



THE MONTHLY BULLETIN OF THE KU-RING-GAI ORCHID SOCIETY INC.

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Next Meeting : Mon 19th June 2023

Venue : The West Lindfield Community Hall, corner of Bradfield Rd and Moore Avenue, West Lindfield.

*Attendees must be at least double vaccinated. Please tick your name off the attendance list on arrival & enter 'DV' for double vaccinated if your status has not already been recorded. Face Masks recommended.

The hall is open from 6.30pm to set up the hall (please help), benching can begin from 7 pm but **PLEASE** no benching until all the class dividers and cards are in place. Give the set up team time to get everything organized.

Our Culture class for June will be **Dora Law on the subject of Softcane Dendrobiums - culture and preparation for the bloom season**. Dora has become an expert in growing nice big flower covered Softcane. These are a really popular orchid in Sydney because they rest in winter and therefore easily tolerate our temperatures. Don't miss this one. **AND REMEMBER** please bring in a chair from the back of the main hall and take it back afterward.

The usual **monthly raffle**, and the **library** will be operating, and the **sales table** will be open for sale of member's spare plants and for small quantities of pots and other growing supplies. **PLEASE** though, anyone expecting to purchase a larger volume of any one item should contact Dennys Angove in advance as previously explained.

The Supper Break – Our supper Volunteers for June are **Penny Prott & Pearl Tong**. Thank you for volunteering ladies. Your help is greatly appreciated. **Members please note** - the society supplies tea, coffee, milk, sugar etc, **but we ask all members to bring in a contribution of cake or biscuits etc for the supper table, AND please everyone, bring your own mug.** Also note that Supper is not self-serve, a member is assigned to serve to minimise handling. For those who forget to bring their own mug. Go out and put your club night coffee or tea cup in the car right now.

Guest Speaker - After the break we have **a great guest speaker**. Our very own **John Chang** telling us all about the **2023 Tokyo Grand Prix International Orchid and Flower Show**. International events like these are just amazing. John will show us all the champions, and even an intriguing look into the sales area. Now that will be something.

Best of the Evening Open Hybrid – Howeara (syn Rydbergara) **Mary Eliza** benched by T&P Onslow

This is just a gorgeous orchid and although it got a mention in last month's piece on Leomesezias, it wasn't a BOE last month, so here is a little extra.

What a perfect example of innovative hybridising to create a miniature example of how lovely an Oncidium can be. The big Oncids are magnificent in full flower but they often have a spike up to a 90+ cm tall and many come from highly seasonal habitats that make them tricky for a lot of orchidists. Now I'm not saying that these minis have solved the tricky to grow syndrome but if they can make them look like this already, I am sure they will shortly fix that little problem as well.



The only problem I have with Mary Eliza is its new name. Like the renamed "Leomesezias" last month, Mary Eliza has also been renamed and is now a Rydbergara. Despite it being rather clumsy, I get Leomesezia from **Leochilus** x **Gomesia** x **Rodriguezia**, but "Rydbergara"? I have to assume that it commemorates a Mr or Mrs Rydberg. I wonder if they knew or were pleased or to be commemorated in this way.

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Society News (if anyone has a news item, please phone Jim on 9476 3383, or email at jimbrydie@aussiebroadband.com.au)

President Denny's Desk —Our June meeting was attended by 49 people and 114 orchids were benched. It was a fun night for me watching **Jim** and **Trevor** wrestling with the names of new members while undertaking an 'info' rich auction. They did so well to let members know about the attributes and culture of each plant prior to purchase. I think we even had a transparent member who was very hard to see. There were 29 lots and only 3 were passed in. The class on cymbidium culture by **Geoff Le Marne** was well attended and generated a lot of positive feedback. Supper was most enjoyable, and I thank **Ann** and **Gloria** for their assistance and making sure members were kept safe and well fed. I also thank **Cynthia** for marshalling the forces of the raffle, where we had 12 plants on offer. We were a little light on with helpers packing up at the last meeting and I thank those who were able to stick around.

Rare orchid finds – New populations of 4 rare orchids have been found near Queanbeyan, Bungendore, Braidwood and in the Blue Mountains. One of these is the buttercup double tail orchid (*Diuris aequalis*) shown in the image supplied here. The photo was taken by **Laura Canackle** of the Department of Planning and Environment. The full story can be followed on www.environment.nsw.gov.au/.



Community grant success – Previously I had been advised that our grant submission to the Australian Government grant program had been unsuccessful. I am happy to report that this is not the case, as I was recently advised by **Hon. Paul Fletcher, MP for Bradfield**, that KOS was successful. Mr. Fletcher congratulated us on this achievement and is looking forward to coming to one of our meetings to share some time with us. On behalf of all our members, I thank Mr. Fletcher very much for his and the grant committee's consideration and the benefit they have bestowed on KOS. The amount awarded was \$1,700 and will be used to help modernise our administration and enhance governance and operations. I also thank **Herb** for his advice and **Jenny** for keeping me on track.

St. Ives Orchid Fair – The "show" is just around the corner, and we will be starting our preparations from this meeting. So, we will need some volunteers and **Kevin** will be handing out helper rosters for the show. At some time in the near future, **Jenny** will be sending out the "information pack" for our members to get a better understanding of volunteer and other roles at the "show". It can be fun so please get involved.

Sales Table – Please remember that the sales table does not open until 7.00 pm since it takes some real time to get items sorted let alone the minds of **Bill** and **Herb**. Please let the plants arrive at the table. If you are bringing plants in for sale, remember, the focus is on culture items so you may have to initially limit/manage your plant offerings accordingly and bring more in for sale from your vehicle as needed.

Culture session and badge reminders – Please remember to wear your badge and to carry a chair into the annex to attend the class and then take it back out again. If you are unable to carry a chair, please ask someone for help. I or others are always happy to do this for you.

Bulk purchase – If you need large numbers of items that we normally stock, please email your requirements to me so I can bring them in as a special order. I only have limited space in my vehicle so therefore, I am limited in the numbers of items I can bring to our meetings.

Wearing masks – The wearing of masks in indoor spaces is still recommended by NSW Health. If you are unsure about this, please visit, <https://www.nsw.gov.au/covid-19/stay-safe/guidance-on-wearing-face-masks>. If you are still concerned about the transmission of COVID or flu, then please feel free to continue to wear a mask at our meetings. I will continue to wear a mask until I feel it is safe not to.

Member's welfare – personal challenges occur all the time, so please remember, if you need to speak to someone immediately then you are most welcome to contact me at any time, 24/7 on 043 88 77 689.

Other News Items

Upcoming events

The 2023 show season has begun. Apart from local society winter shows, we have just completed Orchids Out West, and coming up next is the big Mingara Orchid Fair at **Tumbi Umbi**. maps available online.

How could you possibly not go to a show at Tumbi Umbi. Every time I hear that name it reminds me of the poem about Tumba Bloody Rumba by perhaps Nino Culotta. A wonderful bit of Australiana from the mid 20th Century.

BUT THEN, the biggies. The National Orchid extravaganza *followed immediately by* **ST. IVES**.

Thur 15 – Sat 17 June - North Shore O.S show, St Ives Shopping Village, Mona Vale Rd St Ives

Fri 16 – Sun 18 June – MWOS show, Belrose Supacentre, 4/6 Niangala Close Belrose

Sat 24th – Sun 25th June – Mingara Orchid Club Fair and Show at Tumbi Umbi in Mingara Sports club.

Fri 11- Sun 13 Aug - National Orchid Extravaganza and Paphiopedilum Society, Yagoona

Fri 18 – Sun 20 Aug - St Ives Orchid Fair, St Ives Showground. See advert below,

And, members, please volunteer as St Ives helpers. Be generous with your time when those rosters come around. The financial support we get from St Ives is what keeps our society as generous to you as we are.

St Ives Orchid Fair

'The Big One'



ST IVES SHOWGROUND, Mona Vale Road, St Ives

Friday 18th August 2023 9 am to 4 pm
Saturday 19th August 2023 9 am to 4 pm
Sunday 20th August 2023 9 am to 3 pm

ADMISSION \$8

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The Orchid Mart / Serhan's Orchids, Tinonee Orchid Nursery
Woolf Orchidculture

For more Information: Show Marshal: Garrie Bromley Ph: 0425 336 049
<http://www.stivesorchidfair.com/>



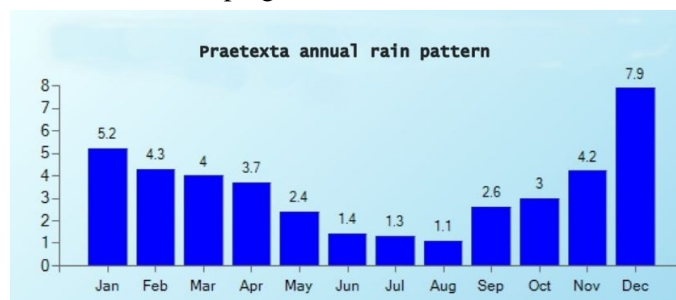
In partnership with
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Best of the Evening Species – *Gomesa praetexta* grown by Trevor and Pauline Onslow

Some sources still list this as *Oncidium praetextum* despite all of the Brazilian 'Crispa' group of what were *Oncidiums* now having been validly switched to *Gomesa*. Although, I still wonder about the evolution path between these *Crispa* group and the original group of *Gomesas* as typified by the popular *Gomesa crispa* and *Gomesa recurva*.

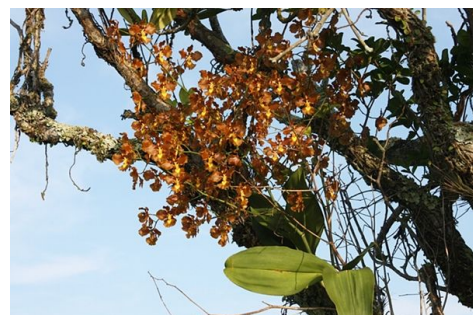
Whatever its genus though, these chocolate coloured flowers of *praetexta* look delicious enough to eat. Way better than some of the Easter eggs I got this year.

Praetexta is found on the east coast of Brazil, north and south of Rio in the states from Espirito Santo down to Parana but it is not a coastal lowlands orchid. It is an epiphyte in the relatively low Organ mountain range inland from the coast but parallel to it. In Orchidwiz, one of the experts studying the habitat described it as - "a real rain forest, where almost daily rainfall was supplemented by moisture-laden clouds sweeping in from the Atlantic Ocean on those rare days when there



was no actual precipitation", but in a later article, he added : "however, winters in the habitat are drier and clearer with bright days and cool nights."

That may sound rather contradictory but this habitat rainfall chart from Orchidwiz (produced by Charles and Margaret Baker) helps clarify the situation. The figures are in inches of average rainfall by month and show that although *praetexta* gets some rain every month, it is far reduced in June/July/Aug.



To give an Australian latitude comparison, *praetexta*'s habitat areas equate to a Queensland coastal area from somewhere a bit south of Cairns down to Gladstone. These are tropical latitudes, above the tropic of Capricorn which also runs across the coast near Gladstone. But it is important to remember that *praetexta* is found in the low mountains at around 1000-1200 m so you would expect cooler conditions, especially at night which aligns with the other habitat tables provided by the Bakers. They tell us that humidity remains around 80% throughout the year but that temperature only varies seasonally from 25 to 19°C in the day, and from 15 to 8°C at night.

So, although the latitudes might suggest a need for warmth, their habitat is cool and dryish in winter and they have a winter pause when they aren't doing much anyway. They can tolerate harsher conditions than you might expect.

As Trevor told us during the meeting, *praetexta* is an orchid that (within reason) appreciates being grown exposed to the elements. They don't grow in full sun but they may well get broken sun at times during the day and they do like bright light and air as you can see in the above habitat picture of a flowering *Gomesa praetexta*. They are not an orchid for the closed up glasshouse. Let them feel the wind and rain.

Congratulations on a beautiful orchid Trevor and Pauline.

Best of Evening Novice – Billre?? Sandra Lee? x Miltonidium? Christmas Eve? benched by Paul and Loretta Au
Well this was a tricky one to figure out.

First there was that genus name for the first named parent ‘Sandra Lee’. Discussion amongst experienced growers decided it was most likely meant to read Beallara, which was the old genus name for an intergeneric hybrid between the genera Brassia, Cochlioda, Miltonia, and Odontoglossum (Brs. x Cda. x Milt. x Odm.). Beallara is no longer a valid genus name these days because the genera Cochlioda and Odontoglossum no longer exist. The species from those genera have in most cases been reassigned to become just straight Oncidium.

So, how do we find out what the correct name is? Luckily for orchid editors like myself, we have several tools to help us with names. I could see from the size, shape, and colour of the flowers that the parentage included at least Brassia, and Miltonia which are both in the orchid subtribe Oncidiinae, but perhaps Sandra Lee also included some smaller components of other Oncidiinae genera that I wasn’t noticing. I opened my Orchidwiz subscription software which has search tools for all orchid species and hybrids. I selected a broad filter for only Oncidiinae hybrids, and searched for all hybrid names starting ‘Sandra’. Surprisingly, there was only one result – Oncidium Sandra Levy. The close resemblance of the names Sandra Lee and Sandra Levy couldn’t be ignored but there were no Sandra Levy pictures available to give us an idea of its basic appearance. When I looked at the background parentage to Sandra Levy it just didn’t look right. Its parentage was focussed around the old Odontioda style hybrids (Cochlioda x Odontoglossum). I would guess from that that its flowers were roundish, 7cm or more across, ruffled flower segments, and in colour combinations of red, yellow, and white. It is possible it could still be the parent in Loretta and Paul’s orchid but if so it must have got all its colour and shape from the other parent.



Maybe the ‘Sandra’ part was misspelled I thought. So I tried an Oncidiinae hybrid search for names ending ‘Lee’. Orchidwiz came up with Tolocentrum Eng Bee Lee (a mule ear Oncidium hybrid), Trichocentrum Engaline Bee (another mule ear), Notolidium Felice Lee, Lydia Lee, and Ginny Lee (3 twig epiphyte Tolumnia hybrids), Miltonia Gerry Lee (a Miltoniopsis hybrid). None of those looked even a remote possibility. There was also a Brassidium Pauline Lee – a big yellow and brown spider shaped hybrid that at least contained Brassia but none of the purple flowered Miltonia for our colour. And lastly Gomesa Rachel Lee – a standard Oncidium shaped flower hybrid in yellow and brown. To sum up, no likely Sandras, and no likely Lee hybrids. Where to next?

What about the other parent Miltonidium ‘Christmas Eve’? I went back to Orchidwiz and looked for all hybrids called Christmas Eve. There was only one and it was a Miltonidium. It had to be right this time.

Miltonidium Christmas Eve was registered in 1984 and is a mix of what used to be 4 Miltonia species until the old Miltonia warscewiczii was redefined yet again as Oncidium fuscatum. This species was first described as Miltonia warscewiczii in 1856 but there must have been some debate about its status because in 1863 it was changed to Oncidium fuscatum. In more modern times in 1983 it was changed back to Miltonia and even more recently, don’t ask



me when, it was decided it was an Oncidium after all and switched back to Onc. fuscatum. Much ado about nothing I guess.

Anyway, with warscewiczii becoming fuscatum, Christmas Eve became a Miltonidium (Milt. X Onc.). I can’t find any pictures of Christmas Eve but I do have pictures of its parents - Ka Moi (far left), and Festiva (left). You have to take in that these are just samples of what the parents would look like and that there may be other, much better cultivars, but based on these images, I can’t imagine that Christmas Eve contributed much to our hybrid other than wider flowers and numbers of flowers on spikes.



Which brings us back to trying to identify Paul and Loretta’s orchid. Going by what I could see in the best of the evening pictures, I started to search for pictures of Brassia x Miltonia hybrids with that familiar shape. Like the popular old Miltassia (syn Bratonia) Charles M Fitch (pictured left), or even Bratonia Aztec ‘Toni’. I looked at all the Orchidwiz pictures under Miltassia/Bratonia and found nothing. I then did some wider google searches, and

after a lot of eye straining searches through many, many images, I stumbled on a dead ringer for Paul and Loretta’s orchid. Don’t ask me how I got there because it was a fluke, but there it was. A lovely picture in Flickr of the exact same orchid, or at the very least a very close cousin. It was in Sydney’s Western Suburbs Orchid Society photo stream on Flickr. And guess what its name was? Miltassia Sadie Loo x Miltonidium Christmas Eve. So our subject was not a Sandra Lee, or a Sandra Levy but instead a Sadie Loo. How could anyone find it that than by a fluke.



(Aliceara) Sadie Loo x Chr. Eve

First, a Brassia x Miltonia x Oncid = Aliceara, but now that we know what it is, let's look behind the name.



There are two factors that make the Au's orchid so eye catching. The first is the large flower size and distinctive shape it gets from the genus Brassia, and the second factor is that wonderful purple colour that comes from Miltonia moreliana (left). In our member's auction last month there was an awarded cultivar of moreliana that almost got passed in unwanted. I wonder why. Milt moreliana was previously known as Milt spectabilis variety Moreliana but has now been recognised as a species in its own right. When grown well it is one of the most beautiful of all orchids. And when hybridised with a big bold flowered Brassia the result is also very pleasing.

The Brassia side of Sadie Loo is Brassia Edvah Loo. A 1966 cross between Brassia arcuigera and Brassia gireoudiana. Both are stunners and we still see both these species and Edvah Loo

benched at meetings and sold at auctions from time to time. Gireoudiana is the bigger of the two species with spikes

that can be up to a metre long and carrying up to 15 huge flowers, each up to 30 cm tall. The flowers can vary substantially from one cultivar to another and are variable to an almost unusual extent. Most are green with dark brown markings low on the sepals and petals and spotting on the



lip (like the picture here) but other cultivars can have much narrower segments and some have near white base colour on the lip. It comes from Costa Rica and Panama from moderate elevations. Although I have grown it in my unheated shade house here at Hornsby, it didn't flower reliably for me and it may have appreciated more winter protection.

Brassia arcuigera comes from a wider range from Costa Rica right down to Colombia in South America and while it also comes mostly from moderate elevations (usually up to 1200 m) it is also found much higher in places and can grow at up to 1800 m which would suggest to me a wider temperature tolerance. Arcuigera has smaller spikes (30 – 45 cm) and much more cream to yellow or even orange in its flower colour, along with the obligatory brown patches.

Congratulations on another Best of the Eventing Loretta and Paul.

If this one came with that label there isn't much you can do about it other than now correct it but as a message to all members, please take care when you write new labels to replace old, or to label a division. We all make errors but when we get them wrong it's a real nuisance and the wrong name easily gets propagated from grower to grower.

Starstruck

A Michigan woman and her family were vacationing in a small New England town where Paul Newman and his family often visited. One Sunday morning, the woman got up early to take a long walk. After a brisk five-mile hike, she decided to treat herself to a double-dip chocolate ice cream cone.

She hopped in the car, drove to the centre of the village and went straight to the combination bakery/ice cream parlour. There was only one other patron in the store: Paul Newman, sitting at the counter having a doughnut and coffee. The woman's heart skipped a beat as her eyes made contact with those famous baby-blue eyes. The actor nodded graciously and the star struck woman smiled demurely.

Pull yourself together! She chides herself. You're a happily married woman with three children, you're forty-five years old, not a teenager!

The clerk filled her order and she took the double-dip chocolate ice cream cone in one hand and her change in the other. Then she went out the door, avoiding even a glance in Paul Newman's direction. When she reached her car, she realized that she had a handful of change but her other hand was empty. Where's my ice cream cone? Did I Leave it in the store?

Back into the shop she went, expecting to see the cone still in the clerk's hand or in a holder on the counter or something. No ice cream cone was in sight. With that, she happened to look over at Paul Newman.

His face broke into his familiar, warm, friendly grin and he said softly to the woman, '*You put it in your purse.*'

A man takes his Rottweiler to the vet. 'My dog is cross-eyed, is there anything you can do for him?'

'Well,' said the vet, 'let's have a look at him' He picks the dog up, examines his eyes, then he checks his teeth. Finally, he says, 'I'm going to have to put him down.' 'What? Because he's cross-eyed?' 'No, because he's really heavy'

What is it that defines a ‘Good grower’? A ramble of thoughts by a ‘Wannabe’ – Jim Brydie

Intro - For some time I have been becoming increasingly uncomfortable with how many times I write that Trevor Onslow and Garrie Bromley are top growers. Not because of any doubt about their quality as orchid growers but more because I don’t want to imply that these two are rare cases and there are very few other top class growers about.

The main reason I keep using Trevor and Garrie as examples is because many individuals are embarrassed by such mentions and don’t want to be mentioned in that way. The same likely applies to Trevor and Garrie as well but I have known both for a very long time and I judged that they would at least tolerate me praising them up.

The truth is that Sydney is awash with many top class growers. I don’t go to the meetings of more than 5 or so clubs, and these days only rarely for most of those, but I could easily name a dozen great growers around Sydney.

Such as (in no particular order and with apologies to all those I just haven’t thought of) : Joe Gaffa, Seong Tay, Veronica Clowes, Jan Robinson, Gloria and Allan Cushway, Cary Polis, Bill Dobson, Paul McDonough, Lesley Bromley, Craig Scott Harden, Jody Cutajar, and perhaps even myself if you take a squinted view (I hope all those named will forgive me). There must be heaps more than that number if you looked wider because I am only throwing up names that come immediately to mind from my own small sphere and even I also see many more classy growers whose identity is unknown to me, benching at shows and orchid fairs.

But what exactly am I talking about when I say Top Grower, or Good Grower? Part of the answer lies in the past.

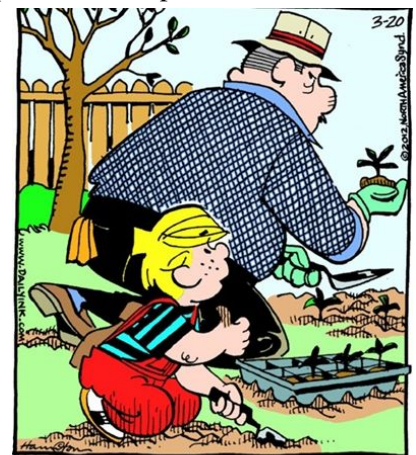
History - Orchid growing began as the plaything of the ultra-rich. In the 1800’s rich Europeans sent explorers out all over what they called the ‘new world’ to find new species and new varieties of already known species, always seeking something new, something fantastic that no-one else had. Rather self-indulgent, even though it did advance the scientific recording and cataloguing of all plants.

However, no matter what we may think of motives, we owe much to those early explorers and experimenters.

Methods for growing epiphytes and for trying to raise orchids from seed was all a giant laboratory experiment. There were no ‘good growers’ back in those days but there certainly were good gardeners. Man had been cultivating ornamental plants for his own pleasure and for food for a very long time and some were very good at it. We used to say that those who excelled at plant culture had a ‘green thumb’ as though it was some inherent genetic ability but I believe these green thumb gardeners had the same distinctions that define a good orchid grower. They learned about the plants, watched what worked and what worked better and they tried to read what the plants told them of their satisfaction with their circumstances.

Most Ornamental Orchids are Epiphytes

Having drawn the correlation between a good gardener and a good orchid grower, it would seem necessary to explain why there is still a distinction between them. Good gardeners always make good orchid growers too if they ever take an interest and decided to learn about orchids, but there are substantial differences. The vast majority of our large flowered, ornamentally grown orchids are Epiphytes.



Pause and redirect?

In the broader scheme of things, orchids are just another ‘different’ group of plants.

I don’t want this article to become side-tracked into a botany lesson so this is just the broadest intro. Gardeners all know about diverse plant groups like ferns (Pteridophytes), pine trees (Gymnosperms), and flowering plants (Angiosperms), and even the many divisions within these groups. For example trees, shrubs, annual flowers, and grasses are all ‘flowering plants’, and so are orchids. Each family has its own evolved idiosyncrasies.

For orchids it includes Epiphytism with its very different root structures, photosynthesis via the CAM pathway - similar to succulent plants, and a strong symbiotic relationship with fungi which dominates seed germination and in many cases, plant growth as well.

If you would like to know more of those fundamentals, jump forward to the next article then come back.

Back to Good Growers – For some time I have been pondering how I might explain the difference between an average grower and a good grower – both are meaningless terms invented purely for this discussion. Nearly all members of our club are orchid growers at some stage of their skill development, some just beginning, some reasonably successful and at least satisfied with whatever flowers they produce, some are well on their way to far better knowledge and skills, and some are already highly knowledgeable and skilled. There is no ceiling however. No one ever achieves knowing all there is to know. You keep learning and honing your skills while ever you keep trying. What I envision as that ‘good grower’ is that person who walks into the meeting hall every month carrying



amazing looking orchids with flowers you envy and a plant of health and growth that you can't help admiring.

That great orchid coming in the door that drops your jaw doesn't have to be a new orchid you hadn't seen before. It is the skill the owner has applied to growing and flowering it. You may even have one of that type yourself and now you recognise what it can look like, and it makes you want to strive to understand better and to improve your own skills.

That is a "Good Grower". But how do you explain to less experienced grower what they should be doing differently.

There is no magic recipe book for growing orchids. No reproduceable methodology that every grower can apply. Each growers circumstances and growing conditions are different and require processes designed for them

While I was watching Trevor telling us about his two Best of the Evening plants last meeting, I could see an idea.

Trevor was talking about his Howeara (or Rydbergara) Mary Eliza and his Gomesa/Oncidium praetexta. He told us there was nothing special about the way he grew the Howeara. He grew it in peat and perlite like nearly all his orchids, and all his orchids get watered at the same time - once a week in the warmer months (October to April) and every two weeks in the cooler weather.

. and then, without intending contradiction, he went on to tell us about the variations he just considered common sense in growing each orchid. Just small adjustments and accommodations to fit with the habitat needs of each orchid from things he had learned from a mix of research, enquiry with other growers, observation, and experimentation.

He told us that he grows his 'Howeara' up near the roof where it gets good light and drains quickly. He then gave some insights into his Gomesa praetexta – again growing hanging up for the light. He also told us that these Brazillian 'Crispa' group Oncidiums/Gomesas, like praetexta, are not the kind of orchid for locking up in a glasshouse, they like to experience the wind and rain and open air.

So What You might ask? - Well what I drew from all that is that first, Trevor has first established a stable culture regime of medium/ watering/ and fertilising that forms the basis, or at least a starting point, for all his orchid cultivation. He has a stable platform to work from. But on top of that, as there are so many orchids with little quirks in their growing needs, he makes sure he understands his orchids and is willing to make variations where needed.

After the meeting I talked to Trevor about this idea I had about defining a good grower, with the objective of getting those who wish to improve their culture some tips on methods. Not on how to grow, but on approaches they should have. He offered these suggestions and some additional tailored or learned insights into different kinds of orchids.

"Be observant. Walk through your growing area regularly, always looking for a pest outbreak, an orchid that isn't looking happy, orchids that need repotting, an orchid becoming overshadowed by its neighbour, any signs of things that might need some attention."

"Be aware that there are always some orchids that won't fit your standard regime. Learn. Not all the advice you get on the internet is correct and some may be inappropriate for your conditions. Sometimes it is better to find a local grower who succeeds with your subject plant and get their direct advice."

"Regarding some specific types of orchids, he says: "Although peat and perlite is our chosen and preferred medium, there are some plants that we do not grow that way. One group is Sarcocylus. For these we use a mix of medium bark, with 15% of charcoal and 15% super coarse perlite. We also grow our Brazilian Oncidiums on slabs of cork, keep them under 50% shade cloth, and hang them up high (600 mm) from the roof, but they are misted in the hot or windy weather." (misting isn't watering them, just cooling them down and ensuring they don't excessively desiccate). With misting, the when and how often is a matter of paying attention to the conditions where the plants are growing, and watching the plants themselves for any signs of stress."

"We also grow our Cattleya (Sophronitis) coccinea in our bark mix, so as we can mist when needed and not leave the plants roots too wet which leads to rot. Some people grow coccinea on cork slabs, but we found they grow much slower mounted (and they are very slow at the best of times)."

"Another Genera to mention are Oncidiums: The varicosum type grow in peat and perlite in plastic pots, but we do not repot unless they are showing green growing tips on the roots which is usually a short time after flowering. These orchids only grow one set of roots per season so the timing is very important."

"Oncidium (Zelenkoa) onustum is the exception, as we still use our peat and perlite mix but put them in clay pots which helps satisfy their very specific wet-dry cycle."

This application of smart thinking and effort is common among our better growers. For example, Cary Polis, another top grower and current President at the Manly Warringah OS, used to write brief articles for their newsletter based on his frequent 'rambles' through his growing area and his observations and thinking there. Here are some examples :

"Cary's Shadehouse" (extracts) - Spring has really sprung at my place, especially with the natives. The Dockrillias in particular have been outstanding. Things like calamiformis, teretifolia, fairfaxii, schoenina and pugioniformis. I'm really finding that the ones that are in mesh pots are doing far better than the ones on mounts, no matter which way they have been planted. I have used 3 basic methods: 1) just plant straight into the pot. 2) cut a window or flap on the side of the mesh pot and poke the roots through making sure that the plant is secure. 3) cut a window or flap in the

base of the pot and poke the roots up into the pot. Seeing that they mostly have hefty roots, I use large or medium bark. This technique works well with other things as well, including *Sarcochilus falcatus*, especially on the side of the pot. In fact Guy Cantor just ties them onto the side and this allows the roots to find their own way in.

One of the really good things about growing orchids (and gardening in general) is that you can experiment quite a bit with your growing techniques. It can lead to unusual and spectacular results. How many times have you admired a plant on the bench which has been grown in an unconventional manner, ending up in not only a healthy, robust plant but almost a work of art? For example, it wasn't that long ago that the idea of growing orchids successfully in water well pots would have been debunked by the "experts". There is a whole range of orchids that are more than suited to this technique with brilliant results. I have never been able to grow *Dendrobium agrostophyllum* for any length of time, just standing by helplessly watching it go into an irreversible state of decline leading to death but now I have one in a water well pot and it is one of the stars in my bush house. Of course when trying different things you must be prepared for some failures, but this tends to happen anyway no matter what you do.

I still make the time every day at least once, to go into both the bush house and the hothouse and cast an eye over while doing the rounds. A walk past to ensure that nothing awful is happening anywhere. Like any interest, what you put into it is directly related to what you get out of it. "

And then more insightful commentary in extracts from a later newsletter in Dec 2022 :

.... I am making a huge effort to be more consistent and methodical with my culture and maintenance. I have embarked on a plan to systematically go through my collection plant by plant and do whatever I feel that it needs at the time, whether it is repotting, just a tidy up, scale control or even just topping up the mix. So last week I managed to do this for a day and a half, starting on the left side of my hothouse.

... it is easy to fall behind with watering and this can be time consuming. Even though I'm set up for it, I'm not a fan of sprinkler systems as they can be very hit and miss where invariably many plants will be overwatered and many will be underwatered. Apart from anything else there is the danger of making one lazy about hand watering which as I have noted before, is a great opportunity to observe and check on one's plants. There is no such thing as overdoing checking one's plants out."

Becoming a better Grower – Trevor couldn't have captured it better when his notes to me following the meeting started "Observe, observe, observe". From Cary's notes, you can't miss the constant inquisitiveness. Experimentation to try a better way but not by way of applying it to the whole collection in one go. In earlier times there would be a new orchid medium invented every year and some less experienced growers looking for that magic bullet would repot their whole collection only to find 6 month later it was a failure. If you experiment, do it on one or two subjects and record your observations.

Both Trevor and Cary (and many others) ask you to constantly wander your orchids and look them over more than superficially to see what is going on. Ask yourself why you are seeing whatever you see. Look for the ones needing attention and ask what happened. Insects? Watering? Disease? Left in the pot too long? Whatever it may be, it is your job to work it out and fix it. If you need help then don't be afraid to ask but make an effort first. Don't expect someone else to do all of your job for you. Attempting to work it out is the beginning of learning

And what advice could you possibly expect from Jim Brydie, other than to understand the orchid you are looking at. Where does it (or its parents) come from. What does that tell you.

Is it a seasonal grower, does it like shade or bright light, is it a warm grower that will not tolerate lower temperatures?

Remember that your path to be a better and better grower is never ending. Enjoy the process and help others along the road as you progress. Put in the effort and you will succeed.



how could anything hide in here?

The Welsh Choir – There wasn't much on the supermarket shelves that attracted me yesterday so I decided to improvise and make a risotto.

I bought the rice and a couple of basics from the supermarket but I forgot the mushrooms and had to collect some I foraged for locally in the bushland behind the house.

Not only was the risotto delicious, but soon after dinner a male welsh choir of pink elephants showed up and sang the whole of Meatloaf's Bat Out of Hell album all accompanied by a light show. Wow, what a night.

My new SUV has a button that says 'Rear Wiper'. I am afraid to push it.

Orchid Epiphytes are Different by Jim Brydie

In one way orchids are just another type of flowering plant among the Angiosperms. It is different, but so then are grasses, succulents, cacti, bromeliads, and various other evolved groups of flowering plants.

A few of the orchids distinctive features that directly relate to growing them as a hobby are :

- They are mostly epiphytes (or perhaps lithophytes if you feel those things are separate)
- They mostly use the CAM pathway for photosynthesis.
- They have pollen in various numbers of waxy bundles rather than as separate dust like particles
- Their seed is minute and dust like with almost no stored food to support germination.
- Nearly all orchids have an association with one or more fungal species that becomes a partnership to support germination and sometimes forms a permanent orchid/fungus growth relationship.

While some of these may not affect the orchid hobby grower, an understanding of these unique characteristics is important if the grower wishes to advance their ability to grow and display orchids.

Evolution- Like a number of other different plants, including ferns, orchids developed the ability to grow as epiphytes. That is to grow on another plant or similar surface (like a rock) rather than growing only in soil.

The adaption to become epiphytic is usually aimed at gaining access to more light, higher in the forest canopy. After all, photosynthesis depends on light as the energy to the chemical process so with access to better light than on the forest floor a limitation on growth capability is removed or reduced. However, the downside of being an epiphyte is that up in the canopies of trees they don't have access to the water that soilborne plants can access and this has led to the roots, stems, and leaves of epiphytes becoming modified to cope with their dryer environment.

Roots – Let us begin with an understanding of orchid roots and how those unique organs affect the way orchids grow. The roots of epiphytes are physically different to those of non-epiphytes and have evolved to operate in air. As the root grows, the outer layer of cells dies to create an insulating sponge like surface that appears white when it is dry.

This layer of empty cells is called velamen and can be from 1 to 8 cells thick. It has two main purposes. First, when dry, the empty cells protect the living cells beneath from evaporation. Secondly, when water is available, the empty cells quickly fill with water like a reservoir, which is then transported by the living root cells to the rest of the orchid. The velamen is so absorbent that it will even take up moisture from clouds and mist. When wet, velamen appears to go green in patches, reflecting the chlorophyll in the living cells under the water filled outer cells. The few patches that stay white are specific air pathways that help the roots breathe when wet.

The epiphytic orchid lifestyle is one of alternate cycles of wet and dry. When it rains they get soaked, but when the rain (or mist) stops, the roots quickly dry off again, at least on the outside. Orchid roots need this airy environment where they can breathe. If they stay wet too long they can rot, and over watering kills more orchids than any other single failure in culture.

Fat roots, thin roots, roots hairs, and hairy roots – First off, all orchid roots have adaptations that enable them to stick to the surface of whatever host they happen to be growing on. The way they do it is that a developing root in contact with a host surface will produce specialised root hairs that enter tiny crevices on the host material and exude a glutinous material that acts like a glue. Other than that, orchid roots rarely have root hairs apart from a few unusual exceptions I will mention shortly.

Orchid with Fat Roots - you must have already noticed that some orchids have fat coarse roots and some have thinner finer roots. Obviously, the velamen layer is thicker on fat roots but that isn't the only reason they vary in thickness.

As a general rule, fat roots have evolved to operate in drier, airier conditions than thin roots. They take up a lot of water when it is available and then they like to dry out again. They don't like to be constantly wet and if grown in a medium like pine bark they are often rather prone to rot off in the pot once the bark starts to break down and stays soggy. Plants with fat roots include Cattleya, Laelia, and most of the Vanda alliance. The Vanda alliance are mostly warm growing lowland plants from areas with very high humidity and frequent rain or its equivalent. Many Vandas grow large curtains of non-attached coarse root whose purpose seems to be purely to soak up precipitation or mist when it occurs. Cattleyas and others also produce specific 'air' roots but not to the same extent.

One orchid with coarse roots that is something of an exception is the Cymbidium. Despite its fat roots those roots have evolved in a much more constantly moist root environment rich in humus.

Orchids with Thin Roots - Examples are Masdevallia, Pleurothallis, and some Bulbophyllums but there are many others. As you might expect, fine thin roots are usually associated with more constantly moist environments. Perhaps with the roots constantly burrowing around in sphagnum moss or lichen or decaying organic debris.

These are (usually) smaller plants than the Cattleyas and Vandas and with the more constantly moist root environment, the velamen has no need to be so thick and are (generally) much thinner. There is less need for insulation and less capacity to take up a lot of water in one big gulp. Thin roots *need to be moist most of the time*, but again they don't want to be constantly saturated. There should still be a cycle between wet and 'dryish', but the medium shouldn't ever be allowed to dry out completely.

Hairy roots? - Technically, all orchid roots have hairs (as used to attach roots to a host), but really, you would never see those kinds of hairs without a microscope. The hairy roots I want to discuss here are the very obviously hairy roots of *Paphiopedilum*, *Phragmipedium*, and *Lycaste*. There may be others but I can't think of them.

Anyway, the hairs on the roots of *Paphs*, *Phrags*, and *Lycaste* are so prolific they look more like fur. I have no real idea why these genera started to grow hairy roots but it is assumed it is to do with increasing root area contact with the medium in which it grows. More efficient uptake of moisture and minerals? Just be aware these ones are different.

For we growers trying to cultivate orchids, we must have an understanding of orchid roots and the characteristics of the roots of the particular kind of orchid we are growing. It does affect culture of the orchid.

The CAM Photosynthesis Pathway – The Crassulacean Acid Metabolism pathway is named that way because it was first identified in the genus *Crassula*, a group of succulent plants.

Not all epiphytic orchids use CAM photosynthesis. The thinner leaved orchids like the *Oncidiinae* use the C3 pathway where the leaf pores (stomata) are open during the day so that carbon dioxide is being taken in and water vapour let out at the same time as photosynthesis is taking place. If too much water is being lost, the stomata can close to restrict the process and conserve water but this will shut down or reduce all processes.

Orchids with more succulent leaves, like the *Cattleyas* and many others, those which are subject to more desiccating conditions during dry periods, generally use the CAM process. In this system, their stomata are open at night to take in carbon dioxide and let out water while temperatures are lower and humidity higher, but are shut during the day when it is hotter and dryer. The CAM pathway separates the intake and fixation of carbon at night, and its use in the photosynthesis process during the day. I don't intend to try and explain the chemical processes involved but what it means for growers is that should know that your succulent leaf orchids are breathing at night and not in the day.

The two types of orchids function quite differently.

Sex, Family, and Breeding – At some point in each growers development, they will begin to take an interest in either breeding orchids or at the very least raising orchid seedlings or manmade clones from a bottle.

The Orchid Families - If you want to try breeding two of your own orchids you will need a basic understanding of orchid families. The reason you need to know which orchids come from which families is not to avoid illegal incestual breeding, but more along the lines of avoiding trying to cross a dog with a cat. Orchids are one of the most diverse groups of Angiosperms and have evolved into a range of family groups that diverged so far back that, in general, they are no longer genetically compatible in breeding.

For example, the family to which *Cattleya* belongs is the subtribe *Laeliinae* and that subtribe contains about 40 different genera including *Cattleya* and *Laelia*. Most of the *Laeliinae* genera will interbreed but not all combinations.

A *Cattleya* will not breed with a *Dendrobium* because the latter genus comes from an unrelated subtribe. Growers don't necessarily need to study these things but neither should they ignore the subject saying "I don't need to know that". Knowledge of the structure of the orchid families and tribes is unavoidable even if you have to acquire it bit by bit over a longer period of time.

Orchid Physical Sex and Breeding – It's probably not worth expanding on all this here but perhaps we should do it as a culture class some time. The sexual structure of an orchid including its waxy bundles of pollen and its weirdly particular insect species pollination strategies are unique to orchids and make for fascinating stories.

In addition, the stuff about mycorrhizal partnerships to germinate seed is so amazing it deserves understanding and I would bet that 90% of top growers could tell you all about it off the top of their head. Put it on your learning schedule.

Just as an advance teaser, mycorrhiza is why you only get to buy orchid babies in sealed glass jars. It doesn't work for all orchid genera, but for many orchids man replaces the role of the fungus/seed relationship with a nutrient solution mixed with agar to support the seed until it is big enough to photosynthesize alone.

Sowing seed and deflasking are also skills you need to learn even if you don't take them up as a frequently applied part of your orchid growing. But again, these are topics for another day.

The core behind success -- A martial arts master was deep in meditation when his young pupil stormed into the room, frustrated with another loss in a contest.

"Master, why does my ability not improve? I'm always defeated." he sighed.

The master, pensive and forever patient, answers: "My dear pupil, have you seen the gulls flying by the setting sun, and their wings seeming like flames?" The student, responded, "Yes, my master, I have." The master continued, ".... and a waterfall, spilling strongly over the stones without taking anything out of its proper place?" "Yes, my master, I have witnessed it." the student replied. "And the moon... when it touches the calm water to reflect all its enormous beauty?" asked the master. The student nodded, "Yes, my master, I have also seen this marvellous phenomenon."

Master sighs, "Well, that is the problem. Your attention is being side-tracked instead of focussing on training and applying yourself."