to investigate the intimate relationship between mushrooms, insects and *Dracula* orchids, reports **Rachel Mason Dentinger**

Our bus has barely skirted the hills around Ecuador's capital, Quito, when traffic comes to a standstill and we have our first taste of the rain's dominance over life here in the wet season. No one seems surprised or upset. Across the aisle, a man claims it will take hours to clear the landslide that blocks the road in both directions. Some years, he tells us, the road crews give up and allow erosion to reclaim the road, at least until the rains diminish. Luckily, we wait only an hour before our bus continues into the western foothills of the Andes, heading toward Reserva Los Cedros. Straggling passengers run alongside, carrying ears of steamed corn and bags of tree-tomato juice, shedding their makeshift umbrellas of giant *Gunnera* leaves just before jumping back on the moving bus.

The onslaught of rain fells forest giants and wipes out the Reserva's bamboo bridges, but it also ignites a burst of bloom. This is the season of *Dracula* – the orchid genus that brings Kew mycologist Bryn Dentinger and his collaborators (including myself, as a field assistant) to this sodden corner of the Andes. For a mushroom expert, orchids may seem an unexpected research subject – until you consider the world from the perspective of a fruit fly. Despite the name 'fruit fly', most such drosophilids seek fungi for feeding and breeding. As a graduate student, Bryn became fascinated with the relationships between mushrooms and insects. The *Dracula* orchid project was conceived when he learned of the orchids'

resemblance to mushrooms and the untested hypothesis that *Dracula* orchids lure pollinators with a 'mushroomy' promise. When orchids entice insects into pollination, it's often with a flower that resembles food or a female. Fooled insects leave unsatisfied, but none the wiser, carrying pollen on to yet another orchid. In *Dracula*, a specialised petal bears a remarkable visual and tactile resemblance to a mushroom, tantalising both bugs and biologists.

Mimicry is a three-way relationship, and understanding the exchanges between two of its players can inform biologists indirectly about their exchanges with the third. What mushroom-like elements of these orchids attract drosophilids? And can their tastes in orchids tell us something about their tastes in mushrooms? This is the allure of *Dracula* for Bryn, that a mushroom-mimic could tell him more about being a mushroom than the mushroom itself – or at least about being a mushroom in the eyes of a fly.

The fascinating flora and fungi of Ecuador's Reserva Los Cedros are under threat from illegal mining



All photos: Bryn Dentinger

Dracula orchids (here *D. morleyi*) derive their name from 'little dragon' rather than Bram Stoker

It's easy to see how drosophilid flies might mistake *Dracula* orchids (right) for *Coprinellus* mushrooms (below)



But how can you see the microscopic details of a fly's world from our macroscopic level? The answer is to follow your nose. Beneath the physical contours of the cap and gills, a mushroom is a complex geography of chemical cues. One imperative for Bryn and his collaborators, Dr Bitty Roy of the University of Oregon and her graduate student Tobias Policha, is to tease apart the threads that weave together a drosophilid's sensory experience, distinguishing between the myriad cues that might motivate fly behaviour. Scent collection is part of their strategy.

High in the forest, huddling under an umbrella, we set up a portable olfactory laboratory. Using methods devised by a perfumist, we encase an orchid in a glass sphere, sealed as tightly as possible without damaging the flower. We insert a glass tube into the sphere, which is attached to a vacuum pump, pulling air out of the sphere and through a filter in the tubing. This specialised filter is designed to trap scent molecules, preserving them for analysis. Later, in a laboratory thousands of miles away, the team's chemists profile the orchids' scents and confirm the presence of classic mushroom scent molecules. The astonishing result is that *Dracula* orchids not only look like mushrooms, they also smell like them, making it all the more probable that the orchids are true mushroom-mimics. For Bryn, the orchids' exploitation of mushroom scents has implications for the mushrooms themselves. 'Mushrooms produce an astounding variety of scents, for reasons largely unknown, and these drosophilids may help us to understand why,' he says.

Before the team can draw any conclusions, however, they must better understand the insects and mushrooms that interact with the orchids. Watching insects visit orchids and mushrooms requires only a waterproof notepad and a poncho, while a simple insect aspirator can pull insects into a jar, powered only by human suction. Armed with these basic tools, we see drosophilids congregate on the mushroom-like labellum of orchids, flicking their wings back and forth in a repetitive dance. It's possible that male flies use the orchids to 'lek', staking out territories as they compete with each other for females. This is an intriguing twist on the team's original hypothesis – if males derive a benefit from visiting *Dracula*, then the orchids' mimicry is far from deceptive.

A thrilling moment comes when Bryn is collecting flies on a mushroom. One of the flies carries orchid pollen on its back. This means that flies travel freely between mushrooms and orchids – a prerequisite for establishing the evolution of mimicry that suggests flies may not be able to distinguish between a mushroom and an orchid. 'It all comes down to a fly's view of taxonomy,' Bryn tells me. 'To a fly, *Dracula* orchids are extremely similar to mushrooms. It's not much different from our own pre-Linnaean taxonomy,' he says. 'For centuries mushrooms were thought to be plants. But when molecular tools gave us access to mushroom DNA, we could finally trace out the evolutionary lineage of fungi and see how far removed from plants they really are.'

One of the most intriguing aspects of mimicry is how it transgresses what biologists now know about the evolution



The team ventured deep into Ecuador's cloud forest to collect scent molecules from orchids such as *Dracula chiroptera*

of distantly related organisms. Fungi, plants and animals diverged in the very distant past, heading off along distinct evolutionary trajectories. But when a fly's subtle senses cannot detect the difference between plants and fungi, 'it pushes the boundaries of how we think natural selection normally operates,' Bryn says. 'On the molecular level, we will always know the difference between a mushroom and an orchid. But on a very real ecological level – from the fly's perspective – the flowers are evolving into mushrooms.'

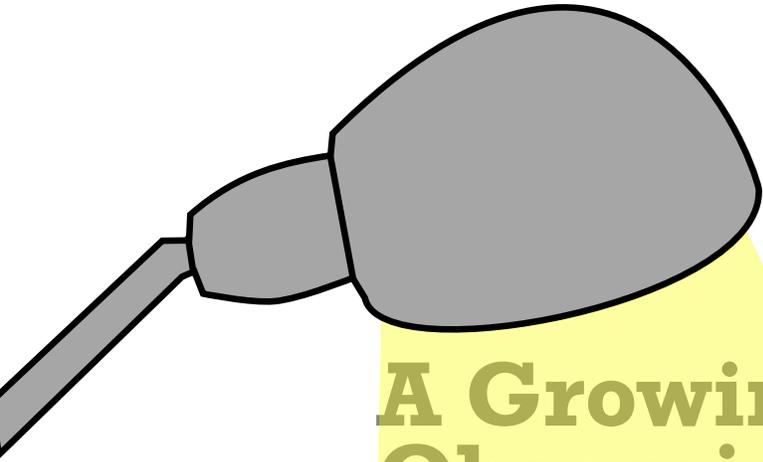
It's fitting that an orchid should be appreciated for its 'mushroominess', even if only by mycophiles like Bryn and the drosophilids. While conservationists often mobilise around compelling species, like orchids, true conservation requires a better understanding of their relationships with less charismatic organisms. 'This study is demonstrating that cloud forest mushrooms are fundamental to the conservation of *Dracula* orchids, but we know dangerously little about

them.' And for places like Reserva Los Cedros, where mining and illegal logging threaten the health of the forest, knowledge about mushrooms can't come soon enough.

- Rachel Mason Dentinger is a freelance science writer – she is also Bryn Dentinger's wife and *de facto* field assistant
- » This expedition was funded with help from the National Geographic Society and the National Science Foundation
- » Reserva Los Cedros is a 17,000 acre biological reserve in the Andean cloud forest of Ecuador – for more details, go to reservaloscedros.org

Support the Kew Fund

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A Growing Obsession

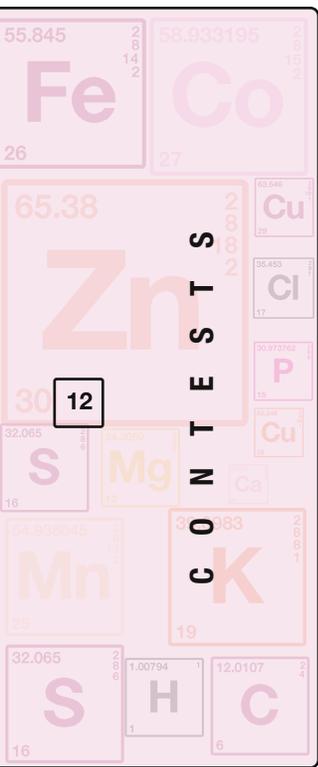
Orchids are an obsession...just ask anyone who grows them. But what is it about them that causes us to want more and more and more? Well, we're asking you! Tell us about your orchid growing history.

Not sure what to write?

How did you begin? Did a phal at the grocery store call your name? Did someone give you an oncidium as a present? Did you begin adoring one species only to have your focus change after a few years? How long have you been growing, and what keeps you motivated?

Write a 500-word article that takes us on your orchid journey and win a plant raffle ticket for the month your story is published in the newsletter.

Send submissions to:
newsletter4vos@gmail.com



This is Your Leaf

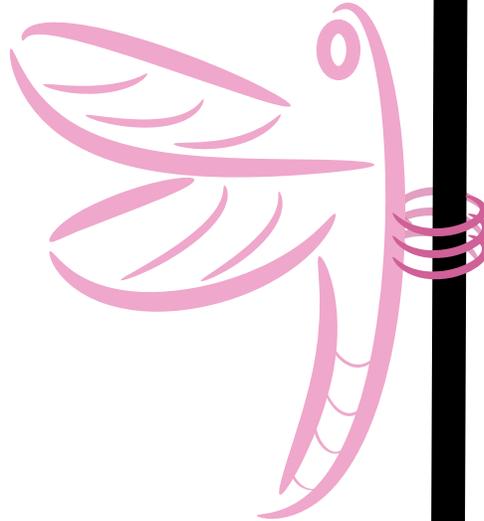
Show off your plant knowledge and win!

The first member to email the correct name of the orchid below wins a plant raffle ticket at the monthly meeting.

newsletter4vos@gmail.com



Found in India, Myanmar, Thailand, ...Borneo, Sumatra, and the Philippines
Grows at elevations of 1000 meters or below
Blooms especially from spring to autumn



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Submission Deadline

The first of each month.
Anything submitted after
the first will appear in the
following month's newsletter.
Please send contributions to:
newsletter4vos@gmail.com



Mailing Address

Vancouver Orchid Society
PO BOX 42025, Marpole RPO,
Vancouver, BC, V6P 6S6

Website

www.vancouverorchidsociety.ca



Pierostylis baptistii

Australian Orchids in Vancouver?

Early in July, Jennifer Pell received an email from Brendan Killen in Brisbane Australia, who, along with his wife, was to be in Vancouver for a week at the end of August. Brendan's wife was competing in basketball at the American Masters Games, while Brendan, an avid orchid grower and hybridizer in Brisbane, was looking for the opportunity to meet with local orchid growers to appreciate our cultural requirements and the range of genera we nurture in our temperate climate. In particular, he wished to meet local orchid enthusiasts with an interest in cultivating Australian orchid species in our conditions.



Diuris sulphurea



Brendan lives in a sub-tropical climate where both warm- and cool-growing orchids thrive in his care. He cultivates a range of Australian native species and hybrids, vandaceous species and hybrids, hard and soft cane dendrobiums, cattleya alliance species and hybrids, phalaenopsis and related species and hybrids, as well as a scattering of other fascinating genera just for interest and the challenge. His primary focus is growing and hybridizing native dendrobiums and sarcochilus.



Plectorrhiza tridentata
the tangle root orchid

After a number of emails, I arranged to pick him up in downtown Vancouver on August 29 and take him to visit the greenhouses of two of our local expert growers: Bill and Carla Bischoff in Surrey, and Eugene Banziger in Richmond. We spent a couple of hours with Bill and Carla, touring their yard and greenhouses. Carla and Brendan had a lively discussion on the cultural requirements of dendrobiums, sarcochilus, and many other different orchids that Carla has in her collection, each

gaining valuable tips from the other. Brendan was equally impressed with their yard, which, in many ways, is like a mini botanic garden. As always, the hospitality at the Bischoff's was wonderful; Carla had made a delicious plum cake, Pflaumenkuchen, which we all shared with a healthy dollop of ice cream and hot cups of coffee. It was a very enjoyable visit.

Next, we headed off to Eugene's home, where again we were very warmly welcomed. Eugene gave us a detailed account



Dendrobium speciosum var hillii

of his greenhouse, which I can only describe as pristine! His plants are amazingly clean and the growth achieved since he started his regular fertilizing program over the last year can only be described as incredible; I am sure Eugene is also giving his plants hormones!! Brendan and Eugene compared notes on different plants in the collection, and Brendan shared stories about his forays into the wild in Australia to observe native orchids.

We received photos and the following message from Brendan on October 3 after his return home to Brisbane: "Firstly, I would like to express my sincere gratitude to Wayne for taking time out to host me around Vancouver. I enjoyed your company and the manner in which you quickly adopted me as a fellow orchid enthusiast. Thank you.

Carla and Bill, I was welcomed into your home like an old friend and treated accordingly. I enjoyed sharing your

knowledge on all matters of plant cultivation across the great variety of plant genera you grow around your home. Your orchids attracted my attention for the way you succeed in such challenging winter temperatures and

light conditions. I especially enjoyed seeing native Australian *Sarcocylus* orchids thriving under your love and care, so far from their native habitat. Thank you.

Eugene, you continued the wonderful Canadian welcoming approach when I visited your home and orchid house. I was likewise fascinated at the range of orchid genera you manage to cultivate so successfully in such a small and challenging space. Thank you."

If you are planning a trip to Australia and the Brisbane area, I am sure that Brendan would be very happy to reciprocate by showing you around. He can be reached by email at: brendank@internode.on.net

Submitted by Wayne Riggs



Dendrobium speciosum var. hillii



Dendrobium aemulum



Bill, Carla, and Brendan



Sarcocylus falcatus



Spring show
West Brisbane Orchid Society



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Kyle Exner at kyle@bcgreenhouses.com

Website: www.bcgreenhouses.com

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Address: 705 West 3rd St, North Vancouver, BC

Tel: 604-988- 8082

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