



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

(Established in 1947)

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Annual Membership : **\$15 single, \$18 family**

## *. Patrons - Pauline and Trevor Onslow*

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**Committee**

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**Society email :** kuringgaiorchidsociety@gmail.com

## Next Meeting : Mon 20<sup>th</sup> February 2023

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

Attendees must be at least double vaccinated and Vacc. certificates will be checked. 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.

***February will be our first Culture class*** for some time. **Dennys Angove will lead and be discussing a refresher to benching.** The ***sales table*** is operating for sale of members plants and for small quantities of pots etc but anyone expecting to purchase a larger volume of any one item should read the news item on page 2.

The usual ***monthly raffle***, and the ***library*** will be operating.

**The Supper Break** – The society will supply tea and coffee but we ask all members to bring ***in a contribution for the supper table***. There will be no self-serve, someone will be assigned to serve to minimise handling. Please ***bring your own mug***. We have a few disposable cups left over but single use plastics are no longer permitted in the hall.

After the break, our guest speaker will be **Peter Weston**, – on ***Native Orchids of the Sydney Region***.

Peter is a very knowledgeable grower and an excellent speaker who has lectured on many different subjects at various clubs. This will be an entertaining and educational session so don't miss it.

## **Best of the Evening Novice – Miltoniopsis Breathless 'Beauty' - grown by Loretta and Paul Au**

Aren't these spectacular orchids. Huge pansy shape flowers but with colours and patterns you won't find in any real Pansy.

In recent years we have had a few speakers give talks on growing these beauties and they have also been written up a few times. For those who missed out but are interested, refer to our Jan 2019 bulletin containing an article by Allan Kerruish from Cumberland OS, and Sept 2019 with an article on Miltoniopsis culture by Victorian nurseryman Craig Miles. If you want copies ask at the society email address.

Briefly, the big curiosity with Miltoniopsis hybrids is that despite all taxonomists agreeing in 1975 that this was a separate genus, they had been previously treated as part of the older genus Miltonia and thus all Miltoniopsis hybrids are still registered as Miltonia. How's that for crazy.

Anyway, despite that I am sure nurserymen still label them Miltoniopsis, because as they have become more popular and sought after, that is what orchid growers are looking for. No need to confuse buyers by calling them Miltonia when they are not.

In earlier times, Miltoniopsis had a bad reputation for being difficult to grow but as they were better understood, most growers can grow them with a little care for their particular needs. That is, the half a dozen species from which all our fantastic hybrids like 'Breathless' are bred from species from humid areas where the plants are fairly constantly moist. If these hybrids experience insufficient water at the same time as high temperatures, they very frequently produce adjoining concertina folds in the growing leaves. Those ugly folds with never straighten. They are there for the life of the leaf, but if you fix the culture problem, newer growths and leaves will be fine.

If you want to grow these lovelies, I recommend you read both the articles referred to above.

Congratulations Loretta and Paul. You obviously have the growing needs nailed down nicely. Your 'Breathless' was lovely.



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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](mailto:jimbrydie@aussiebroadband.com.au))

**President Dennys' Desk** – Our first meeting of the new year was attended by 45 people. The Plant Doctor's session was so, so good. I have had a lot of feedback about how helpful the session was. Members were able to interact closely with our "doctors" on a wide variety of topics and in some cases were able to go much deeper on topics such as media, use of fertiliser and repotting. I thank Jane, Garrie, Trevor and Peter for their time.

**Culture session restart** – In February we will be starting our culture sessions which start at about 7.20 pm. I will be running the session with some help from Jim on Benching basics. The sessions should be helpful for novices and may be useful as a review for those who have moved recently into the open ranks.

**Garden City Plastics purchases (our supplier)** – Some of our members have expressed the need for more bark of different sizes and in some cases, more fertiliser. We do need some more Osmocote. We still have to finalise a delivery location but until then, if you need some bark please email your needs to our society email.

**Bulk purchase** – Jim has mentioned this before but 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.

**Membership Renewal** – Members are reminded that it is now time to renew your membership. You can do this online or see Lina Huang at our next meeting who will gladly assist you to do so. (Jess will be away)

**Supper Roster** – As we used to do before COVID, we will be calling for 2 volunteers each meeting to help prepare and then assist in serving, the food brought in by members for the meeting's supper. Please put your hand up and we will remind you well before the meeting when you are scheduled to help. Please help, we really appreciate it.

**Wearing masks** – Although COVID Safe rules have changed, the wearing of masks in indoor spaces is still recommended. If you are unsure about this, please visit, <https://www.nsw.gov.au/covid-19/stay-safe/guidance-on-wearing-face-masks>. I will continue to wear a mask until I feel it is safe not to.

**Member's welfare** – if you need help then you are most welcome to contact me at any time, 24/7 on 043 88 77 689.

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#### *Other News Items*

**1. Sales Table supplies.** – Unfortunately our sales table managers are finding that members arrive at the meeting and buy large quantities of supplies from our sales table leaving nothing for other members. We only bring moderate quantities of supplies to meetings, purely because of the practical problem of loading and unloading the car and carrying boxes in and out of the hall. Please members. If you know in advance you need a larger quantity of some particular item, phone Dennys on 043 88 77 689 and give him enough time to pack a box of your requirements prior to the meeting.

If it is a bulk supply of fertilizer you are looking for, you may need to coordinate a larger order with one of our orders from our supplier.

**2. Membership** – Not sure if you have already paid or not, please ask at [kuringgaiorchidsociety@gmail.com](mailto:kuringgaiorchidsociety@gmail.com)

Fees are \$15 single, \$18 family. You can pay by bank transfer to **Westpac Bank, BSB No 032 188, account name - Ku-ring-gai Orchid Society Inc. and account number 103568**. If you use this method, please use your full name as the payment description or your phone number if your financial institution does not allow you to enter a name. You can email [kuringgaiorchidsociety@gmail.com](mailto:kuringgaiorchidsociety@gmail.com) to confirm your payment if you feel it necessary.

**3. Welcome to a new member** – Our member Helen Wong has changed her membership to a Family status so we are welcoming her husband Robert as a new member. Thank you for joining us Robert and I hope you enjoy our meetings and make new friends.

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#### **2022 Benching results for Novices, and individual Novice Status updates**

##### **Here are the top overall annual scores for our Novices in 2022**

1 <sup>st</sup> Gorginian, Fred	162	4 <sup>th</sup> Mobbs, Anthony	40	7 <sup>th</sup> Ruthven, Stuart	13
2 <sup>nd</sup> Au, Loretta	45	5 <sup>th</sup> Szeto-Low, Yvonne	20	8 <sup>th</sup> Flinders, Di	8
3 <sup>rd</sup> Tau, Annie	44	6 <sup>th</sup> Zderic Adrian	14		

Well done to all of you. It is good to see lots of lovely orchids on the Novice benches. Keep it up.

#### **About Novice growers vs Open class growers.**

As we generally have additional new members join us each year we publish something like these explanations each year to help them in understanding the difference between Novice versus Open, why we have a status of "Novice", and how long a beginner grower may remain a "Novice".

**So what is a "Novice"?** Well it isn't meant to signify any lesser grade of membership. 'We are one' as our National Anthem says. Novices don't have "P" plates or "L" plates. They can bench in any benching class if they want to.

Over many years we have found that the biggest hurdle facing every new grower is a *lack of self confidence*. There is

an unwillingness to bring their orchids in to meeting because they don't think they are good enough. If they kill an orchid, or one of their orchids isn't growing so well, they frequently don't tell anyone about it or seek assistance for fear of being shown up. What they don't know is that every grower in the hall (including the top growers) all have dead plants and half dead plants scattered in their collections. The difference is that the experienced grower either already knows what they did wrong or has already phoned a mate to see what they do with that type and knows that some purchases will die regardless of what they do or don't do. They accept it.

Learn not to be scared that you will be looked down on, or anything silly like that. We all learn by making mistakes or not getting something right, finding out what went wrong and doing better next time.

SO – the Novice Benching Classes are just a separated area to encourage new and learning growers to bench so that they aren't having to put their orchid next to some amazing orchid from Trev Onslow or Garrie or other top growers.

***It's a confidence building area. which also allows you to keep track of your own progress. Once you manage to get one orchid benched you are on your way to growing more orchids.***

### **Revised Novice Grower Standings for 2022/2023**

**For Novices Only** – New members often have trouble understanding our complicated little system for gradually elevating growers from Novice to Open class, so I provide an explanation each year : -

Our 'rules' prescribe that in addition to any prize they may win by being top annual score in any single novice class, that grower also loses the right to bench in that particular Novice Class from then on.

That is, they are elevated to OPEN class for just the kinds of orchids that are specified by the Novice class for which they won. However, they can still bench other kinds of orchids in other Novice classes, until they are eventually elevated to open in any three different Novice classes.

When a Novice finally wins 3 different annual Novice classes, they must bench only in 'Open' from that point on.

This process may take several years, or may in some cases happen in just one season. It depends on skill and progress rather than any given period.

**However, please note an additional complication. – Your novice standing at our club is also affected by your novice or open standing at other clubs.** If you lose your novice standing at another club (or that other club's equivalent of novice standing), in any one or more of their benching classes, then you are likewise no longer Novice in the equivalent classes (or overall) at Ku-ring-gai. ***If you do progress in another club, please tell us so we can congratulate you for your progress and move you forward as deserved.***

Because the classes and rules at each club are so variable, it is impossible to write an exact interpretation of this condition for every circumstance, so we expect individual members to judge this for themselves reasonably and to act accordingly. If you are ever unsure about some aspect of this and want to ask for clarification, please raise your issue with any committee member. We will work out a practical and common sense solution for you.

You are not novice just because you have just joined our club. It is provided to help new growers learn and gain confidence as they learn. ***If when you join us you are already quite an experienced grower, then please don't abuse the process by benching in novice just to win a few prizes.*** Novice section is meant as an encouraging haven for new and inexperienced growers.

### **Updated Novice Standings for 2023 : Novices please take careful note, and bench accordingly.**

Each year we publish the table below to remind Novice growers of where they stand in this gradual process of moving from Novice to Open in our society. The table lists members who are presently benching in Novice classes at meetings and who have at least partially lost their Novice standing.

#### **THESE ARE THE NOVICE CLASSES IN WHICH those listed ARE NO LONGER ELIGIBLE TO BENCH**

<b>Fred Gorginian</b>	In 2022 <b>won three different Novice classes and so no longer qualifies for ANY Novice classes</b>
<b>John and Jean Hocking</b>	Previously won class 34 – Australian Native Species & Hybrids (They are now Open in this class)
<b>Anthony Mobbs</b>	In 2022 won both <b>Class 34 Australian native species and hybrids</b> , and <b>Class 37 Oncidium species and hybrids</b> , so <b>no longer qualifies for Novice in those classes.</b>
<b>Janet Snodgrass</b>	Previously won class 35 – Laeliinae species and hybrids ( <b>Janet is now Open in this class</b> )
<b>Yvonne Szeto-Low</b>	Previously won class 35 - Laeliinae Species and Hybrids and class 39 – Miscellaneous Hybrids <b>Yvonne is now Open in both these classes</b>
<b>Adrian Zderic</b>	In 2022 won <b>Class 36 Cymbidium</b> , but as Adrian only joined the society in September, and only benched one month, it is unreasonable to elevate Adrian to open on that basis. His Novice status is unchanged. In essence we need more orchids benched in a given classification to reveal true progress. (there was only one other Cymbidium benched all year. Shame on all you other novices)

*\*\* growers who no longer come to meetings have been removed from the list. If you start again after some period out of action you may need to ask a committee member about your novice status.*

## Fertilisers and applying them – The Doctors report from Last Meeting

After our January meeting, our Plant Doctors reported that there were many members who wanted to better understand the fertilisers we sell on our sales table and how you can practically measure the amount of fertilizer to use as the concentrate with a venturi siphon device like the Fertigator. Venturi siphon devices like this use the pressure of water flowing through a garden hose to suck fertilizer concentrate from a much smaller side hose to mix it with the hose water. The Fertigator is one commonly used product of that type that mixes hose water and concentrate at a nominal rate of 16 : 1. However, the actual mix rate varies depending on water pressure at the tap, how far “on” you open the tap, and also the length and condition of the hose. For example, long hoses restrict water flow due to friction and this reduces water pressure at the venturi suction point so this system is not an exact science. However, providing you are only trying to apply fertilizer at a weak rate, the variations probably don’t matter all that much.

### **Trevor Onslow provides this following description of the way he and Pauline use their ‘Fertigator’.**

“Hi Jim, at the last meeting a new member enquired about how you work out how much fertiliser to use with a 16 to 1 siphon mixer. I explained that although these devices did not give exactly the proportions as claimed due to water pressure variation, overall Pauline and I had used the following system for 30+ years and been happy with it.”

“To make things simple we started out using a 1 cup (standard cooking measure) of Peters Finisher (from our sales table) to a 9 litre bucket of water. However, we found this concentration lead to a build up of salts around the base of the pot and was too much. As time went by we kept using less and less until we settled on a ¼ of a cup of fertiliser to a 9 litre bucket, and have used this amount for many years. We use hot water to mix the fertiliser concentrate. We apply this weak fertiliser and water mix every 3 out of 4 times we water. On every 4<sup>th</sup> watering we use only water with no fertiliser to flush out any chemical build up of salts in the pots.”

Thank you Trevor. A very practical and easily followed process.

I would like to make a few additional observations. 1. There are a number of different venturi siphon devices for applying fertiliser. They aren’t all 16 : 1. Read the instruction for any particular one you buy and adjust your process if needed. 2. You must use a fertiliser that is intended to be applied as a solution. Never use a fertiliser with any solid organic component as the solid particles will block the fine venturi vent in the device. 3. Choose as short a garden hose as possible, no more than 10 metres if possible, and do not use very old hoses. Old hoses begin to break up internally and disrupt the flow of water, lowering pressure. The venturi action may be unreliable or intermittent.

The following article was published in our bulletin in December 2016 and deals with fertilisers and applying them in a broader context but I thought it may be useful to newer members who may not have seen it.

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**Applying Fertilizers** by Jim Brydie (2016) (based on an article by Sue Bottom on applying fertilisers and chemicals) For the benefit of newer growers, I feel it is worth starting with a statement that if you decide to grow orchids, a fundamental part of your culture regime, no matter what kind of orchids they are, must be that you feed them regularly. The artificial potting mediums we use for orchids have almost no nutritional value and as the orchids in our home collections are not being constantly drenched in the drip of mineral rich exudates from the rainforest canopy above, the only ‘food’ they will get is what we deliberately provide in fertilisers. In addition, as orchid mediums are generally coarse and open, they retain little of what we supply, so we must supply it again and again.

There are a number of ways to apply fertiliser to your orchids but they can be readily separated into two categories. The most basic is to water with some kind of soluble fertiliser dissolved in the water. The second is to apply the fertiliser to the pot in a form that slowly releases some fertiliser to the pot, and the plant, over a period of time.

**Slow Release** : There are several types of slow release. The first one is a scientifically engineered form which is really a little ball of concentrated soluble fertiliser encapsulated in a special coating that allows the fertiliser to slowly release through osmosis into the moisture of the pot. Typically, the little capsules are a like 2 to 3 mm diameter balls as pictured at the right. One such commonly available product is called Osmocote. (*pictured at the right*)

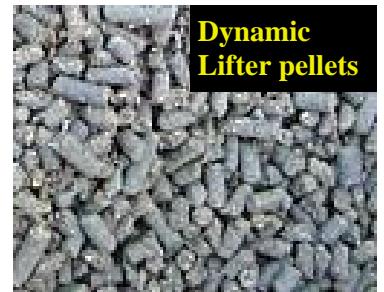


Slow release pellets like these have different ‘life’ periods depending on the brand and type. Some last for up to 9 months, some much less. You can use them by incorporating some pellets in with the medium when you repot, or sprinkling them on the surface periodically. The packet will advise on the amounts.

Personally, I find that there is one serious drawback with osmotic release pellets, in that you can’t readily measure whether the slow release pellets are still supplying anything. Dead pellets look the same as active ones. You never know when to put some more on.

If you have only a small collection of orchids, perhaps you could just apply pellets to every pot all at the same time. That way you wouldn’t need to be able to tell by appearance. The calendar would tell you when they were running out. However, in reality, most of us repot orchids throughout the year and would likely apply fresh pellets when we repot. I am not saying that slow release osmotic pellets aren’t a very valuable tool in a scheme of fertilising orchids, it is just that in my view they can’t practically be used as the sole basis of nutrient application.

**Organic Slow Release** : The next type of ‘slow release’ fertilisers are the organic varieties such as the pelletised manures like Dynamic Lifter and Rooster Booster etc, and the more traditional products like powdered blood and bone fertiliser. Pelletised products like Dynamic Lifter are relatively mild manure based fertilisers that are safe enough to use from the point of view of fertiliser strength. You can add a small volume to the medium when repotting or apply a small pile around the base of the plant during the growth cycle from time to time. For orchids however, the drawback of pellets like Dynamic Lifter is that as they break down they clog the air spaces in the pot. Orchid mediums are designed to create a delicate balance between moisture retention and air spaces. Air content is vital to replicate the root environment an epiphyte would encounter in real life in nature - that is, when growing on a tree or on rocks. Pellets such as Dynamic Lifter contain a high proportion of physical organic material that releases as the pellets break down, and they clog up the medium.



Another organic - Blood and bone, is less a problem in this regard, but it is best suited to finer, wetter mixes like some Cymbidium mixes or semi terrestrial mixes. It is not absorbable directly by the orchid. It needs to interact with bacteria and other microflora in the pot to break down the fertiliser to mineral forms that can be absorbed by the plant.

The final slow release type that I want to mention is “Magamp”. This is an unusual form of pelletised fertiliser that looks like little white rocks, about pea size and a little less. They are formulated to just gradually dissolve away in water, releasing the fertiliser as they dissolve. I have read that they are used in Bonsai culture as a slow release fertiliser mixed into the soil mix, but that is not the way we use it with orchids. Orchid growers use a see through plastic tube mounted in line with your hose. You can make it yourself, or buy a ready made one called a “Nutriflow” applicator. The tube has a wad of shade cloth fitted to each end to stop the fertiliser nodules washing out.



You fill the tube completely with Magamp pellets and use standard clip on hose fittings to attach it to the tap at one end and the hose at the other. They come ready to use in that regard. As you water the orchids, a very small amount of fertiliser is dissolved away from the pellets in the water flow and applied to the orchids every time you water. You can see the Magamp slowly disappearing over a period of a year or more, depending on how often you water. When it is getting down to a quarter full, dismantle the tube and refill it. (NB: you **can't** use the Magamp Nutriflow applicator at the same time as the venturi suction device below)

**Soluble Fertilisers** : The alternate strategy for fertilising your orchids is to apply soluble fertiliser as a drench. If you only have a small number of orchids, you can just make up the solution in a watering can, and pour it over your orchids, or use a pump action sprayer, or a battery powered sprayer. In all cases make sure the pots are moist before you do. When using a sprayer, make sure that you properly soak the plant and the medium with the spray.

**Venturi siphon devices** : For growers with larger collections, a more practical way to apply soluble fertiliser is to use a venturi siphon device that uses water pressure from your tap to suck concentrate from a reservoir and mix it with the tap water. These devices send a scientifically diluted fertiliser through your hose for you to just water onto your orchids which is very convenient. The device connects to your tap at one end, the hose at the other, and has a smaller diameter hose coming from the side with a filter at the end that goes into the concentrate bucket.



There are a number of brands and designs available, including two of the brass made devices that I have always used. I think the one that George Birrs and Mike Hichcock sell (for \$50?) is the “Hozon siphon mixer” which operates at 16 : 1 (ie it sucks up one litre of concentrate for every 16 litres of tap flow). I have also seen the “Dramm Siphonject” sold here, and that one operates at 20 : 1.

I use one of these siphon devices to apply fertiliser in both my glasshouse and my shadehouse. Because I water thoroughly as I fertilise, I use a lot of fertiliser when I do. I need roughly a 20 litre bucket of fertiliser concentrate to do my 20 foot (6 metres) long glasshouse. When I do my much larger shadehouse, I need a larger volume of concentrate



solution and I use a 60 litre garbage bin. It takes two garbage bin batches to thoroughly water and fertilise the shadehouse. It is probably a bit wasteful of fertiliser, but it is the most simple and easily used methodology.

**Fertiliser Rates** : To give you an example of how to calculate the amount of fertiliser to use, let us assume you are using a Hozon 16:1 device. If you were making up a 10 litre bucket of concentrate in which to place the siphon hose, by the time the bucket is emptied the total amount of water delivered through the hose would nominally be 170 litres (the 10 litres from the bucket plus 160 litres from the tap). For the 20 litre bucket I use, there is 340 litres of diluted fertilizer delivered to the plants.

If you are using the Peter Excel Calmag Finisher fertiliser that we sell on our Society sales table, the manufacturer’s recommended rate is 0.8 - 2.0 grams per litre of water applied once a week “to the soil” - obviously this is meant for

soil grown plants. For orchids, most of our experienced growers recommend much less concentrated rates. Perhaps  $\frac{1}{4}$  to  $\frac{1}{2}$  the recommended rate, but on the basis it is applied regularly.

Now be warned. Fertilisers do not weigh the same as the same volume of water. 1 millilitre of water weighs exactly 1 gram but with soluble fertilisers powder – volume does not equal weight. i.e. a 5 ml spoon of fertilizer powder does not weigh 5 grams.

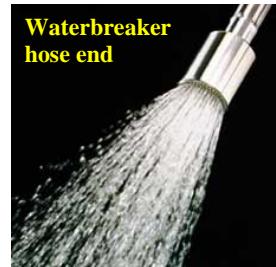
Each fertiliser is different. Some fertiliser packs come with their own measuring spoon which takes this volume/weight issue into account but the spoon in that pack is only designed for that fertilizer. A friend and I did some sample measures a few years back which showed for example, that dry Peters Finisher weighed nearly twice as much as Aquasol soluble fertilizer powder. (5 mls of Aquasol weighed 3.2 grams – 5 mls of Peters weighed 5.8 grams. But, when I re-measured the latest Peters Calmag Finisher we are using today, 5 mls weighed 6.25 grams.

For practical purposes, I personally use a 200ml yoghurt cup when measuring the fertiliser into the bucket or bin. A 200ml cup of Peters weighs about 250 grams. For the 340 litres of diluted fertilizer delivered to the plants from my 20 litre concentrate bucket, that works out at 0.73 grams per litre (250 grams divided by 340 litres). I usually use a little less than a yoghurt cup full in the bucket so I am more likely delivering about 0.6 to 0.7 grams per litre.

When using a different fertilizer or the bigger bin, I just adjust the volume up or down accordingly.

**Making the siphon work :** There are limitations you must consider when using the siphon device. The siphon jet requires adequate water pressure and water flow to work properly. You need at least 35psi water pressure to make it suck properly. Sydney's water supply should easily supply more than that, but the water pressure and flow can be reduced by any of a number of factors:

- (a) The length of the hose. Maximum length when using the siphon is 15 metres but 10 is better. A larger diameter hose may also help if you have problems with low pressure.
- (b) Old hoses may be damaged internally, and may restrict flow. Try a new hose.
- (c) Any chronic kink in the hose, will restrict flow.
- (d) A spray head at the end of the hose that restricts the flow too much and does not deliver a full water flow will be a problem. Don't use a gun type hose end. (I always use a high volume aluminium waterbreaker spray rose on the end of the hose.)
- (e) When you use the siphon, turn the tap on just about full.



One further issue that can arise is that you need to make sure the fertiliser is fully dissolved as a concentrate before you try to start, and make sure that the filter at the end of the uptake hose doesn't become clogged. Also, if you are using strong fertiliser rates, a salt encrustation may build up over a period of years in either the intake filter or at the siphon jet itself, hidden in the body of the device. When you finish applying the fertiliser, **ALWAYS** take the intake hose out of the concentrate bucket and apply the hose sprinkler (plain water stream) directly against the intake filter. Continue to squirt clean water through the venturi intake hose for about a minute to make sure you flush any residual salts. This will help ensure its long term use by keeping the inner parts clean.

If you think the venturi might be affected by a build up of salts encrusting the insides, I am told that sometimes an overnight soak in vinegar will remove deposits that plug the system and it will begin to siphon properly once again. However, I haven't been able to prove this. I only tried to fix a bung siphon once and that didn't work.

I have been using the brass venturi devices for over twenty years and have only had to throw away one. The part that I always find causes the most trouble is the intake filter. The old ones used to have a 4cm wide, circular intake head fitted with a lovely fine copper mesh filter, which is quite delicate and prone to tearing or falling out. The filter is important to stop the suction head pulling in detritus from the bottom of the concentrate bucket or bin. I eventually had to replace the mesh on mine with shadecloth as a filter, tied it in place with copper wire. I suspect that the device that stopped working, and that vinegar couldn't fix, was probably clogged with a piece of fine debris it sucked in through my adapted, rather coarse filter.

Many growers who buy a siphon applicator without realising the very simple factors above, find that they can't get the siphon to work reliably. If you abide by the rules and take care, these are a great, reliable, orchid growing tool.

**Dosatron?** While the Hozon is the everyman's siphon device, there are much more sophisticated, more expensive versions of the same kind of device. The "Dosatron" is one example. These are used in many agricultural or horticultural situations where there is a requirement to add a liquid solution to a water flow. It can be used for feeding animals or plants, or applying chemicals for pests or diseases, as well as other functions. It still uses a venturi suction device driven by the water pressure but it is more adaptable because the siphon rate is adjustable and maintains the dosage rate regardless of variations in water pressure. I doubt it is what most growers would be looking for so I won't go into it further here. If you are interested, I suggest you consult Dr. Google.

**One final Note :** The chemicals in some soluble fertilizer will react with some of the metal parts in your watering system. Peters Finisher certainly reacts with copper elements such as the Hozon uptake filter. After a while it will look like very clean naked copper meaning the copper is being eaten away by some of the other metal compounds in the solution. **ALWAYS** wash out your equipment thoroughly with clean water after you finish using it.

### **Anguloa virginalis** - benched by Lina Huang

This is an orchid I don't think I have ever seen benched at Ku-Ring-Gai before. Commonly called the baby in the cradle orchid because of the appearance of a baby swathed in blankets in the interior of the flower. Kind of fanciful but you can see what they meant.

Anguloa is a genus of 13 orchids of mostly terrestrial orchids found in the north eastern areas of South America. Sort of from the end of the central American isthmus, east to Venezuela and Bolivia, and south and east to encompass Ecuador and the top end of Peru.

Anguloa virginalis is listed as occurring in Colombia, Venezuela, Ecuador, Peru and Bolivia in wet montane forests. It is a large sized, cool to cold growing terrestrial in deep shade on steep humid hillsides, in wet montane forests at elevations of 1250 to 2400 meters. It has large pleated leaves like some of its cousins in the genus Lycaste.

This plant benched by Lina last month was really lovely. The flowers were about 3.5 cm wide x 9cm tall, which is quite large. Lina's was a creamy white with just a faint hint of pink and I believe this is perhaps the most common colour but some individuals can be much more pink. The pink ones seem to be the most sought after and have been line bred in nurseries to accentuate the colour.

Like the Lycastes and Maxillarias to which it is related, Anguloa orchids produce multiple flower spikes in summer, each with just a single flower.

I have never tried to grow Anguloa. They were occasionally available in nurseries as seedlings but for some reason they never got onto my list. I am not sure why because I seem to have given a try to just about every other species I ever came across, often to my chagrin at ending in failure.

I thought Lina's Anguloa was exceedingly beautiful and it was a pleasure to admire it on the bench. If I had seen it 10 years ago I think I would have been checking the internet to see where one might be obtained.

The big pleated leaves on virginalis are typical of what I call quasi terrestrial orchids that come from shady, moist, well drained areas. Others fitting this type would be the Calanthes, and the larger flowered Lycastes like skinneri. Although skinneri usually grows as epiphyte in the forks of trees or on large moss draped branches, they also like shady moist conditions. Tall, wide, pleated leaves are clearly indicative of conditions where evaporation and sunburn are not a serious problem, and if that isn't a pointer to cultural needs then I am a pumpkin.

Thank you for showing us your treasure Lina. Grow it on, doing whatever you are doing now, and keep bringing it back every year to show us how it is progressing. A truly beautiful orchid.

### **Cattleya Mem. Edna Goostrey** – benched by Trevor and Pauline Onslow.



So many excellent growers bring in these fantastic Cattleya flowers every month that our minds begin to think that such quality is normal. But not so. Even as recent as 20 or 30 years ago most of the Laeliinae hybrids were slightly ordinary.

I had never seen an Edna Goostrey before but isn't this just about perfect. Edna Goostrey was registered in 2001 and already two cultivars have been awarded. Trevor didn't give us a cultivar name and it may be a seedling, but it looks quite similar to the awarded "Michelle" which has an HCC.

Edna Goostrey was made and registered by a grower in Qld so we can claim it as an Aussie orchid. Its breeding is quite complex and covers many generations but its two dominant species contributors are Catt. walkeriana and Catt loddigesii and to my eye the flower and lip shape is reflective of that.

I only have a flower picture of Trevor's orchid. The award description tells us that Michelle's flowers are about 7 cm across which is a very nice intermediate size. And as to plant size, walkeriana is a sort of sprawling, relatively short pseudobulbed plant getting to perhaps 20 cm tall. Loddigesii is a bit taller at perhaps 40cm but is also only a moderate sized plant. Obviously there is much more to Edna's parentage but I am guessing it would be more like loddigesii as a plant, with tallish, fairly slender pseudobulbs and an overall height of something like 30 - 40 cm.

Very nice Trevor. A delightful orchid.



**Best of the Evening Hybrid – Vandachostylis Pine Rivers ‘Wasana’, and  
Best of the evening Species - Aerides multiflora – both grown by G & L Bromley**



**Vandachostylis Pine Rivers ‘Wasana’**



**Vanda Jeans’s Delight**



**Aerides multiflora**

Few growers cultivate the Vandaceous orchids and well as Garrie. He has been growing this lovely blue ‘Wasana’ for many years and what a magnificent example he showed us this month. It had 54 flowers and 5 buds. The flowers were the deepest purple blue you have ever seen. And, at the same time, Garrie’s Aerides multiflora was also judged best species orchid of the evening, with even more flowering sprays than its huge, awarded flowering last year. This time it had 17 pendent spikes each covered in flowers.

In doing his usual job of announcing the winners and telling us a little about them, Garrie also extracted from the bench another gorgeous Vanda specimen he had brought in - Vanda Jean’s Delight and while he was telling us about his three stunners, he also gave members a brief run down on some of what he believes to be some false ‘truths’ about growing Vandas and other Vandaceous types, such as - you can’t grow Vandas without a heated glasshouse. He told us of his experimentation with his own plants that shows that this belief is not strictly true.

As both Garrie’s Best of the Evening plants have been best of the evening a number of times previously, I thought that this month I will skip my usual BOE analysis for fear of boring readers with repetition. For those who have never seen ‘Wasana’ or Aerides multiflora before and wish to know more, refer to our March bulletin last year.

In place of the missed BOE write ups, I have worked with Garrie to look at what we commonly call Vandas as a group and try to give growers a better insight into what that covers, and where some of the hardier genetic strains might be found.

### **All About Vandas - Garrie Bromley and Jim Brydie**

#### **First, just what are Vandas?**

The genus Vanda is just one orchid genus in a family of closely related orchids that share what we call a ‘monopodial’ growth style. That is, they make a single stem which just grows taller and taller each year. The stem that makes new leaves from the growing point at its top, making the stem grow taller and taller each year.

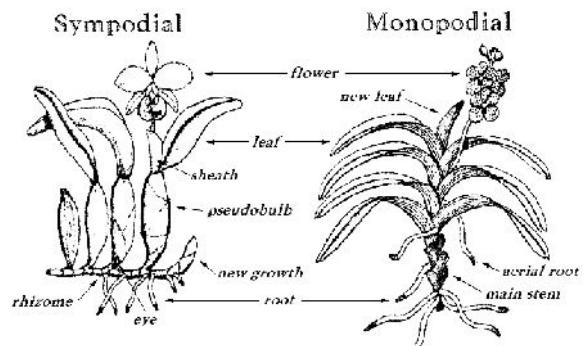
The other growth style is Sympodial, which is the type that makes separate pseudobulbs joined by a special stem called a rhizome.

But of course nature is never as simple as the simple Monopodial pattern described above. Every plant has dormant bud zones on their stems that are designed to allow the individual to survive damage to the top growing point that may otherwise have been catastrophic. For example, when you cut the top section off a mature Vanda (including a number of aerial roots), you now pot up the top division as the new plant and hope that a stem bud will shoot and make a new plant out of the leafless bottom section. Frequently, it will.

But as well as being a possible method of propagation by division, many monopodial orchids naturally produce side growths from those side buds. These then become vertical growths in parallel to the original growth, making a cluster of vertical growths. That doesn’t make them any less ‘Monopodial’. It just means they grow in a cluster of monopodial growths.

Now as to which ones we call Vanda and which ones get some other genus name, well that is a question not easily answered. In fact taxonomists are today still studying DNA relationships to sort out which are really which.

I won’t go any further in this little explanation but all monopodial orchids are in the giant orchid Family “Vandeae” which covers about 160 genera and over 2000 species and there are many, many more Vandaeae hybrids. Our society’s



benching classes call this group “Vandaceous” so we have a class for Vandaceous species and another for the Vandaceous hybrids. In practical terms you can say if your orchid is monopodial, it is ‘Vandaceous’.

**Taxonomically, the hierarchy for Vandas is :** Family Orchidaceae – Sub Family Epidendroideae – Sub Clade Dendrobioid – Tribe Vandaeae – Subtribe Aeridiinae - - Genus Vanda etc.

However, from there it gets sticky. Over the past 50 years all sorts of species have been moved in and out of Vanda. The latest research I read was from 2013 and it decided the answer was still a pineapple until more detailed DNA research was completed. So for now I am saying Vanda includes what were the genera - Ascocenda, Euanthe, Neofinetia and a handful of other relevant but lesser significant genera.

**Types of Vandas** - The orchids that were always known as “Vandas” come in basically three types:

“strap-leaved” – which have wide, more or less flat leaves.

“terete leaf” – which have round, pencil-shaped leaves. And,

“the semi-teretes” – which are hybrids between the other two types, and have an intermediate leaf shape. Their leaves are fleshy, heavy textured, but with an open “V” shape. Sort of like a pencil shape slit down the long side and opened.

All the terete leaf (pencil leaf shape) Vandas have now been moved to their own separate genus called Papilionanthe. Although Papilionanthe and Vanda do make hybrids, They do not hybridise as easily as Vanda to Vanda because their genes do not quite match up function to function in the same way as Vanda to Vanda. Which seems to support the terete leaf types being shifted to a separate genus.

There are 11 Papilionanthe species and about 65 species of strap leaf Vanda although when you get down to examining the Vandas more closely you can see that the physical characteristic of wide flat leaves within Vanda is not completely consistent across the whole genus anyway. Many species, especially the smaller growing types like those that used to be call Ascocenda, have stiffer, more sharply V-shape leaves getting closer to what you might call semi-terete. So don’t get too carried away separating Vandas on the basis of the shape of their leaves.

#### **Growing styles and habitats**

#### *Papilionanthe teres*

What is very different between Papilionanthe and Vanda is growth style & habitat. The pencil shaped leaves of the Papilionanthe are sort of cactus like and allow them to grow in full blazing sun. They are still tropical orchids that prefer regular rain and warmth all year round but the fact that they grow out in the open makes them a little bulletproof. They are terrestrials but kind of clustering. Some are almost swarming climbers. One American growers description says : “*The terete or semi terete vandas are the most bullet proof orchid I have. They have been exposed to over 100F and down to the high 20'sF. They have been buried under hurricane debris for months and found unscathed. Mine climb trees. ...*”

I don’t know that writer but I like the bullet proof bit. I can’t verify the temperature tolerance either but I have grown several Papilionanthe and they do tolerate at least near zero Centigrade. And, as full sun plants, they can also tolerate very high temperatures. It stands to reason that their hybrids (including the semi-teretes) are also tough as nails.

#### *Papilionanthe Miss Joaquim*



All of this discussion about really hardy and tolerant Vandas brings us back to the very reason for writing all this stuff in the first place.

**Are there Vandas you can grow outside in Sydney?** Before we can answer that we need to look at a few of the more lovely flowered ‘strap leaf’ Vandas that give us those huge brightly coloured Vandas that we all admire so much.



At one end of the scale is the Queen of all Vandas, *Vanda sanderiana* (*left*). This amazing orchid comes from the Philippines Island of Mindanao and from elevations up to only 500m. The plants can be up to 1 metre tall x 60 – 80 cm wide. The two toned flowers are about 10 cm across and the 30 cm inflorescence can have from 4 to 10 flowers. Large plants with multiple inflorescences can be a very spectacular sight and this amazing species is present in the majority of the large flowered Vanda hybrids.

Apart from the amazing flowers, its habitat is the most important factor to note. Here is the description from IOSPE : ... *grows on trees at elevations of sea level to 500 meters close to the sea, often hanging over the water, and often fully exposed to the sun as well.*

In Orchidwiz, the Bakers Habitat tables tell us that day temperatures there average 29-31 °C, and night 20-21 °C, with hardly any variation through the year. Humidity is 80 – 85 % all year, with rainfall moderate to heavy all year.

This is a Vanda you do need a heated, humidified glasshouse to grow properly in Sydney.

However, we know that there are more than 60 other Vanda species and some of these come from higher elevations and some from habitats where there is much more variation in temperature and humidity. Happily for us, these ‘others’ include wonderful orchids like the stunning blue *Vanda coerulea* and a number of other gorgeous types used

in Vanda hybridising.

Vanda coerulea (*right*) comes from the lower slopes of the Himalayas in NE India, Burma, Thailand, and SW China, up to about 1500 m, so the temperature extremes will be significantly greater. The Bakers describes its growing habits as : - *..They usually grow high up in rough-barked trees that are not exceedingly leafy so that the plants are fully exposed to the sun, rain, and wind. The roots sprawl over the dry rough bark with no moss or lichen present. Therefore, they are able to dry very rapidly after becoming wet.*" It seems obvious that Vanda coerulea will pass on much more hardy habitat tolerance in its genes than those species from the traditional lowlands that are always wet and humid. Vanda tricolor also grows at elevations up to 1600 m.

Of the other species I see frequently listed in the genetics, most, like dearii, tesselata, and merrillii are all lowland wet humid types, but some, including the group of smaller growing and smaller flowered types that used to be called Ascocendas can be a little tougher. For example, Vanda (Ascocenda) miniata can be found up to 1000 m and often grows in dry deciduous forests. That would imply that they have evolved to tolerate a significantly wider range of temperature and humidity and changing seasonal conditions.

So, where does that leave us? I think it leaves us looking to experienced and very good growers like Garrie for guidance on which ones to try and how to treat them if you buy one.

If you really want to give a Vanda a try, but have no experience with them, then our suggestions are :

1. You should look for an attractive semiterete type (a Papilionanda) for your first try. They are still beautiful but much more hardy than strap leaf types. And more forgiving. One that is a bit old but beautiful is Pda. Mevr. Velthuis (*right*) which is the cross between Singapore's National flower - "Miss Joaquim" and Vanda sanderiana. Jim grows this in his cold (but roofed) shadehouse and it flowers regularly.
2. When you buy a Vanda for the first time, DO NOT BUY some tiny seedling, mericlon, or baby plant. Buy a mature flowering size plant for your first try. It will have more strength to tolerate your possibly less than perfect growing culture.
3. Concentrate on learning how to grow a Vanda. The best way to get a mature Vanda through a winter (that it never wanted to see) is to make it the biggest and strongest and healthiest you can get it before winter. Learn how much light is ideal. Even if you can't supply ideal conditions, you will know what to aim for. Hang them up high nearer to the roof. Give it a slatted basket or some airy container to grow in, open, coarse medium, and make sure it can dry quickly between waterings. THEN figure out how often to water and fertilise within that watering and drying cycle IN YOUR CONDITIONS.
4. Make sure you do fertilise it regularly, and not too concentrated. These orchids don't have big pseudobulbs as storage organs. Yes, they store minerals and water in their leaves, stem, and roots, but that is a shorter term resource than in orchids with pseudobulbs. They want it supplied regularly and not too strong in any one dose.
5. If you have been growing a Vanda for a few years and it is growing well enough but hasn't flowered for you, you might try either more light, or move it to your more open shadehouse area where air movement is increased. If you do this however, do it in spring/summer and as we move into perhaps mid to late autumn, and we start getting those colder nights, keep an eye on the plant for any 1 cm+ black spots starting to appear on the leaves as these may be indicating leaf cell collapse due to cold damage. If so, move the orchid to warmer, more protected conditions.



### A little dig at the Ladies (sorry girls)

#### Covid

**MY WIFE SAID THAT IF I DON'T GET OFF MY COMPUTER AND HELP WITH THE DISHES, SHE'LL SLAM MY HEAD ON THE KEYBOARD, BUT I THINK SHE'S JOKING! SG67SGH13DHGJ RE7490DNDWHK3-2J4H37SHDUDKJ1 SD877HR8SK020A3Y3H3J3UHU338JE SU83J8R**

The quarantine has strained many marriages but for some of us it has enhanced our relationships. I'm lucky to have the most loving wife. Last night I woke up while she was holding a pillow tightly over my face to protect me from COVID 19.

