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

(Established in 1947)
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18th August 2025 - Volume 66 No. 8
Annual Membership : **$15 single, $18 family**

Patrons - Pauline and Trevor Onslow

President : not appointed
Vice President and editor : Jim Brydie
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Committee : Jessie Koh (Membership Secretary / Social Events)
Committee : Stuart Ruthven
Committee : Adrian Zderic
Committee : Jane D'Olier
Committee : Peter D'Olier

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Society email : kuringgaiorchidsociety@gmail.com
facebook : www.facebook.com/p/Ku-Ring-Gai-Orchid-Society

Next Meeting : Mon 18th August 2025

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

COVID and even common old influenza remain a problem. **Please, if you are feeling unwell - do not attend.**

YOU MUST SIGN IN on the ATTENDANCE SHEETS at the **front hall on arrival**. – Insurance requires it. **Please do it.**

Special General Meeting – As you have all been notified by email or in writing by now, we will hold a Special General meeting just prior to our next standard monthly general meeting. The purpose of the special meeting is to enable members to vote on a proposal to appoint one of our newest committee members, Peter D'Olier, to fill the vacant role of President. Please attend and play your role in the administration of your club.

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

There will be no Culture Class this month so that we can hold our Special General Meeting.

Guest Speaker - This month, after the supper break, **Jim Brydie** will present a ***talk about Lycastes***. He has done this presentation for a few clubs in the past but has revised it to focus a little more on how to grow them. Our August meeting is always the day after the St Ives Fair. There may be a lot of rather tired members present but it is always a terrific meeting so don't miss it.

The society sales table will also be open as usual with pots, sticks and fertiliser etc. and hopefully also some spare divisions of members plants. Please respect the ***"Sales Table Open / Sales Table Closed" signs*** and give our sales table managers time to set up and get themselves ready before you start grabbing stock and offering money.

The Supper Break – Supper is not self-serve. Volunteers are assigned to serve the food for hygienic reasons. And remember, we still need volunteers for September and October. Supplies are all organised in advance.

Supper Food – We do ask *all members* to bring in a contribution of edibles for the supper table. *Just a small plate.* If you are a cook, show off your skills with something special but if you are like me, shop bought stuff is perfectly acceptable. Please avoid nuts due to allergies. *And – Please bring your own mug or cup with you.*

August volunteers are – Nancy Yao, Lisa Harris and Helen Wong - thank you ladies.

(NB : Supper volunteers needed for Sept and Oct – if you can help please see Julie or Jim at next meeting or by email)

From last meeting

(Note: a Rhyncattleyanthe = Rhyncholaelia x Cattleya x Guarianthe)

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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)
Jim's news – As you have already been notified, just before we begin next month's general meeting, we will hold a Special General Meeting to propose the appointment of Peter D'Olier, one of our new committee members, to the role of President of the society. Peter and Jane D'Olier joined our committee at our latest committee meeting, and we look forward to the addition of their experience and skills to our management team.

Peter and Jane are very experienced and knowledgeable orchid growers and have been part of the committee of many orchid clubs, including Peter as President on a number of occasions. I recommend Peter to you as our newest President.

We had an excellent roll up at our last meeting, with 50 members and several visitors attending, and a wonderful array of orchids on the bench for Winter, including the 3 lovelies on the front page. Yellow is not a common colour for large flowered Cattleya hybrids but the hybridists are slowly getting there and have produced some really gorgeous products in recent times. And what about the wonderful contrast of those yellows with the deep purple and near black of the Zygopetalum in the middle. The Zygo was labelled maculatum, but I am unsure about many Zygopetalum names these days. Maculatum is now the accepted name for what were previously 3 different species - Z. intermedium, Z mackayi, and Z maculatum but I haven't read the reasoning behind those changes, and I don't trust internet picture names these days, especially in Zygopetalum. Z. maculatum may well be the correct name but various pictures of Z. maculatum I found look quite different to one another.

I hope everyone enjoyed the July meeting. Dora did a great practical explanation of the need for advance preparation on your softcane dendrobiums to get the 'soon to flower' stems to the outside to allow the flowers the space and light they need to develop best.

Jane showed us less travelled orchid growers an amazing view of the orchid rich country of Panama and explained how the covid era created absolute havoc with their economy, their petrol supplies, and the distribution of goods. If we thought we had it bad here during Covid, there were others who copped it worse.

There are so many fantastic places to see around the orchid world. If we can't go ourselves then at least we can get an insight from great travellers like Jane and Peter and a look into the orchids and people of those places as well. And what about those great pics of a fat native bee pollinating an orchid, and the story of their entomologist guide chasing the bee across the fields with a net to get the evidence of bug and pollen for his partner. Talk about dedication.

On another matter, I have little apology to make concerning the article I provided last month about TDS levels for fertiliser solutions. One reader contacted me afterward and pointed out that I didn't mention the factor of the starting point TDS level of whatever water source you are using. I should have mentioned it, but I didn't because I was thinking along a different line and wanted to make a point about the comparative TDS readings for different fertilisers. Anyway, I don't want to get down to tin tacks on that subject here. If you have an interest in TDS measures for fertiliser application, please be sure to read the more detailed explanation later in this newsletter.

And finally, we are now on the brink of the St Ives Fair. Please make sure you know all about the processes, forms, and timetables. It is a complex task we all take on as a team. Sometimes I think it is over complicated but there are valid reasons for every little step we ask of you. Please help us by playing along with all the paper and processes and getting your plants to us on time for our display. There is more detail on this in the news section below.

The Fair is a huge factor in keeping our club going.

Other Society News

1. New members – no new members signed this month but we have quite a number join us this year and we are still getting visitors.

Make sure you say hello to attendees at meetings, especially those you don't recognise. It is very hard when you first start and you don't know what to ask or who to ask. I plea to older members to help everyone feel welcome. And please all wear your name badges at meetings. Having names in front of you on the badges is a big help in communication.

Coming events (from OSNSW website)

15-17th August – (9-4 Fri + Sat, 9-3 Sun) St Ives Orchid Fair – St Ives Showground, Mona Vale Rd.
21-23 August – Berowra and District OS, Westfield Hornsby (9-9 Thur + Fri, 9-3 Sat)
21-24 August – Western Subs OS, 9-6 daily, Ashfield Mall, 260 Liverpool Rd Ashfield,
4-6 Sept – Cumberland OC, shopping hours, Winston Hills Shopping Centre, Winston Hills

4-6 Sept – Fivedock RSL OS, Shopping hours, Leichhardt Market Place (near Target) Flood St Leichhardt
11-13 Sept – North Shore OS, Shopping hours, St Ives Shopping Centre, St Ives
11-13 Sept – Eastwood and Dist OC, shopping hrs Thurs/Fri, 9-3 Sat, Eastwood Shopping Centre, Rowe St
11 Oct – Species OS, 9.30-3pm, annual show and public orchid auction
17-19 Oct – Orchids Central orchid fair, Sat 9.30, Sun 9.30-2pm, Club Condell Park, 18 Eldridge St

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The St Ives Orchid Fair – 15 - 17 Aug - St Ives Showground - Mona Vale Rd, St Ives

Members - We are one of the clubs that run this fair and we also put on one of the displays.

St Ives Fair 2025 combined Rosters. The following table is merely an alphabetic ordered table to help remind members of the managing clubs of the various shifts each member has offered.

If you have volunteered to help set up the Vendors Hall on Thursday, or to help pack up same **after 3pm** on Sunday, please just go to the relevant hall. However, once the show is open, do the following :-

** **All helpers MUST first go to the entry ticket table at the front door of the Vendors Hall.**

You must check in with Jenny Richardson and be assigned separately for each shift you have offered.

** ***Assigned roles may differ between each shift. You will be given your pass at check in.***

Please note : your requested roles or physical limitations have been considered by roster mangers, but flexibility is requested.

Thursday 14th August (FOR Vendors Hall set up ONLY)		Friday 15th August (open to the lublic)	
9.00am to 12.30 pm	12.30pm to 4.00pm	9.00am to 12.30 pm	12.30pm to 4.00pm
	could any of the following members please	Paul and Loretta Au	Mark Ashbury
David Hemmings	also help in the morning as the tables need	Gloria Cushway	Judith Barry
Barry Moore	to be set up by lunchtime.	Allan Cushway	Clover Bradley
Ted Shaw	Anthony Mobbs, Pearl Tong,	Lynn Dabbs	Susie Butler
Chris Wilson	Lisa Harris (till 3.30pm)	Lisa Harris	Ann Evans
	Adrian Zderic, Annie Tao,	Jon Hestelow	Trish Hamilton
	Nancy Yao	Katherine Hsiao	Sophie Kirk
		Ela Kielich	Pam Lyons
		Sophia Kirk	Trevor Miller
	For the late afternoon we only need security	Jessie Koh	Anthony Mobbs
		Jeanne Lam	Tinka Riddell
		Jame Litten	Stuart Ruthven
		Pam Lyne	Bill Saunderson
PLEASE NOTE : -	*Jenny Richardson*	Anthony Mobbs	Robin Stewart
	Lina Huang	Christine Rethers	Angie Sulfaro
	Are additions to every shift	Graeme Russell	Ian Tanner
		Bill Saunderson	Pearl Tong
		Herb Schoch	Seb Torressi
		Angie Sulfaro	Erica Veltmeyer
		Annie Tao	Bryanna Whitaker
		Erica Veltmeyer	Nancy Yao
		Chris Wilson	
		Helen Wong	

Saturday 16th August		Sunday 17th August		Sun. 18th August
9.00am to 12.30 pm	12.30pm to 4.00pm	9.00am to 12.30 pm	12.30pm to 3.00pm	3.00pm to close
Janine Angove	Clover Bradley	Janine Angove	Judith Barry	Paul Au
George Hardy	Lesley Bromley	Clover Bradley	Lynn Dabbs	David Hemmings
David Hemmings	Jan Duggin	John Hocking	Julie Iyengar	Julie Iyengar
Jon Hestelow	Geoff Duggin	Jean Hocking	Sophia Kirk	Rohit Iyengar
Sophia Kirk	Sophia Kirk	Jon Hestelow	Jessie Koh	Anthony Mobbs
Jess Koh	Ros Mathews	Sophia Kirk	Jeanne Lam	Barry Moore
Dora Law	Anthony Mobbs	Dora Law	Dora Law	Chris Wilson
Geoff LeMarne	Stuart Ruthven	Christine Rethers	Nancy Macri	
Trevor Miller	Li Shan	Graeme Russell	Tinka Riddell	
Christine Rethers	Robin Stewart	Angie Sulfaro	Herb Schoch	
Graeme Russell	Angie Sulfaro	Annie Tao	Li Shan	
Herb Schoch	Ian Tanner	Susan Ward	Angie Sulfaro	
Robin Stewart	Erica Veltmeyer	Helen Wong	Pearl Tong	
Angie Sulfaro	Brenda Walker		Erica Veltmeyer	
Bob Taffel	Josh Zandstra			
Erica Veltmeyer	Olivia Zandstra			
Helen Wong				
Josh Zandstra				
Olivia Zandstra				
		(Apologies for any misspelling)		

PLEASE NOTE - The Tables above are NOT THOSE used at the show to manage and assign volunteers

Show Management Rosters – The Fair Management committee has assembled a combined roster from all the shifts volunteered by members of each of the 4 partner societies. **AND *You can be assured*** that the roster managers have recorded each volunteer's requested specific roles and/or limitations on physical capabilities etc. They will do their very best to try to accommodate. However, we ask for all volunteers' understanding and flexibility when you check in. We cannot always meet all desires and plans don't always go as planned.

Fair Managers will use their annotated rosters for assigning volunteers to specific roles day by day as volunteers check in. Being human, sometimes things just don't go to plan and plans change moment by moment. Some turn up late or early, some fail to show up, or make special last minute special requests. As a result - we don't publish preplanned assignments in advance. Please have patience with the managers, they will do their best for you.

The Ku-Ring-gai Orchid Society Display at St Ives
This is your show – We need your Support.

*** ***The following is all set out in detail in the SIOF KOS Member Information Pack, but to summarise.***

Set up day is Thursday. ***We need both flowers and foliage from members AND they need to be at the display hall by 9am Thursday 14th Aug.*** (to enable the team to assess the available material and to begin organising the display)

Plants for our display **-** We know that many of our members also belong to other societies. Many traditionally support the 'other' society in their displays, **but we ask even those members to find a few plants for Ku-Ring-Gai.**

Providing orchids and foliage for our display is entirely voluntary, but please members, don't leave it all to others, we especially need your orchids.

Getting them to the show **-** If you can't get your plants to the show, we may have some limited capacity to transport them for you but we would greatly appreciate it if you can get them there yourself.

If you do need help to get your plants there, please phone Dennys on 043 88 77 689, to see what can be done.

(A) Plant preparation and condition – Plants should be clean, in good condition, and free of pests and diseases. Please attend to any clean up, staking and preparation in the week or more leading up to the show.

(B) Orchid flowers will be judged for prizes – All orchid flowers in the displays are also entered into the show classes set out in the show schedule distributed to members. Because they are separately judged in their classes, we need members supplying plants to fill in a nomination form (already supplied to members) so that we know who owns each orchid and what the orchid's name is. Remember, you may be putting your orchids up to win some prize money for yourself. Try to fill in the form as best you can with at least plant names and your name.

We need your Nomination Form list submitted to Dennys Angove by email at dennys.angove@gmail.com by 6pm Tues 12th Aug to enable us to start making the large decorative plant name cards used in the display. When the public admires the displays, the big cards help viewers identify the plants they admire.

(C) ***Marking your plant pots - You also need to mark each pot clearly with your name or initials*** so that the plant comes back to you. *Most of us use small white removable paper sticky labels available from office supply stores*. However, *a piece of common paper masking tape* is also good. ***Put your sticker on the back of the pot, away from where the flowers face***, and write your name or initials boldly and clearly. The display pull down process on Sunday afternoon can be a mad house. Labelled pots help us quickly sort which plants belong to whom.

Again, all the information you need is in our SIOF (St Ives Orchid Fair) KOS Member Information Pack

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Pleurothallis pectinata

Did you notice this new 20 flowered curiosity from the D'Oliers last month? I noticed because I knew it, and I tried and failed once. But what an interesting orchid.

Description info Info from Marni Turkel tells us : "Found in Brazil in the states of Rio de Janeiro, São Paulo, Paraná, and Santa Catarina at elevations around 1200 ft elevation. Published as a Pleurothallis but later changed to Acianthera. The leaves are pendant and "boat shaped" *(JB: sort of an umbrella for the flowers).* The inflorescence comes from the base of the leaf and is shaded by the overhang of the leaf. Leaves usually start upright and as it grows it arches and becomes pendant with the weight of the leaf. Sometimes it will emerge from the side of the container. Best grown in a basket where the leaves can hang free. The flowers can range from yellow to maroon and blends of the two."

Best of the Evening Hybrid – Cymbidium Dream Blaze 'Dural' - grown by ***Geoff LeMarne***

I must say that hybrid Cymbids have sure come a long way in the past 20 years. There were some really lovely ones there last meeting, but especially two Geoff benched. Big round, heavy flowers, perfectly arranged on nice length spike. Real head kickers.

The darker one below is Regal Fury 'Venus' that I wrote up in the August bulletin last year.

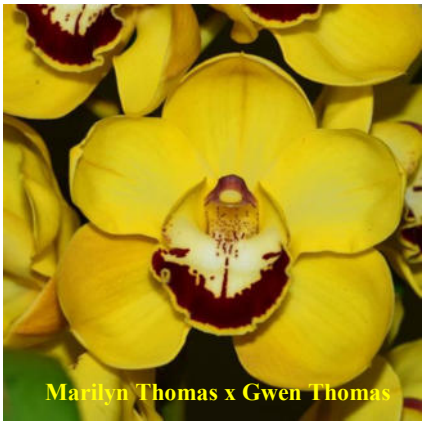
Personally, I am not an afficionado of Cymbidiums. Not because I don't admire them, it's just that I find them big and bulky and difficult to transport and once I learned what the best growers do to be the best, I began to see miniature orchids in better light – I must be lazy, I guess.

Anyway, the originator and registrant for the gorgeous pink we are dealing with here was Keith Wallace, but this is part of a long line of breeding from the partnership of Keith and Gordon Giles and I believe that Geoff himself has also progressed some of their lines.

The orchidwiz originator and registrations lists over the past 25 years show a mix of some in Keith's name and some in Gordon's but earlier than that they may have been under the nursery name 'Wondabah'. Since Covid I haven't been in touch with Gordon but he has long been a huge force in the creation of high-class Cymbids.

For what it's worth, Dream Blaze was registered in 2017 as the cross between Lunar Blaze and Flaming Vulcan. You might imagine from the latter name that most were big full purple/reds and that would be correct although there were a few pinks as well. Lunar Blaze was very similar. The best had fantastic flower shape but the colours were sometimes a little dirty and not quite clean pink or clean purple. A bit of brown in there somewhere too. I imagine Dream blaze was aimed at retaining the flower shape of the best, with the cleaner colour of the other, and at least in Dream Blaze 'Dural' they got just that. I would expect that there would be some darker coloured cultivars as well but I don't know the Cymbids myself, so I am only guessing.

And here are a few of the other Cymbids from July (not all Geoff's). Anyone looking for culture info on Cymbids should check Geoff's notes in our August 2024 bulletin.



Congratulations Geoff. You are a master at these Cymbidiums, and you produce really beautiful orchids.

Ceratocentron fesselii – benched by Jane and Peter D'Olier

Well, here's one you don't see every day. This delightful little miniature is related to the Aerides group and the Vandas. It comes from the Philippines and has only been found on the island of Luzon in the mountains at around 1000 m elevation. It grows as an epiphyte, mainly on tree trunks.

The first picture is Jane's, but I included the second one from Orchidwiz to give you a size context. The flowers are 1 to 2 cm across and the plant can have up to 4 flowers on a stem.

I don't know how big it can get but from the pictures I have seen it's only a few inches. What a cutie!

<u>Paph insigne</u> - Best of Evening Species (left by *L&P Au*)**, *and Best of Evening Novice*** *(right by Stuart Ruthven)*

This has to be the hardiest of all the Paphiopedilum slipper orchids. As you can see from even just these two samples, there is variation between individuals within the species.

It is unusual to combine two Best of the Evenings under one description, but in this case I decided it was the only way to do it. Back in 2013 I wrote up a nice summary of the history and habitat for the species. So rather than reinvent the story with variations, here it is all again.

Paphiopedilum insigne (updated) written by **Jim Brydie**

At past meetings there were some wonderful specimens of this species and many very nice smaller plants as well. Few achieve a 'Best of the Evening' as the species did this month, but I am sure some members just don't bring in the lovely insignes anymore.

This is a wonderfully rewarding orchid. It doesn't require stringent conditions to grow it well, and with a bit of understanding and a little care, any member can grow it on to a full pot with multiple flowers. I thought it might be timely to give you all a bit of information I have trolled from the internet.

First off, the name. Paphiopedilum is derived from Paphio, another name for Venus - the Roman goddess of love and beauty, and pedilon - anglicised to pedilum, which means sandal or slipper. Thus, the common name 'Venus Slipper' or more commonly just 'Slipper'. The species name insigne means noble, or admirable and distinguished.

P. insigne was discovered by Dr Nathaniel Wallich in the Sylhet District of Northeast India (now Bangladesh), during the second decade of the 18th. century. It was sent by him to England about 1819 - 20, flowering for the first time in Europe in 1820 in the Liverpool Botanical Garden. It was only the second Paphiopedilum to flower in Europe, the first being Paph venustum, also discovered by Wallich and flowered in England a year earlier in 1819. Insigne was also found later in the Khasia hills just a little further north.

Wallich's history is quite interesting. Born in Copenhagen in 1785, he undertook a medical degree in his native city. He graduated MD in 1806 but also studied botany at the university alongside and was appointed surgeon to the Danish factory at Serampore, near Calcutta, in 1807. However, the settlement was annexed by the East India Company as a result of the Danish alliance with Napoleonic France in 1808 and Wallich became a prisoner of war. William Roxburgh, the Superintendent of the Royal Botanic Garden, Calcutta, requested that Wallich be allowed to enter the company's service on the merit of his scholarship and in March 1809, he began employment as Roxburgh's assistant. Wallich became Superintendent of the garden in 1815, leaving in 1816 and then returning in 1817. Wallich served in this post until 1846.

While at the botanic garden, Wallich made a distinct name for himself through his enthusiasm for collecting and describing new plants, having them drawn and painted, and distributing specimens to the chief gardens and herbaria in Europe and North America. He was responsible for introducing many and varied genera into cultivation. Perhaps the most significant of these was the tea plant Camellia sinensis.

Getting back to insigne however, its natural habitat is limited to NE India/Bangladesh/Meghalaya area, at about 1000-1500m above sea level. The region is fully exposed to the southerly monsoonal rains, has wet and heavy rainfall in the summer, and dry and humid winters with heavy fog. The plants grow in the light shade of shrubby vegetation, often occurring on dolomitic limestone outcrops over streams and rivers,

or near waterfalls. Roots are normally embedded in soil and moss. In some pictures I have seen, it was growing among tall grasses on a steep hillside slope (see left). It appeared it would have been in full sun if not for the shade of the grasses.

Unfortunately, as is the case with many orchids, once insigne was first described as a new species way back in 1820, much collecting was done in the wild and hundreds of thousands were shipped to Europe to satisfy the insatiable demand for wild orchids. Whole areas were denuded and the rape of the wild continued until even relatively modern times. At one time a nursery in Melbourne offered thousands of imported insigne plants cultivated for bulk sale. Today, the only remaining wild population is in a small area in Meghalaya.

Pollination. All Paph flowers are insect trap pollinators. Basically, the insect slips into the pouch and gets pollen glued to its back on the way out. If it already had pollen attached from a previous flower, the pollen gets scraped off onto the female part of the flower before getting a fresh pollen load glued on for the next. However, until recently, I had never read a description of which insect, or why it visits in the first place.

The following comes from an article by Simon Retallick in the magazine of the friends of Treborth Botanic Gardens in the UK (on the west coast opposite Dublin Ireland). Simon is the orchid specialist at the gardens.

"One day I was babysitting a neighbour's cat while they were on a two-week visit to Australia. Sasha (the lonely cat) was an affectionate thing, and probably had an identity crisis, seeking human company rather than her own species. Consequently, I felt I couldn't just feed her and put her out (well you can't, can you!). I had to sit and watch TV with her for a bit each day! Amazingly, on one occasion I turned on to a nature programme about orchids! The photography was absolutely superb, and I wish I had caught the name of production. One thing I will never forget about it, however, was its filming of hoverflies being attentive to the flowers of Paphiopedilum insigne! The narrator described the fly's attention that was centred upon a small green protrusion in the middle of the flower just above the slipper-shaped lip."

"As many would know, hoverfly larvae eat aphids, and as such, are an all-round excellent insect to encourage in the garden. It would appear that in the Hills of Assam and Nepal, these hoverflies are duped into thinking the little green lump on the flower is an aphid! When the fly gets nearer to the false aphid (presumably to lay eggs) its wings hit the sides of the slipper, and the poor creature falls in! Something like a pitcher plant mechanism. Unlike our friend the pitcher plant, however, there is a way out for our friendly fly. It is up the hairs on the back of the lip, and out through one of the two narrow gaps at the top. As it does so….you've guessed it already…..it is squeezed past the fertile bits, where it picks up pollinia on its back, or head. The pollinia have a very sticky stipe and remain attached until the fly repeats the process in another flower. This time, however, if the flower is receptive, the tacky stigmatic surface rips the pollinia from the fly and fertilisation is achieved. Amazing to watch!"

"To complete its lifecycle, however, the hoverfly will need to meet real aphids sometimes, ….. unlike me… and, come to think of it…..Sasha too! We have always preferred never to see real aphids, …….especially on orchids!"

How about that! Aphids might actually be useful in some way.

Within any species (especially orchids) individuals vary somewhat from one to another, and this is certainly true in insigne. From a distance most look much the same but if you look closely, they vary in shape, size, the spotting on the dorsal, and even in general colour tone. In its early history, there were at least 40 named cultivars or varieties although it could be argued that many of these were hardly distinctive variations from the type form. There are a few cultivars, perhaps tetraploids, that are quite substantially taller and bigger. Eg the cultivar "Harefield Hall" and the cultivar 'Maulei'. These both have flower stems about 30% taller, and flowers perhaps 30% larger. Unfortunately, these days we see all sorts of supposed "Harefield Hall" plants benched at meetings.

Sometimes there will be several impossibly different plants benched side by side, and whether any of them are the real thing is debatable. It seems that every slightly larger cultivar gets the "HH" label so take care if you try to buy one and buy from a trusted source.

There are also other cultivars that are also quite different without being larger. The first of the 2 at the right above, is a rather darker coloured form, and the other is a weird mutation with 3 lips that looks like someone playing peek-a-boo.

The most distinctive types, however, would have to be the attractive green and white 'albino' forms. The first to be documented was the famous 'variety' Sanderae, or more correctly 'forma' Sanderae. Although this is the familiar green and white we admire, it also has a distinctive vertical stripe of brown dots down the centre of the dorsal sepal, a remnant of the brown dorsal spotting from the normal form. This suggests that this is perhaps not a true albino because it still has some genes for expressing the red anthocyanin pigments that help make brown colours. The true albino forms, without the dots, are called 'forma Sanderiana'. Please note though, that forma Sanderae and forma Sanderiana are definitions of two different and *particular kinds* of insigne, and are not definitions of one distinctive cultivar. As you can see from the pictures below, there are many different cultivars of each of the two 'forma' - forma Sanderae and forma Sanderiana. For example, I have a cultivar of forma Sanderiana called "Royalty", but for some reason, most individuals of Sanderae seem to have no cultivar name.

3 cultivars of Sanderae -‖- **2 cultivars of Sanderiana**

Insigne is an ideal subject for our Sydney climate. It doesn't seem to mind our fairly cold winters, and it tolerates a wider range of shade conditions than any other Paph I know. It can be grown in quite shady conditions, but it also seems to be ok with quite bright conditions, even full sun in the early part of the day when it isn't too hot. The broken shade we get under tree cover in our backyards seems to suit it quite well. It is also very adaptable to a wide range of potting materials and doesn't need repotting nearly as often as other types. Cynthia and I use a mix of medium bark and Cymbidium mix that seems quite successful in our conditions but that doesn't mean you should rush out and change over your mix. The main thing, as with any orchid, is a reasonable compromise between water retention and sufficient air in the mix. Sometimes mixes need to be adjusted to be compatible with your particular water practices.

Paph insigne flowers prolifically when growing well and is regularly grown successfully as a pot plant by ordinary gardeners. Not that I mean any disrespect to gardeners. They are often more astute 'plant people' than those that specialise in orchids. I think Garrie Bromley put it very well at a meeting one night when talking about growing Cattleyas and he said "the best growers are those that regularly talk to their plants". These are the growers who see what the plants are telling them. If a plant needs attention, you can usually see it if you look.

A nicely grown insigne with a few flowers is a stately sight but a big pot full with 20 or more flowers makes people draw in their breath. Don't break up your Paph insigne pots if you don't need to. The bigger the clump the stronger the plant, and a specimen display is what you should be aiming for, even if it does take a number of years to get it going.

Key References

1. article by Reg Shooter in the orchid club of SA magazine Oct 2012 - *Paphiopedilum insigne*
2. article by Simon Retallick in the magazine of the Friends of Treborth Botanic Gardens
3. article "Wallich and Indian Natural History" – Kew Royal Botanic Gardens website

Modern alternate dictionary definitions

Flabbergasted (adj.), - appalled over how much weight you have gained

Esplanade (v.), - an attempt an explanation while drunk.

Balderdash (n.), - a rapidly receding hairline.

Frisbeetarianism (n.), - religious belief that when you die, your soul goes up on the roof and gets stuck there.

Coffee (n.), - legal term describing a person who is coughed upon.

Abdicate (v.), - to give up all hope of ever having a flat stomach.

Flatulence (n.) - the emergency vehicle that picks you up after you are run over by a steamroller.

Some more detail on TDS measures - Jim Brydie

Following last month's article on TDS measures and calculating how much fertiliser you should apply to your orchids, I was contacted by one overseas reader who pointed out that I had neglected to mention whatever TDS level existed in your water source before you add the fertiliser and measure the TDS. The reader was correct and water supply TDS can be a significant factor. In addition, the pH of the water supply is also a factor but it should be noted that the pH and TDS relationship is not linear and is dependent upon the type of substances dissolved in the water.

In Sydney we are very lucky to have a municipal water supply of excellent standards. Metropolitan water supplies across Sydney can come for any of 3 or 4 sources and filtration plants but is usually the same for specific geographic areas. The Water Board publishes quarterly water quality reports and will supply you the appropriate report for your area. From the Annual 2024 report for my area, I can tell you that while our water 'content' does vary from time to time, the annual 2024 figures show a pH averaging around 7.3 (lowest was 6.8, highest 8.7 but those extreme numbers were a surprise). The annual average TDS was 72-96, but I saw a measure of 155 in an earlier annual report (2022/3?)

So, these numbers do go up and down, but in my view are more likely affected by rainfall patterns that would affect reservoir and treatment plant measures.

So What effect does Water Quality have?

The most obvious effect when measuring the TDS of fertiliser added to water is that you would have to deduct the native TDS level of the water to calculate the effective fertiliser reading from your TDS meter reading. However, this does not really account for the concentration of the various kinds of different ion species already present in the water, so TDS is always just a method of approximation.

For example, at the most simplistic level, if it was your aim to apply fertiliser at a rate of 500 ppm, and the water started out at 100 ppm, you would aim to see a TDS meter reading of 600 after you added the fertiliser.

BUT, as I said, that is a rather simplistic way to look at things. It would probably be close enough for us lucky folk using Sydney's metropolitan water, but if you happened to come from a place with lesser quality water, like my overseas reader where I was told the water had a TDS of 600. One has to ask, what is the mineral content creating that 600 ppm water.

I am also aware that many commercial and semi-commercial operations just outside our Sydney Water area use dam water or pumped tank water to irrigate their orchids and in cases like those the calculations become much more complex. Algae control, pH, and the nature of the water content become serious factors.

What is it that makes the measures in TDS – this is difficult to explain without getting a little complicated

The acronym TDS stands for "Total Dissolved Solids". Note the word ***dissolved***.

"Dissolved solids" refers to any minerals, salts, metals, cations or anions dissolved in water. It includes anything present in water other than the pure water (H_20) molecule and other than any suspended solids. Suspended solids are particles or substances that are neither dissolved nor settled in the water. Suspended solids will usually settle to the bottom if left to stand long enough but may appear to be dissolved in the water when stirred or agitated. They are solids but they are NOT DISSOLVED.

For example, Table Salt is the crystalline form of the chemical compound sodium chloride. When you put it in water it dissolves, and the sodium ions and the chlorine ions separate and become free in the water. These will be measured by a TDS meter. Some chemical compounds, and some elements, do not dissolve in water, and would not be measured by a TDS meter.

"Electrical conductivity of a solution" - What your TDS meter is measuring is the ***Electrical conductivity*** which enables the solution to serve as a channel or medium for electricity. Salty water conducts electricity more readily than pure water. Therefore, electrical conductivity is routinely used to measure salinity. The types of ions causing the salinity are usually nitrates, chlorides, sulphates, carbonates, ammonium, sodium, magnesium, calcium and potassium.

Unfortunately, not all salts conduct an electric current equally and neither type of meter (EC or TDS) has the ability to distinguish between different types of ionic salts. Ammonium sulphate for example, conducts twice as much electricity as calcium nitrate, and more than three times that of magnesium sulphate (Resh, 1989). Also, nitrate ions do not produce as close a relationship with electroconductivity as potassium ions (Alt, D. 1980). Consequently, the higher the nitrogen to potassium in a nutrient solution, the lower the relative electroconductivity values. Although this means that the measurements you take with the meter should not be taken literally, they are still invaluable for comparing the relative concentrations of fertilizers and for accurately communicating usage rates of EC or TDS with other growers.

EC and TDS meters provide only an estimate of the conductivity/salinity of a solution and its fertiliser content.

Chemical interactions and pH - Fertilisers are a mixture of all sorts of chemical compounds and in some case, such as physical fertiliser products like Dynamic Lifter, contain physical solid materials that will not dissolve in water.

Commercially manufactured soluble fertilisers are designed to dissolve in water and for the chemicals that dissolve in

the water to not readily chemically interact with one another.

However, if your water supply contains high levels of other soluble chemicals, and in some areas where the water source is subterranean or passes through limestone, this might be the case, the fertiliser chemicals and the water chemicals MAY interact. If this is the case you will need a complex analysis of what may happen, beyond what I can offer here.

If you have a water supply with a high TDS with a pH above or below say 6.5 to 7.5, specific expert advice is required.

Getting Back to the situation for Sydney Growers

In Sydney, with a pH of 7.3 and a TDS of 100, and where much of the TDS of 100 would be from non-fertiliser type chemicals, there will be little chemical interaction so all you need to know is your meter will read 100 or so more than you thought it would.

Why did I leave all this out previously? About 20 years ago our society purchased a pH meter and a TDS meter for the use of members. I managed the loan out of those products to members. Without going back to my records, I believe about 10 members took out the TDS meter and perhaps 15 used the pH meter to check their systems, but most only ever borrowed them once.

the "Hozon" Siphon applicator ►

Our old TDS meter had to be calibrated before each use with a calibration solution, so perhaps more technologically up-to-date tools are easier to use. The tools have sat unused in my cupboard for many years but I am sure would still function if anyone wants a play.

What I found previously was that members who used the TDS meter used it to check how much of which fertiliser they would adopt as their standard application. They wanted to know what the TDS reading would be for what they had already been doing all along, and whether they might want to increase or reduce it slightly as their standard. There was never any intent to measure their fertiliser water every time they applied fertiliser. If for example, they had been applying 1 gram of Peter's Cal Mag fertiliser per litre of water but applying it via a venturi siphon device like the "Hozon Siphon Mixer" which mixes a concentrated fertiliser solution with tap water at a rate of 16:1, the grower wanted to know what the resulting applied fertiliser rate would be in parts per million. Once they had figured out what practical application rates were and made adjustments to the strength of their fertiliser concentration solution, they had no further use for the meter.

There is a strong message there. The growers seek to establish a repeatable system they can use every time. They might vary it a little occasionally to accommodate the effect of seasonal changes but once they know the rates for their standard application, the variations are simply an increase or decrease as a percentage of their standard rate or the application of any supplemental fertiliser to be applied for different orchids like Cymbidiums, or Softcane dendrobiums that need to grow fast for a short period.

Fertiliser rates and measures are not an exact science. If you aim at supplying 500 ppm every application, it doesn't matter much if you only give 400 or even 600 occasionally. Think longer term. It is plant food you are supplying. They won't die if you miss a feed now and then but if you miss a whole year of feeding there will be measurable changes in results. Feed regularly and don't overdo it for strength.

And Remember – Each fertiliser make up is different.

From the table I published last month, you can see that physical volume measures of fertilisers can't be equated. We don't usually drag out the kitchen scales to measure fertiliser, we measure by volume with measuring spoons or cups.

Make sure you know the relevant ways to measure whatever fertiliser you are using. That is where a TDS meter can be a valuable tool. Make some test runs and measure the TDS of what you have been doing and with which fertilisers. Calculate the rates you want to use and then stick to that except where you deliberately use a measured bit more or a measured bit less.

The tables I supplied last month can be useful for those purposes as well and also give comparative TDS rates for certain volumes. However, commercial fertilisers do change their formulations from time to time so periodic rechecking is advised.

Which Fertiliser? - Many years ago I saved and republished a profoundly common-sense assessment of fertilisers from the First Rays website in the USA. I still believe it applies perfectly today.

From the First Rays orchid website in the USA.

"People spend a lot of time worrying about what fertilizer to use on their orchids, and manufacturers make so many different blends, that it's difficult to know which is "the right one". Generally, just about any fertilizer may be used on your orchids, within certain guidelines. To make it really simple, select a formula that does not contain excess nitrogen, but does contain a wide array of minor and trace elements. There are some that feel that those minor ingredients are the most important components of the formula.

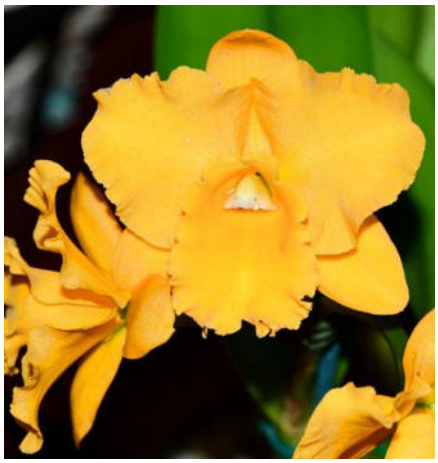
Why do we want to avoid high-nitrogen fertilizers (even though they're often specifically called "orchid food")? To answer that, let's look at some history: When orchid collecting began, it was noted that the majority grew on the bark of trees. Naturally, that led to the idea of growing orchids using bark as a potting medium, and that was the standard for many, many years. Unfortunately, wet crumbled bark in a pot will slowly decompose, courtesy of various microorganisms. The little critters also consume a large amount of nitrogen as they work, and would end up leaving the plants nitrogen-deficient, so it seemed necessary to compensate for that in the formula. Unfortunately, more recent research has shown that feeding your plants too much nitrogen can lead to the delaying or outright stopping of blooming, which defeats the goal of the orchid grower.

That leads us to the question about the use of "bloom-booster" formulas. Those are the blends with augmented levels of phosphorus in the formulation. They are commonly used for a number of weeks prior to the start of inflorescence growth, as a way to "build up" the plant for blooming. Are they necessary? My own experience doesn't give me an answer, and when asking that of others, you'll get the full spectrum of responses.

More recent studies at Michigan State University suggest that blooming is less an issue of boosting phosphorus than that of not overdosing nitrogen, so maybe the effectiveness of the bloom booster formulas is related to the ratios of the two, and not so much the phosphorus level itself. A plant will only use as much phosphorus as it needs - which isn't all that much - and exposing it to more does nothing.

A further comment: sometimes when you hear glowing comments about that "miracle" product, the reporter doesn't realize that a shortfall was remedied. For example, when the "MSU" fertilizer formulas hit the orchid-growing scene, (JB note : =fertilisers designed by Michigan State University), many new users were simply "astounded" at how much better their plants grew and bloomed. In fact, that had little to do with the fertilizer, but due to the novelty factor, they suddenly began to pay more attention to their plants and fed them on a regular basis, rather than the "hit or miss" method they had previously been providing. In other words, they were giving their plants what they needed to live up to their genetic potential."

Some other lovelies from June



Catt Dal's Moon 'Cynthia'
Garrie and Lesley

Catt Dal's Good One 'Cynthia'
Garrie and Lesley

Catt Seagulls Mini-Catt Heaven
Trevor and Pauline

EpiCatt Rene Marques 'FlameThrower'
Loretta and Paul

Coelogyne Linda Buckley
Loretta and Paul

Masdevallia Earl Bishop 'Vermillion'
Loretta and Paul

Paph Invincible
Annie

Paph Gold Dollar
Jim

Paph unknown (Leeanum? or Krishna?)
Annie

Men are masters of improvisation

the Bench Drill cake mixer

cooking a late night sausage

inventing the mixer tap

The stand-in wiper blade

… but of course some ideas don't work out so well