



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

(Established in 1947)

A.B.N. 92 531 295 125

20<sup>th</sup> June 2022 Volume 63 No. 6

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

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**Next Meeting :** Mon 20<sup>th</sup> June 2022

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

**Same as last month** – booking is not required but attendees must still be double vaccinated. Your vaccination certificate will be checked (unless it was previously checked and registered upon attending a meeting). Please be considerate to those managing this process. Also, if you aren't feeling well on the night, please stay home. It may turn out to be nothing but think of your friends if it isn't.

A face mask is no longer mandatory but is strongly recommended where 1.5 M spacing can't be maintained!! We know masks are uncomfortable but please have a mask with you and comply.

**The hall is open from 6.30pm.** Please try and get there early to help set up tables and chairs. A small number of members do already help but it is true that many hands make light work (and that doesn't just refer to the hall lights). Remember, **No benching until all the benches and the class dividers are in place.** PLEASE give the set up team time to get everything in place. If you start benching too soon you just delay the whole process.

Finally, when benching, if you aren't sure where your orchid should go, ask for help from one of the committee or any of the more experienced members, they will guide you, or point you to someone else who can help.

**No Culture Classes at present due to Covid.** The **sales table** will be operating for sale of members plants and for small quantities of pots and other supplies. There will be the usual **monthly raffle**, and the **library** will be operating.

**The actual meeting commences at 8pm.** We start with the meeting formalities run by the President while the judges review the benched orchids. Once judging is complete, and winners announced, we will break for supper.

**The Supper Break** – Coffee, tea, milk and hot water will be provided at the meeting. But **remember**, you will still need to bring your own **sugar/mugs/cups and stirrers**. The club will supply some wrapped biscuits but members may also **bring their own nibbles. No food sharing please.**

**After the supper break** – There will be a talk by James Clugston, a Postdoctoral Research Fellow working with the Royal Botanic Gardens who will present to us on “The Concept of Species in Orchids”. Now that should be an interesting one.

*3 lovely Best of the Evening Orchids from last meeting* (more on each inside)



*Coelogyne rochussenii*



*Vandachostylis Alice's Anie*



*Oncostele Wildcat 'Yellow King'*

Another 3 beauties for best of the evening last month, and wonderful photos from Jane D'Oliver.

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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** – Don't forget, we still need to keep to our COVID plan as many people are still getting infected. I thank all those members who kept their masks to make that extra effort to keep the risk low. Please make sure you bring a mask with you and comply with the rules.

We are still unable to run our culture classes but will resume them as soon as it is possible.

**Coffee and Tea** – We will once again be offering coffee and tea and hopefully some biscuits at the June meeting. You will still need to bring your own mugs/cups and stirrers. And all means, bring your own supper if you like, but no sharing, please. We will need one or two volunteers to be on hand to dispense the milk during the break. Thank you everyone for doing it all at our last meeting.

**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.

**St Ives Fair volunteers** - Dates for our big, upcoming St Ives Orchid Fair are outlined below & further info will be provided at our next meeting. This is our big show & our main source of income which has been sorely missed during covid. Ku-Ring-Gai is one of the 4 partner societies that manage and run this fair and there is lots to do to make it run smoothly. You don't have to have any orchid knowledge to assist, there are many different roles to be filled, so please put your name down on the volunteer sheets that will be circulated at our next meeting. If you aren't attending this month but want to help in working at the show, just email to our club email on page 1. BUT, if you belong to more than one of the societies that run the show, please don't duplicate your name and time same slots offers on different volunteer sheets.

#### UPCOMING EVENTS: (please check at source for any last minute changes)

1. 16-18<sup>th</sup> June N. Shore Orchid Show at St Ives Village Shopping Centre.

2. 17-19 June, MWOS Orchid Show, Belrose Super Centre

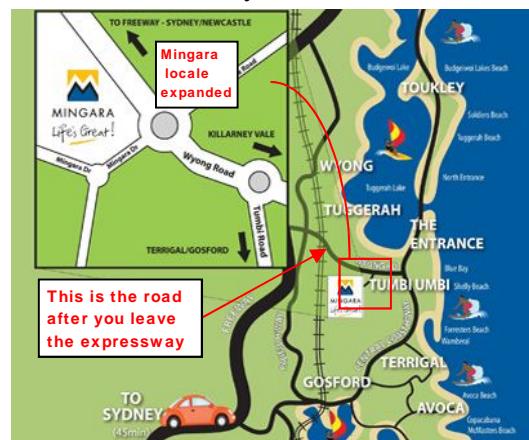
3. 25-26 June - **Mingara Orchid Fair and Show**, Mingara Recreation Club, Tumbi Umbi

The Mingara Fair is one of the largest orchid events around Sydney. It is held in a large hall inside the Mingara Sports Club. There are displays from various societies as well as the huge sales area with many interstate vendors visiting as well as locals. It's a great day out.

To get to Mingara, the best route is straight up the M1 expressway. Take the Wyong exit, and at the top of the exit ramp, turn hard right and cross back over the expressway you just exited. Follow this road for about 8km toward Tumbi Umbi and The Entrance. At the Mingara roundabout, look for the big signs pointing to the huge club complex on your right. You can't miss it.

Mingara Sports Club is a licensed club, much like a leagues club or RSL club. There are bars, restaurants, and coffee shop facilities inside, so you can make a day of it if you wish. Alternately, after checking out the show, you might like to drive back via the nearby famous holiday resort town of The Entrance, where the Tuggerah lakes exit to the ocean.

There is a good road all the way back from The Entrance to Gosford.



#### Other Orchid Dates

4. 12-14 Aug National Orchid Extravaganza & Paphiopedilum Society of NSW, The Arena Sports Club, 140 Rookwood Rd, Yagoona

#### 5. The St Ives Orchid Fair - 19-21 Aug

**St Ives Showground,  
Mona Vale Rd, St Ives**

THE BIGGEST OF THEM ALL, BACK AT LAST

**Attention: members intending to sell orchids via the managing societies sales table, please note:**

*The Society will issue a plant sales guidance sheet setting out the way the sales table works and the requirements on the seller. There are specific requirements for labelling and marking labels with your name and the society you represent.*

*There are also government requirements on selling Aust. Native orchids, both species and hybrids. Special labels and lists are mandatory. These rules will also be sent out to members by our secretary. AFTER READING the instruction sheets, any questions you may still have can be addressed by our committee representative Chris Wilson, whose contact details will be on the instruction sheet.*

## St Ives Orchid Fair

### 'The Big One'

ST IVES SHOWGROUND  
Mona Vale Road, St Ives

Friday 19<sup>th</sup> August 2022 9 am to 4 pm  
Saturday 20<sup>th</sup> August 2022 9 am to 4 pm  
Sunday 21<sup>st</sup> August 2022 9 am to 3 pm

ADMISSION \$8

Major Sponsors  
Rosella Orchids - Garden City Plastics - Swagman Sprayers

ORCHID VENDORS

Alice's Orchids, Dark Star Orchids, Ezi-Gro Orchids, Fong Ping Orchids, Hills District Orchids, Macquarie Native Orchids, Nicky's Slippers, Orchid Care Services, Orchid Species Plus, Orchids of Distinction, Orchids on Newbold, Robertson Orchids, Rosella Orchids, Royale Orchids, The Orchid Mart / Serhan's Orchids, Tinonee Orchid Nursery, Woof Orchidculture

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

## BOE Open Species – *Coelogyne rochussenii* ‘Joy’ AM - AOC grown by Peter and Jane D’Olier



I think this is one of the most glorious of all *Coelogyne*. Unfortunately for me however, I have found this one to be a warmish grower and I just can't find the right spot and conditions to grow it properly. I am envious of Peter and Jane with theirs, I hardly get a flower and if there was ever an orchid famous for flowering it has to be this one.

But don't judge it from Peter and Jane's just yet either. They have it off and running to a great start, but this species is one that is renowned for growing into a larger specimen and that is when you will really see the flowers. Like the specimen below grown by Bruce Gray from northern Queensland.

Bruce's cultivar is called 'Joy' and it gained an FCC in 2010 when this flowering carried approximately 5,400 flowers. Now how is that for a display?

*Coel. rochussenii* comes from Thailand, Malaysia, Indonesia, Borneo and the Philippine Is. It is reported at elevations as high as 1500 m but despite that, I find that it is clearly a warmer grower. Its natural habitat is as an epiphyte in wet forests, but even though this is a tropical orchid that has no 'winter' cool season as such, it would experience 3 months of much drier conditions during the northern hemisphere winter

of Jan, Feb, March, and not much more rain in the month either side.

Bruce lives at the northern end of the Atherton tablelands and is a master grower of a huge range orchids. Magical semi-tropical conditions and a fantastic grower so it is hardly a surprise to see this awarded specimen but many other growers also succeed with *rochussenii* so it is one worth seeking out. Just be aware you need to treat it right to grow it like this.

Peter and Jane's orchid has rather greenish flowers but as you can see, the species does also occur with yellow flowers and it can also be cream and cream with brown. Any of them grown well will look magnificent with a curtain of flowers when they are big enough and strong enough to produce. It is a great orchid.

Congratulations Peter and Jane, let's see twice as many flowers next year.



## BOE Novice for May – *Oncostele Wildcat* ‘Yellow King’ grown by Fred Gorginian



It just goes to show yet again what a popular and successful hybrid was Wildcat. As I gave a fairly comprehensive explanation of Wildcat only a month or two back, I won't bore you with all the details again, but the correct genus name for this one is *Oncostele* and not *Colmanara* as many have it labelled.

I haven't seen this "Yellow King" cultivar before and it sure is yellow isn't it and quite full in shape. More like some of the old *Odontoglossum* crosses from many years back. Very attractive.

I don't think this one has been awarded yet but I could imagine it may well be in the future, especially if an accomplished grower like Fred can get to flower at its best.

These colourful lovelies look wonderful in mass displays. I hope all our members still have them flowering for us in August for St Ives. Maybe we can beat North Shore this year.

Congratulations Fred. You must have quite a collection of these.

### The Irish way of Thinking

Paddy is attending the local horse race meeting when the bloke next to him whispers to him "Do you want the winner of the next race?" Paddy replies "No tanks, oi've only got a small yard."

Mick walks into the barn on Paddy's farm and catches him dancing naked in front of a tractor. Mick says, "Oi Paddy, whatcha doing?" Paddy says, "Well me and Mary haven't been getting on in the bedroom so well lately and the therapist recommended I do something sexy to a tractor."

## BOE Open Hybrid for May – **Vandachostylis Alice's Anie** grown by Garrie & Lesley Bromley

What gorgeous rich colour. Garrie and Lesley just love these tropical Vandaceous hybrids and grow them so well. Which is a bit of a challenge considering that they would be happier in the warm humid conditions of Cairns.

In case you didn't already know, a Vandachostylis is a cross between a Vanda and a Rhynchostylis but what an awful genus name. It has to be one of my top 3 most awful names. Why couldn't they have invented Vanstylis, or Varsstylis, or even Vanchos, or some other at least spellable and pronounceable name.

Anyway, Alice's Anie is a mix of the very pretty Rhynchostylis coelestis (see at the right), which usually has an upright spray of 40 or so, 2cm white centered flowers with blue tips), and a mix of 4 Vanda species (coerulea, sanderiana, curvifolium, and dearii).

Three of these Vandas have large to at least medium size flowers but the 3<sup>rd</sup> Vanda (curvifolium) has flowers even smaller than the Rhynchostylis and until relatively recently, was in a different genus – Ascocentrum. But, as we know, the taxonomists have been working hard this century and with the addition of DNA analysis, they ruled that Ascocentrum were really just a group of small flowered, and smaller growing Vandas. Well this mix of genetics has produced a really pretty, medium sized flowered, Vanda like orchid. There has only been one cultivar awarded since the cross was registered by Alice's Orchids back in 2004 but Vandas can be slowish growing beasts so perhaps there will be more in years to come.



We didn't record a cultivar name for Garrie and Lesley's orchid last month but the awarded one was called 'Alomar' and theirs looks a bit like that one. If it is a different cultivar I think they should pump it up next year and put it up for judging as the colour looks better than the pictures of Alomar I can find.

Congratulation Garrie and Lesley. Magnificent as usual.

### Some other Beauties benched last month



Den Hot Lips 'Lesley'



Laelia anceps 'Helen x 'Del Fuego'



Masd Tarni 'Elizabeth'



Phal Venus



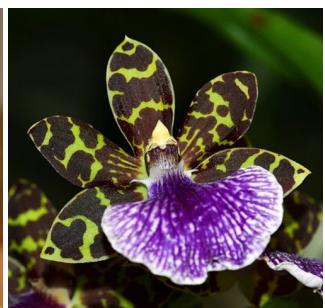
Dendrochilum saccolabium



Mps Breathless 'Good Woman'



Wilhelmaria Pinot Princess



Zygogera Kaboom

How is that for an impressive selection. There are some pretty good growers at Ku-Ring-Gai meetings these days.

I can't give you a write up on all of the above but I can tell you who benched them and at least make a few comments.

1. **Den Hot Lips** – Benched by Garrie and Lesley. This is one of those cute smaller flowered hard cane Dendrobiums that derive from what used to be Den bigibbum variety compactum but is now called Den lithicola. It doesn't quite need the tropical warm conditions needed by most hard canes but they are at least warmish and need looking after. But, when you do it right, you only have to look at Garrie's regular benchings to see the attraction.
2. **Laelia anceps**, a line bred cultivar benched by Lee Payne. The anceps we see today have sure improved from the old divisions we used to share around in my early years. Many of the old ones used to have a metre long spike, or even taller, with 2 to 4 good sized flowers at the end. The attraction for beginners like me in those days was that

anceps was as tough as cast iron and was usually grown hanging in the backyard under light canopy trees. Our winters didn't phase it in the slightest and it flowered every year no matter the conditions.

Today we see shorter spikes with more flowers and better shaped flowers. Who could complain about that.

This one of Lee's is really nice. A typical ances pink and purple, although these days you can just as easily obtain whites with blue lips and they are still tough as bags. Delightful Lee.

3. **Masd Tarni 'Elizabeth'** from Christine Rethers. This is a cross made by one of our old members. David Butler registered it in 2007 and it was one of many he made using *Masd triangularis* to improve shape and colour. I presume the 'Elizabeth' is named after his wife.

I gave Christine a few tips on growing *Masdevallia* about ten years ago and today she leaves me for dead.

4. **Phal Venus** benched by Garrie and Lesley. What a lovely orchid even if it is an old hybrid made nearly 100 years ago. It is a primary hybrid between two species – *Phal lindenii* and *Phal equestris*. It can be emotionally unstable sometimes and suddenly throw a tizzy but most of the time it can be grown happily in the glasshouse. Like all Phals it won't stand the cold Sydney winters without artificial heat but I don't think it would be happy as a house plant either because a heated house usually has too low a humidity level.

This one of the Bromley's is just lovely. The picture only shows one part of the flower display but it shows you the idea. Well grown its gorgeous.

5. **Dendrochilum saccolabium** benched by Lee Payne. This is one of my favourite species. It looks superficially similar to *Dendrochilum wenzellii* but close up they are easy to tell apart. You don't see as much of this one as *wenzellii*, and it doesn't come up for sale as often but it is worth looking for. A really nice orchid that is hardy, cool growing and easily grown.

6. **Miltoniopsis Breathless** benched by Alan and Gloria Cushway. I have always had a thing for the exotic soft and delicate look of this genus but do you think I can grow them – just hopeless. That is not to say that they are all that hard. Many of our members grow them successfully but they do need to be given the right mix of conditions. They hate our cold winters, they hate our hot dry summers, they love air movement, they seem to like fresh potting medium pretty regularly. By that last comment I mean they aren't the sort of orchid I would leave untouched in a pot for 5 years to get a specimen plant.

Other than all that, all I can say is I love to admire them when good growers bring them in, but personally, I have given up.

7. **Wilhelmaria Pinot Princess** benched by Annie Tao. Now how is that for a genus name. A mix of *Brassia*, *Miltonia*, and *Rhynchostele*. I have no idea how the genus name came about but I assume it is named for someone called Wilhelm. But I do like the look of Pinot Princess. I have always admired these *Brassia* shaped hybrids with the long thin petals and sepals. That sort of Spider shape appeals to me somehow, just don't ask me why. Look at the picture above again. It really is eye catching isn't it. Blackish purple spider legs and a brighter purple and white lip for the body. Now that is different.

8. **Zygoneria Kaboom** benched by Jessie Koh. These Zygoneria crosses (*Zygopetalum* x *Negardneria*) have been around for a long time now and when they first started to show up they were very popular. One I always liked was Adelaide Meadows but there were many different cultivars and the appearance varied widely. Some just looked like different *Zygopetalums* but there were enough that were really attractive.

In my view, the ones that appealed the most had good doses of *Zygopetalum maxillare* rather than the more commonly grown *Z. mackayi*. The lip of *Maxillare* is a different shape and is more spade-like and some of its hybrids allow the clear green of *Neogardneria* to feature in the upper segments.

Jessies Kaboom is more *Zygopetalum* shaped and coloured but the colours are so clean and distinct that it is a beauty. Especially that purple striped lip.

### **The Spider Orchids (*Brassia* hybrids) - Jim Brydie**

I have written about these a few times but just in case you didn't notice the other times, I rather like *Brassia* species and their hybrids. The Wilhelmaria hybrid I mentioned above has prompted me to mention it just once more.

There are about 30 *Brassia* species at present but the number does vary as species are shifted from one genus to another from time to time and species are joined or split. *Brassia* is a South American genus spread widely across the tropical zones and mostly below 1500 meters but despite that moderate elevation range most grow well in Sydney. A few, like *Brassia verrucosa* are as tough as old nails. Others are a bit more touchy about extremes of weather or temperature but will grow well with just a modicum of protection. *Brassia* is a member of the Oncidiinae alliance and thus is usually compatible to breed with other Oncidium alliance genera.





Just about all *Brassias* take the form of the one illustrated above. That is to say they have a nice long spray of big wispy flowers with long skinny sepals and petals. But the other interesting characteristic is that their flowers are arranged in two rows. The rows are placed so that when you look down the length of the inflorescence from the tip, the flowers face alternately one to the left, one to the right, as you see in the second picture (left). This characteristic is usually passed on to their hybrids and can be very visually appealing. However, with some lines of breeding, for example with a parent that has a naturally short, crowded inflorescence, the flowers of the hybrid can end up too crowded or the flowers left with insufficient space to form double rows the way they do in a straight *Brassia* cross. The secret for the breeder is to understand and predict what to expect.

One factor in which *Brassia* species are a little deficient is colour. The predominant base colour for *Brassia* is green or cream but many species are

highly marked with darker colours like brown or brownish black. There are a few species with brighter colours, but they are few and often a bit different looking. Not exactly *Brassia*-like.



**Brassia aurantiaca**



---- **Brassia andina** -----



**Brassia glumaceoides**

Obviously, these colourful *Brassias* and many colourful 'other Oncidiinae' species and hybrids offer wonderful opportunities to develop much more colourful hybrids while retaining some of the typical *Brassia* charm. This is presently still an area being explored by breeders and some very nice hybrids are already on the market but I foresee some even more spectacular hybrids to come. I just hope any new hybrid genus names don't try to become even more exotic than the new types of orchids they will represent.

To tickle your fancy, I have selected a few of the nicer 'colourful' *Brassia* hybrids I could find plus a few oldies.

The first set are some of the earlier 'Brassidium' hybrids crossing the spiders with the more traditional yellow and brown *Oncidium* species and hybrids. There are still lots of these around and although old, are very good hybrids.



**Brassidium Ashibune**



**Brsdm (was Maclellanara) Pagan Lovesong**



**Brsdm Dorothy Barfield**



**Brsdm Shooting Star**

The next set are of much the same era but of slightly wider generic make up. These were very tough, reliable and very popular and in fact are still sought after today. Even though some are called *Brassidium* today, they incorporate species that were *Odontoglossum* at the time and thus had an earlier, more complex hybrid name.



**Aliceara (Degarmoara) Winter Wonderland**



**Brassidium (Sanderara) Rippon Tor**



**Brassidium Iridescent**

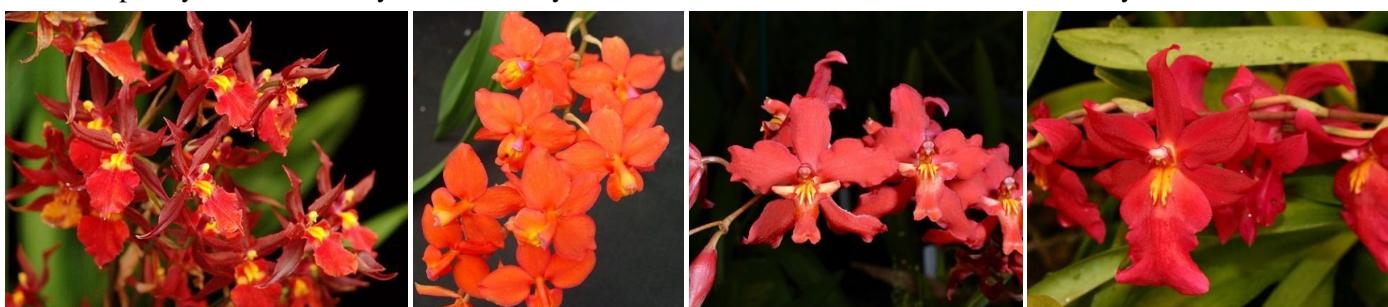
As you can see, the old *Odontoglossum* group substantially filled in the flower form. This group were generally larger rounder flowers than *Oncidiums* and many were more colourful and patterned with splotches of other colours. They were higher elevation plants than most traditional *Oncidiums* but had good medium length inflorescences with branching. Most of the old 'Odonts' became *Oncidiums* but a few were transferred to *Rhynchostele*, but honestly, the latter would have happened anyway because they were different.

The third group focusses more on increasing the old *Odontoglossum* look while also incorporating *Miltonia* to add those brilliant purple colours from *Miltonia moreliana*.



Aliceara Patricia McCully      Aliceara (Goodalara) Pacific Truffle      Aliceara Pacific bright Star      Aliceara Pacific Treasures

The fourth group are those incorporating the brilliantly coloured species that used to be called *Cochlioda noezeliana* but which has been more lately reduced to be yet another *Oncidium* (*O. noezielianum*), despite its rather different flower form and colour to more traditional *Oncidiums*. This species has always been used for its colour by breeders since orchid hybrid breeding began. Way back to the late 19<sup>th</sup> century and early 20<sup>th</sup> century hybrids were created but they were mostly smallish flowers like *noezlianum* itself. Interestingly, some of the early and quite successful hybrids also incorporated the pansy shape orchid we call *Miltoniopsis* today. The species *noezlianum* itself, and hybrids *Onc* (or *Odontioda*) *Bradshawiae*, and others like *Burrageara Living Fire*, *Vuylsteckeara* (now *Oncidiopsis*) *Cambria* and *Vuyl. Edna 'Stamperland'* were such great reds that are now incorporated deeply into the breeding of a large proportion of all *Oncidiinae* hybrids. Nowadays, when you look into the breeding of every good red that appears you see that *noezlianum* represents somewhere between 10 and 20% of its gene pool even though it may be generations back. *Raspberry Stars* is the only red *Brassia* hybrid I have included below but there must surely be more to come.



Brascidoste Raspberry Stars      Onc. noezielianum      Onc Bradshawiae      Vuyl Edna

And finally, the weirdo group that always somehow appeal to me and which show off the *Brassia* parentage best.



Brassoste (Adaglossum) Tarantula      Brassoste Gordon Dillon      Brassoste Billabong

How could these colours and shapes not top appeal to all orchid growers.

### The Toothbrush saga

For the past 20 years, my wife has been complaining about my not putting the cap back on the toothpaste so for this anniversary I decided to change my bad habit to make my wife happy.

For a week I was diligent, always capping the toothpaste after brushing my teeth. I was expecting my wife to at least notice and maybe even thank me, but she never did.

Finally, last night, she turned to me in bed and said... "Why have you stopped brushing your teeth?"

### Age

As you get older 3 things happen. The first is your memory goes, ---- and I can't remember the other two.

## Media – Size Matters by Dr. Courtney Hackney (from Courtney's Orchid Growing Tips)

Reproduced with the kind permission of Dr Hackney and the St Augustine Orchid Society, Florida. Note: Dr. Hackney wrote a monthly orchid culture column in the SAOS newsletter for about 20 years; this was one.)



Size really does matter... at least with respect to orchid growing. The size of the medium in which you place your orchids, the size of the pot, and even the size of a greenhouse all determine some aspect of your cultural practices.

Most novice growers do not consider that the medium magnifies the effective pot size for their orchid. Consider that an orchid mounted on a 1' x 1' flat board has one square foot from which to potentially absorb water, fertilizer, etc. A similar size piece of cork with its very irregular surface not only increases the effective surface area, but also creates small crevices and areas where water can sit or where temperature can vary so that orchid roots have more surface area from which to draw.

Potting media accomplish the same effect to a greater degree. Potting media, usually sold as coarse, medium, and fine, allows a grower to greatly expand the surface area from which an orchid can draw water and nutrients. Far more water and nutrients are held by a fine medium than by coarse medium in the same size pot. There is also correspondingly less air space. Most media that contain mixtures of ingredients, e.g. bark and charcoal, try to use similar size ingredients so that the ratio of material to air is high. While fine bark mixed with coarse bark increases the surface area it also lowers the air space by filling in gaps between coarse bark with fine bark. Avoid mixes that combine different sized products.

The more surface area, the more water and fertilizer that is potentially available to an orchid. Bacteria and fungi quickly cover the surface of an organic medium, enhancing its roughness and ability to hold water. They also enhance the nutrition of an orchid by converting the urea in many fertilizers to forms of nitrogen that orchids can use. In the process, though, they cause the medium surface to decay. The smaller the size of the medium the faster the process, leading to a medium that will not support the growth of orchid roots. In fine media, there is little air space and the bacteria and fungi compete with plant roots for oxygen. When a medium is said to be "sour" that is the time when there is no oxygen present in the medium for extended periods of time; a condition that leads to the death of orchid roots.

Coarse media have small surface to volume ratios and provide less water and nutrients and more oxygen, but last longer, while small media are the opposite. The ultimate small medium is ground peat. Plants, including orchids, grow quickly in media dominated by ground peat, but can also lose their roots when the media "sours". There are a number of commercial media, including ProMix, which utilize peat as a major component. Often called "soiless", these media attempt to compensate by adding Perlite to soften and aerate the medium. While this lengthens the time plants can remain in the medium, it does not change the basic relationship of decay to particle size.

Pot size matters as well. As the pot size increases the same relationship of surface to volume changes with respect to the pot itself. Small pots have large surface area to volume ratios compared to big pots. This is especially important for clay or other porous surface pots as oxygen is exchanged through the clay and water lost to the atmosphere. Plastic pots do not exchange either water or oxygen through the pot, only through the surface medium and any holes in the pot bottom or side. The same type and size medium in clay pots tend to last longer than in plastic pots. Remember that decay is dependent on bacteria and fungi that grow more quickly on wet versus dry surfaces.

One other facet needs to be considered and that is roughness of the medium surface. Brick chunks are relatively smooth compared to the same size lava rock but hold relatively little water and fertilizer relative to lava rock. Nonorganic media do not harbor bacteria and fungi that decompose them and roughen the surface. They will eventually provide living space for bacteria that use excess fertilizer or decaying plant materials. This makes similar sized media of organic versus inorganic act very differently with respect to their role in both plant nutrition and water holding capacity.

The same basic concept applies to growing space as well. Large greenhouses take longer to change humidity and temperature and so are less vulnerable to rapid environmental change. Because they may also contain more plants, pots, media, etc that release water and store heat, large greenhouses also buffer rapid changes. Growing on a small windowsill versus a large greenhouse requires very different techniques and materials.

Finally, size does matter when it comes to flowers. Small orchid plants have limited ability to absorb and store light energy. Large, mature orchids are able to store all the energy required to produce the maximum number and size flowers possible for that individual clone. Until an orchid is mature, it can be difficult to know what the potential for the plant may be.

### Cold Weather Humour

What do you get from sitting on the ice too long ----- Polaroids

What is an Ig? ----- A house made from ice without a loo

What is the difference between an iceberg and a hair brush ----- One crushes boats and the other brushes coats