



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

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Next Meeting : Mon 18th April 2022

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

Covid Restrictions – Advance registration is no longer 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 it is uncomfortable but please have a mask with you and comply.

As for last month, we will have a **full orchid benching (no limit on benching numbers)**, the **sales table** will be operating for small quantities of pots etc, **plus sales of members spare plants**. Also, there will be a **normal monthly raffle**, and the **library** will be operating. There can be no culture class while the 1.5 m distancing applies.

The hall is open from 6.30pm. Please try and get there early to help set up tables and chairs. No benching before 7pm no matter what. PLEASE give the set up team time to get tables, benching class dividers, and class cards in place. When benching, if you aren't sure where your orchid should go, ask for help from one of the committee at the front door check in or at the front table and they will guide you to an experienced member who can help.

The meeting commences at 8pm and starts with the usual meeting formalities 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 April meeting. You will still need to bring your own **sugar/mugs/cups and stirrers**. Food also remains “bring your own”, and no sharing please.

After the supper break – There will be a talk by Joel Cohen titled “Australian native terrestrial Orchids : Diversities and Dilemmas”. Joel is a colleague of our new Committee member James Clugston, both working at the Sydney Royal Botanic Gardens. Joel is a Biodiversity Sampling Technical Officer. I am told native terrestrial orchids are a big interest for him so this should be something really special. Don't miss it.

Best of the Evening Orchids from last meeting – what magnificence (more on each inside)



Novice – One Wildcat #13



Dendrobium Topaz Dream



Miltonia moreliana 'Big Ben'

As usual, our judges found 3 beauties for best of the evening last month, and our photographer Jane D'Olier captured them exquisitely. There is a bit more information on each of these lovely orchids further inside this month's bulletin.

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

President Dennys' Desk – At our March meeting we had 43 people arrive under our new non-registration arrangement. There is still a need to keep to our COVID plan and I thank all those members who kept their masks on just to give that extra effort to keep the risk low. We will let you know if there are new rules before the next meeting but if there is still a need to pre-register, we need you to be conscientious in doing so just to make it easier for all. It was good to see that most members wore their names badges. It does help those who are new to the society and enables friendly communication at our meetings.

Rules are necessary to reduce the personal COVID risk of members to the lowest level possible.

Interesting Developments – At our March committee meeting, our new committee member, James Clugston, suggested that he could explore opportunities for members to connect with the Royal Botanic Gardens (RBG) in a positively, botanic way. The committee discussed James' ideas enthusiastically. Consequently, James started the discussion process with his colleagues at the RBG. I am pleased to report that some positive developments have occurred. I will give more details at our April meeting.

Orchids in the News – Chris Wilson found this [interesting article](#) on the rare leafless tongue orchid (*Cryptostylis hunteriana*) which stopped a development near St Georges Basin. It seems this orchid has also stopped other developments. I think this is very near where one of our members located on the south coast lives. Also, there is another [interesting article](#) on the mignonette leek orchid (*Prasophyllum morganii*) that was thought extinct for the last 100 years. To me this reinforces the need for the formal collection of plants for the future. It is a good article. For article access, place your mouse on the blue link and hold down CTRL and then click your mouse to go to the articles.

Seller's commission – Members please note that KOS has increased the commission on plants sold by members from 10% to 15%. This increase is needed to help offset the increase in rent and is generally in line with other societies. The new commission will become effective at the April meeting.

Coffee and Tea – We will be offering coffee and tea at the April meeting – no supper yet until we see how this goes. You will still need to bring your own mugs/cups and stirrers. By all means, bring your own supper but no sharing please. We will need one or two volunteers to be on hand to dispense the milk during the break.

Misplaced Books – We are still looking for the books listed below. Given the weird 2 years we have just gone through I would be grateful if you could check your bookshelves and if you have any of the following titles can you please return them as able – no fines, just a thank you.

Orchids for the Australian Garden by *Keith Irvine*

Dendrobium and its Relatives by *Lavarack, Grey, Stocker*

The Orchidaceae of German New Guinea by *A.O.F. Schlecter*

Growing Phalaenopsis at Home by *James Neal*

The Cattleyas and their Relatives Volumes i, ii, iv and v. by *Withner*

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

Other Society items

1. New Members – Welcome aboard to a couple of new members - Guta & Henry Frydman. Please seek them out at the next meeting and say hello. I hope I don't embarrass them but sometimes the first few months in a new club can be a bit intimidating and it's hard to make new friends when you don't know the members.

I hope you enjoy our club Guta and Henry.

2. Sales Table Commission – As Dennys explains in the 'Presidents desk' above, the committee has found that rising costs have made it necessary to increase commission on member's plant sales from 10% to 15%. Commission has been only 10% for as long as I can remember although I think it was 20% when I first joined, so the committee has held back against the pressure of costs for as long as possible. The 15% commission starts this month.

3. Membership Fees – Have you paid yet?? If you aren't sure, ask the society by email at kuringgaiorchidsociety@gmail.com

Upcoming events: (please check at source for any last minute changes)

27 – 29 May - Orchids Out West, Hawkesbury Race Club, 1 Racecourse Rd, Clarendon

25-26 June - Mingara Orchid Fair, Mingara Recreation Club, Tumbi Umbi

19-21 Aug - St Ives Orchid Show, St Ives Showground, Mona Vale Rd, St Ives

Habenarias – Do you remember that amazing *Habenaria* medusae that featured last month? Well for those of you experimenting with such delicious and delightful Asian terrestrials, this is your warning. April/May is the last of their growing season before dying down to a dormant tuber until perhaps late next Spring. This is the time to be careful. They don't need too much water from now on, and in fact, at the first sign that they are ceasing to grow lushly, you should immediately back off all water and allow them to go through the natural process of pulling back nutrients and energy from their above ground parts for storage into the tuber.

If you water during this process you invite rots of one kind or another.

Let the green part die down and then, perhaps a month after the top has gone, or is laying frizzled on top of the pot, you might tip out the pot and recover the tuber for storage in a plastic bag with a little sphag., or you could just leave it in place and keep the pot dry and stored where it won't get too cold. This kind of terrestrial is from tropical zones where they are subject to distinct wet seasons and dry seasons but you must remember that they are tropicals and it NEVER gets cold.

In an article on the culture of this type, Brett Maloney tells us : "Some growers advocate no water at all until new growth shows in the spring, but I give a little water here and there, just enough to moisten the mix periodically, but not wet it through, but so that there is a little hydration given to the bulbs. Alternatively you can store them in barely damp media in a sealed bag while dormant, and watch frequently for the new growth. If tubers become dehydrated, they will begin to shrivel."

In Spring, we growers all get rather anxious as to whether a shoot will actually start or not. In nature, it would be the start of the rainy season that triggers a shoot but when we grow under artificial conditions as we do, if you keep them totally dry I think we are depending on the plants failsafe mechanisms to start anyway if the rain is late. The trigger can't be related to seasonal daylength (which is used by many plants) but there may be some dormant time period involved. I haven't found any explanation so far so I am inclined to start moistening the pot just lightly from about mid-September to give the poor little mixed up tuber a reason to try. How's that for logical reasoning? But whatever you do, don't overdo the water until you see a clear shoot well above the mix surface. It just needs enough moisture to hydrate the tuber, there aren't any roots growing just yet.

BOE Open Hybrid – Dendrobium Topaz Dream 'Weva' grown by Garrie and Lesley Bromley



Boy Garrie and Lesley grow these hardcanes well. Especially this Topaz Dream which has been Best of the evening at meetings several times in recent years. I guess it must be a good one.

I won't go into too much detail as I have said it all before, but Topaz dream is an odd breeding line involving two Australian species - *Den. bigibbum* and *Den. canaliculatum*. There isn't much of the *canaliculatum* left in it after several generations of breeding. You can't see that species in the Topaz Dream flower but it has certainly left Topaz Dream with a tendency to throw multiple simultaneous flower spikes off a flowering stem. A very nice habit when you like a lot of flowers as most do.

What a delightful display. Congratulations Garrie and Lesley.

BOE Novice – Oncostele Wildcat #13 grown by Anthony Mobbs

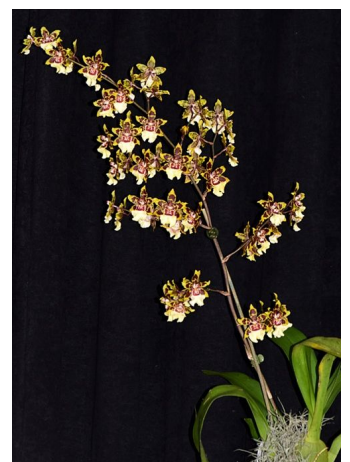
Wildcat has to be about the most successful *Oncidium* family hybrid of the last 30 years. Many regard it as a straight *Oncidium* but *Oncostele* is the correct generic name because one of the species in its background is from the genus *Rhynchostele*. Since its registration as 'Wildcat' in 1992 there have been nearly 70 different cultivars awarded. They come in predominantly red, predominantly yellow, and just about every combination in between.

Each Wildcat throws an upright many flowered inflorescence with a number of side branches. These are highly colourful, very eye catching, and relatively easy to grow compared to some of the other *Oncidium* hybrid types.

I have told you all this before, but it's such a good tale and I can't resist retelling it. Just in case there are a few new members who haven't heard it before of course.

When this hybrid was registered way back in 1992, it was a mix of one *Miltonia* species, seven different *Odontoglossums*, and one *Oncidium*. However, the *Oncidium* alliance has always been a strange mix of genera where the boundaries between some genera are rather ill defined.

Just one year after registration (in 1993), one of the *Odontoglossums* became a *Rhynchostele*. The name of the *Miltonia* (*Milt warscewiczii*) had always been in a state of flux and it was often alternately known as *Oncidium fuscum*, a name which is accepted today. Later, DNA studies finally led in 2008, to taxonomists totally dismantling



the genus *Odontoglossum*, turning nearly all the previously *Odontoglossum* species into *Oncidium*s.

Thus, Wildcat was first called a Colmanara (*Odontoglossum* x *Miltonia* x *Oncidium*), then an *Odyncidium* (*Odont.* x *Onc.* x *Rhynchostele*), and now finally an *Oncostele* (*Oncidium* x *Rhynchostele*). Luckily for all of us, the official *Odyncidium* name was for such a short time no one ever took any notice of it.

Most labels for this lovely hybrid will come labelled as either a Colmanara or *Oncostele* but we do also see it benched occasionally as a straight *Oncidium* but that is not correct. The official name now is *Oncostele*.

As you can see from the close up shot on page one, this cultivar ‘#13’ grown by Anthony is mostly yellow with strong burnt red blotches and some true red in the lip. Just for contrast, compare that to the cultivar ‘Bloodshot’ (at right) benched by the Angove’s when it was Best of the Evening in 2016. Quite different isn’t it?

Wildcat and other similar crosses seem relatively easy to grow. They tolerate Sydney’s winter cold provided it isn’t too extreme. It grows well in a shadehouse under 50% shade. It will also grow under trees in the backyard but in the open the atmosphere is much drier so you may need to take care it doesn’t get fried in the summer. It likes reasonable light but not full sun.

It will grow in a variety of potting mediums. I used to grow it in peat and perlite but most bark combinations work well too. Something well draining but which retains at least a little moisture between waterings. In bark mixes however, like many *Oncidium* types, it doesn’t like to sit in stale mix too long. If you are judicious with an annual addition of calcium to modify increasing acidity, you can leave repotting for a while, but to be on the safe side it might be best to repot every 2 or 3 years to keep them moving along.

They have a bit of a resting period in the colder months so when it’s cool, cut back the water and fertiliser to a bare minimum.

Congratulations Anthony, you are growing this one really nicely.



BOE Open Species – *Miltonia moreliana* ‘Big Ben’ grown by Geoff and Jean Fulcher



For most of its life, despite being initially described as a separate species right back in 1848, this species was known as just a distinct variety *Miltonia spectabilis*. i.e. as ‘*Miltonia spectabilis* variety *Moreliana*’, which always struck me as odd.

If you ever take the time to check out all the different cultivars of *Miltonia spectabilis* that you see benched and pictured in galleries, you can’t help being struck by just how different ‘variety *Moreliana*’ is to all the other spectabiles. It is not just a very different colour. All the wild collected *Morelianas* I ever saw had this ridiculously exaggerated rhizome length between its pseudobulbs (up to 150 mm) and the flowers are nearly twice the size of other *spectabilis* types.

Anyway, in 2002 Cassio van den Berg republished *Miltonia moreliana* as a distinct species and since then it has been accepted that it is a different species to *Milt. spectabilis*.

In nature, *Milt. moreliana* is found in the SE area of Brazil, in the state of Espirito Santo, just above Rio de Janeiro which makes it naturally a slightly warmer grower compared to our climate here in Sydney. It occurs as an epiphyte at elevations of only about 800m, which is not very high and might also hint of a warmer growing tendency, but surprisingly it seems to grow cold here in Sydney relatively well although I suspect that our fellow growers in western Sydney, closer to mountains, might have a few problems where they get regular frosts.

Its cousin *Milt. spectabilis* has a slightly wider range. It is found as far north as parts of Venezuela but also down to SE Brazil. For example, in Espirito Santo alongside *moreliana*, but also in a few adjacent states.

Modern cultivars like *Big Ben* and several others that seem to be traded these days, are a HUGE improvement on the old wild forms of *moreliana*. The flowers of *BIG Ben* are huge. When it received an FCC award in 2016 the natural spread of the flower was measured at 13.2 cm long x 10.9 cm wide. That is really something. The other big genetic improvement is in the much shorter rhizome between pseudobulbs, such that a pot full of *Big Ben* looks like some bulbs should be asked to get off the train because of overcrowding. This is a really superior cultivar but there are now others getting about as well. Whatever genetic change occurred to create these new improved types seems to be genetically stable and crosses between modern cultivars produces more superior types.

Congratulations Geoff and Jean. Whatever you bench is always beautifully grown.

TEN COMMANDMENTS FOR AN ORCHID GROWER (Ernest Hetherington)

Adapted from an article by Ernest Heatherington in NEWS 'N VIEWS, May 1993. Ernest was famous in orchid circles and made many ground breaking hybrids in both Cymbidium and Cattleya. He was associated first with Stewart Orchids and later Armacost and Royston, both very famous nurseries. He was a judge, and gave many talks to growers all around the world. He died in 2016 aged 99 after a distinguished career in orchids..

JB: I saw this great article recently repeated in a copy of the Atherton Tablelands OS bulletin, and having reached a point in my life when I can really attest to the truth in these commandments, I thought others might also benefit from a stop and think.

1. LEARN BASIC GOOD CULTURE

An average orchid, well grown, will give you better flowers than a fine variety poorly grown. When breeding is set for a particular plant, it cannot be changed. The full potential of that variety can only be developed through good culture. As simple as it may sound, learn how to water the various genera (they don't all have the same needs), learn how to feed and adjust light. Do not be continuously experimenting with new mixes, feeding procedures and all sorts of techniques until you have learned the basics. Develop a good relationship with growers whose opinions you respect, and who have demonstrated their skills. Listen to them. Wait until you have proven for yourself that you have mastered the basics of good culture before you start to revolutionise the orchid world.

2. PROVIDE GOOD GROWING FACILITIES

Don't try raising orchids under adverse conditions unless absolutely necessary. It is "getting the cart before the horse" if you spend money on orchid plants before you have proper facilities.

3. WATCH FOR "CREEPING OBSOLESCENCE"

An orchid collection is forever changing. Your interests do not remain the same. What you liked yesterday will not be your favourite tomorrow. As you build your collection, you will find your tastes become more refined and selective.

Realise that you have just so much space, time, energy, and money to spend. Get the most satisfaction and pleasure from your orchids. *If you have plants that you know are diseased or not doing well, get rid of them.*

Good orchid plants are no longer expensive. Make sure that every plant produces well and gives you blooms that you desire. Most of your plants should flower every season; otherwise you have a non-blooming boarder. Give it a fair trial under various conditions. If it still doesn't flower well for you, *get rid of it*. There are other plants waiting to take its place.

Do you have a plant that flowers well for you, but has inferior flowers? You have divided it. Now you have a dozen plants of the same variety? Give some away to someone starting in the hobby. Make room for better quality. Keep upgrading your collection and you will get more pleasure out of it.

4. LEARN ABOUT DISEASE IDENTIFICATION AND PEST CONTROL

Learn aseptic techniques. There are some good articles and books in your library on this subject. Orchids have certain diseases that can be easily spread. What a shame to have a beautiful and perhaps expensive variety become infected with virus merely because you did not learn virus prevention.

Learn basic pest control. Common orchid scale is so easily identified and eradicated with modern insecticides. Learn what a red spider looks like and be on alert for it. How often are beautiful blooms eaten by slugs and snails, and yet there are so many effective baits available. As for aseptic technique, do not cut your flowers until you have sterilised your cutting tools. There are good chemical sterilisers available.

5. BUY GOOD STOCK

Don't be "penny wise and pound foolish" by trying to fill your collection too quickly and too cheaply. You get what you pay for. Good orchids are no longer expensive. There are so many reputable growers who have seedlings of excellent breeding as well as flowering size plants and small divisions that cost very little. A collection of fine varieties can be so much more rewarding.

6. LEARN ABOUT NAMES AND WATCH YOUR LABELING

You get so much more pleasure if you learn a little about orchid names. How are orchids named? How are they registered? Learn what makes an *L.* or a *Blc.* or a *Den.* Keep your plants well labelled. A plant without identity loses so much of its value.

7. BEWARE OF GIFT PLANTS

If you are just starting, beware of the plant that your neighbour gives you because he cannot flower it. Be sure the gift given to you is worthy of your attention. Most plants you win at your society's plant drawings are of excellent quality and from reputable growers. However, beware of plants donated by well-meaning amateurs that are not aware of disease or other conditions.

8. SPECIALISE

Orchidology is vast and varied. There are many fields of endeavour. The basic rule is grow what you like. You may get the greatest pleasure in hybridising and growing your own seedlings to first flowering. You may wish to grow

nothing but the finest selected or awarded varieties. You may decide to grow only cattleyas, or dendrobiums, or cymbidiums, or paphiopedilums, or only species.

9. BUILD A GOOD LIBRARY

You will get pleasure from your orchids in direct proportion to your knowledge of what you are doing. There are so many questions to be answered that a good library is advisable. You can go as far as you wish here, depending on how much of a biophile you might be. A few of the basic books might be all that is needed.

(JB: even though the internet has replaced books for many of you, you will find that when you really want to learn about Cattleyas, or Catsetums, or Coelias, or any narrower subject, specialist treatises on focussed topics like these still only come in books. Don't write off the need for a paper based library just yet.)

10. JOIN YOUR LOCAL ORCHID SOCIETY

When you join your local orchid society you will receive many benefits. If you attend the monthly meetings, there is always a lecture or commentary of general interest. The personal contacts you make are of great value too. By working with others who share your interest, you can multiply the benefits you get from your orchid collection.

Finally fixed that annoying sound in my car, I just opened the door and pushed him out.



AS A KID, I USED TO WATCH THE WIZARD OF OZ AND WONDER HOW SOMEONE COULD TALK IF THEY DIDN'T HAVE A BRAIN. THEN I GOT SOCIAL MEDIA.

I'm so confused. If Mr. & Mrs. Potato Head are no longer male and female, does this mean there will be no more tater tots?

Postscript – Jim's Experience with the Commandments - When I first became interested in orchids no one had heard of Orchid Commandments but looking back, I can see that by accident I did a few of the things the commandments tell us to do, but like most growers I did almost exactly the opposite of many others and wish I hadn't. I regret the opportunities lost and time wasted, and I hope I can help others do better.

In the following I will tell you some of my experiences in learning about growing orchids and draw relationships to the commandments. It won't be in the order of Ernest's list but I don't think Ernest ever intended them to be seen sequentially in that way.

Each of us develops our skill along different paths and in different ways but we all eventually criss-cross all the same fundamental principles. Be assured you will face each truth at some point in your pursuit of growing orchids.

Starting Out - My introduction to orchids began while I was training in horticulture. I found them to be a fascinating group of plants. Unusual, attractive, and variable across the family to an almost ridiculous degree.

One of my friends and fellow horticulture students was already right into orchids and as we were finishing up our course, he gave me a box of about a dozen miscellaneous orchids to play with. I was pleased but I didn't have a clue what to do with them. I knew what orchids were but I only had a rough idea about growing them. My friend gave me a few tips, and I read up a bit, but I didn't have a shade house and ended up growing them on my front verandah under some shade cloth while I tried to figure it out.

I soon realised I needed to know so much more so I joined the nearest Orchid Society (this society) and in doing so met Commandment 10. I went to meetings but the talks were mostly over my head and seemed aimed at people who already knew the basics. I went to every home visit the society arranged, where I saw many different collections of orchids and many different ways to grow them. I befriended many members and soaked up knowledge and experience at every opportunity (commandment 1). So at least I was starting out in the right direction.

Learning and understanding the basics (commandment 1) - As I went to meetings and shows and gradually understood more, I came to realise that most members, even very good growers, had their own unique formula for success. Usually based on one type of potting material, mostly pine bark, and they had a particular set of processes for watering and fertilising. They had worked out what worked for them in their conditions. They grew just about all orchids in one common growing 'house' (as most still do today) but they might vary things a little for particular plants to take advantage of growing house niches that suited a particular orchid. For example, those that prefer brighter light might hang above benched plants. Shade lovers would be at the south end of the structure, or lower down, maybe hanging from the edge of a bench. They might also vary the potting mix by using different grades of bark, adding other components, or using shallow pots etc. But, essentially they had one pattern.

Very few growers had specialist watering regimes for different kinds of orchids and very few had a separate hothouse for orchids that can't survive much below 10°C.

The point I want to make though is that despite each growers obvious success, most did things differently from the

others. Either they had different beliefs about mixes, or watering, or fertilising, or light, or whatever. ***This is not to say any of them were wrong.*** I first assumed it meant there wasn't just any 'correct' way and if there wasn't a right way, I wondered how I how could I learn.

All this reminded me of what Professor Julius Sumner Miller used to say when he ran series of TV science school seminars that I used to watch when I was about late high school age. A renowned teacher, he ran these TV seminars with a live audience and when he set up some experiment and blew something up or made something erupt, he would cheer and say something like 'well you can see what happens', but then ALWAYS follow with "BUT WHY IS IT SO?" In other words, the science is not about knowing what happens, but understanding why it happened.

Translating this back to orchids, don't just seek someone else's formula you can write down and emulate. The key to learning is understanding why an outcome should be expected and what makes it so. You are cultivating a living breathing entity. Understand what the orchid needs and how the various parts of your culture meets those needs.

It took me far too long to reach that simple understanding and I think some never get it. Growing an orchid well requires you to properly understand where that type of orchid comes from and what kind of habitat it prefers. Whether it comes from an area where there is regular water all year round, or whether it experiences distinct wet and dry seasons. Is the temperature always in the 20°C plus range or does it experience cooler conditions. As a bit of side information that may help, I have found that orchids that come from around 1500m elevation or above WILL experience cooler conditions and usually grow without artificial heat in Sydney's temperate zone conditions.

Buy Good stock and beware gifts (commandments 5 and 6) – I failed completely at these. When I first starting going to club meetings I would haunt the sales table looking for divisions of other growers plants. Like most orchid growers I had limited funds to buy orchids and all the related materials, and sales table plants and were much cheaper than plants sold at nurseries.

Naturally there is a downside. Sales table plants are rarely the latest hybrids and sometimes include other growers cast offs. For instance, shy flowerers or orchids that they couldn't even get to flower. They also include, orchids that flower ok but just aren't very good, and even sometimes plants that are infested with scale or fungal disease, or virus. Most clubs have an experienced grower to inspect sales plants and reject obviously diseased or infested plants but they can't pluck out all of them. It is a case of buyer beware.

I don't want to scare everyone off the sales table as the majority are very good plants at very good prices, but if you can, when you are starting out it is a good idea to have an experienced friend at your side to guide you as to which plants would be suitable for you and which are genuine bargains.



just a Cattleya



better quality

In my time I have bought both the best and the worst at meetings and at annual show sales tables. I grew one Cattleya hybrid for 20 years without a single flower before I threw in the bin. I have bought plants that looked OK but had scale down around the base of the rhizomes covered by sheathes. One even had scale throughout the root system. This is rare but it does happen. Check out potential purchases carefully and look deeply.

I didn't buy a single high class orchid (awarded, or latest type) in my first 10 years although I did buy many well bred seedlings. When I stood back and looked at my 'collection', it was distinctly 'B' grade. I got flowers all right, but not as often as I should have, and the quality of the flowers would never get me a best of the evening or a place in a show.

Now while winning at anything isn't the objective, this lack of quality is quite noticeable over time and it impacts your satisfaction and pleasure in your hobby. There is no need for it to be your fate. Don't do what I did and accumulate a wide range of orchids as quickly as possible. Your satisfaction and pleasure in your hobby will be far greater with productive higher class orchids. Grow slowly, 'buy good stock', and learn more about each type's culture before you rush off madly to buy every bargain you find.

Good Facilities (Commandment 2) - As I mentioned earlier, I started without a shade house. Well I fixed that pretty quickly by building one myself. To try and make it look relatively attractive and perhaps rustic, I used old hardwood railway sleepers for the uprights and used second hand galvanised water pipe for the cross beams, all connected



together with Downee clamps. It was cheap enough, but frankly, it hardly met my aim of attractive and rustic. It was rather ugly. What is more, as railway sleepers are only about 245cm long, by the time you set 30 to 45 cm into the ground, the shade house wasn't high enough. It sort of served the purpose for a not mine, but something like this while but that's all you could say.

After a couple of years, and enduring a few periods of frost during winter, I decided I would replace the shade cloth roof with polycarbonate roof sheets.

This require some modifications to the beam structure as well but when finished I had a semi weatherproof shade house with a roof. I could now control water on the plants during rainy periods.

I discovered my first problem during the next summer when I realised that even with shade cloth covering the polycarbonate, the summer sun created a very high heat zone (perhaps 30 – 45cm deep) just under the roof. I sure cooked a few orchids that first summer. You need height to get air and air flow in the structure.

Modern greenhouse structures have more height and usually have the shade cloth mounted on a separate, lighter frame, that lifts the shade cloth 30 cm above whatever other roof structure you use. The air between the two roofs is critical because it creates the necessary cooling. The same principle is used in glass houses. The shade cloth is mounted 30 cm above the glass.



Now looking to the inside of your structure, I dug out the original grass that had occupied the floor space, levelled it as best I could, barrowed in heaps of mixed grade aggregate to raise low spots to get the floor sort of level but sloping to the natural low side. I then covered the whole floor area with weedmat. That was my floor. It worked for a few years until silt run off from watering and rain eventually covered some lower lying areas and I grew a great crop of mixed weeds, ferns, and selaginella. A herb farm would have been very proud but it was damn nuisance. I could regularly pull it out and clean it up but it was back again in months. These lush areas became habitats for crickets grasshoppers, and slugs and snails. I sprayed it with weedicide and got some control but the tale is told here to warn you to do it properly in the first place.

Floors should be either concrete or aggregate at least 100 to 150 mm deep with weed mat over that. Even then, if you go the weed mat route you should lay concrete paving slabs down all the walk paths. Talk to experts, talk to fellow members and design it right.

Benching is fairly easy. I used ¾ inch galvanised water pipe for the uprights and horizontals, all connected with Downee clamps. The bench is galvanised steel mesh of 25 x 100 mm mesh profile (called apertures). This comes in sheets about 3 m x 2.4m and can be easily chopped up into smaller size sections using bolt cutters. You then wire the bench size sheets onto the pipe frames with about 1.5 mm galvanised wire. To control slugs and snails climbing up the legs from the ground, paint sections of the legs with cheap car grease from K-Mart or your local car parts supplier. I will stop at this point because I am sure that is enough to make every new grower see that there is quite a degree of planning and material purchase required before you leap off into building your first growing house like I did. By all means learn as you go but the process I put myself through was ridiculous.

You need good facilities to grow orchids properly. Do it right the first time. Ask for help.

Creeping Obsolescence (Commandment 3) – Another at which I have failed at badly. After buying an orchid that didn't grow well, I could never bring myself to cut my losses and dispose of it. I always thought if I kept trying and experimenting I would eventually work out what was wrong and fix it. I am not sure if that is determination or dumb egotism but I have finally reached the view that bad orchids should be thrown out. Don't give pieces to someone else. De-pot it into a plastic bag and smash it up so you can't change your mind and also so no one will rescue it and waste theirs or anyone else's time.

The same applies to orchids that flower but are just so ordinary that anyone who acquires a piece will be disappointed. Junk is junk. Take it out of circulation.

Disease and Pest Control (commandment 4) – Just as Ernest says, you can't escape the need to use pesticides these days. They don't have to be the dangerous toxic chemicals that were used 50 years ago. There are modern low toxicity pesticides available for most pests these days but first you need to know about the kinds of bugs that you are likely to find on orchids. Like understanding orchids to know how to grow orchids, you need to understand bugs to be able to control bugs. Do you know what they look like? Did you know most pests go through several stages of metamorphosis in their lifecycle? In the same way a butterfly doesn't look much like the caterpillar it was in an earlier stage, scale and other pests also change their form during their life.

There are books for consultation, and societies run classes, but don't try to learn all of them at once. Pick one and study its life and the controls for it, then move to the next pest and study that.

Don't be scared of insecticides. Just make sure what you use has a high LD50 (the dosage rate of milligrams per kilogram of body weight to kill half the bug population). A high LD50 means you need relatively lots to kill. Use protective gear, avoid overspray on your skin, but a little accidental overspray of a high LD50 won't harm you.

Summary – I haven't covered all of the commandments, but I am sure you get the picture. Just don't try to do it all at once. You won't quickly pick up all of the knowledge accumulated by experienced growers. Take your time and be patient and whatever part of your development you are learning, do it well and do it thoroughly.

Humour Break

1. I was just pulled over by the police and when the officer walked up to my window he said "papers". I called "scissors – I win" and drove off but I think he wants a rematch because he has been following me the last 20 km.
2. You can tell an awful lot about a woman from her hands? For example, if they are around your throat she is probably upset.
3. Angry wife's note to husband : "your dinner is in the recipe book on page 22, and the ingredients are at the store".

Learning the basics - Another Illustration – This month's newsletter from the St Augustine Orchid Society in the USA contained a wonderful illustration of the knowledge of growing principles attained by experienced growers. Two of their most experienced members hosted a culture session on factors to consider in repotting. ***It is easy to see that their advice is based on years of knowledge of what orchids need.*** I haven't reproduced all of the discussion because some products discussed are not available here.

Extracts from Karen Ford's SAOS meeting report

Courtney Hackney and Sue Bottom presented a very informative program describing important factors that need to be considered when repotting an orchid plant. They began by reminding us that most of the orchids we grow are naturally epiphytic and adapted to life in trees. Their special adaptations include fleshy leaves, pseudobulbs, a waxy cuticle, and specialized roots that are surrounded by velamen, a sponge-like tissue that readily absorbs moisture and nutrients, facilitates gas exchange, and aids in attachment to surfaces. Some orchid roots, notably *Phalaenopsis* and *Vandas*, are even photosynthetic, so it is very important to have good air circulation around roots.

In nature, orchid roots grow well in a thin layer of organic matter on tree surfaces, but they can range 20-30 feet from the rest of the plant, sometimes even extending into the organic mulch at the base of the tree. It is not uncommon for the roots of many plants to be 10-20 times greater in size than the leaves and bulbs! In addition, orchids are adapted to life in a nutrient-poor environment, so they grow very slowly.

Orchid cultivators frequently try to mimic nature by mounting plants directly on bark or rock, making sure they select a mount like cork that won't rot quickly. Another common choice is to place orchids on a plaque or in a clay basket and to water them at least daily.

With baskets, it is important to remove any plastic that is lining the basket, as it will inhibit good drainage. As the metal parts usually rust, galvanized baskets were recommended for growing *Stanhopeas* and some *Bulbophyllums*.

Many orchid growers have very good success growing their plants in pots. The size of the pot depends on the type and size of orchid you're growing: *Bulbophyllums* and *Cattleyas* do well in shallow pots, while the more terrestrial orchids like *Paphiopedilums*, *Cymbidiums*, and *Habenarias* like tall pots. (various available pots)



Various pots – 1. modern orchid pot, superior drainage 2. terracotta, including slit sided 3. Bulbo. saucer, net pot 4 Vanda pots



enlarging the drain hole frequently. Clay pots breathe, but unless you purchase or create orchid pots by drilling slits in the sides, you will probably want to enlarge the bottom hole, so the pot drains well. This is fairly easily done with a heavy tool like pliers or a hammer but needs to be done gently. Because roots need air for photosynthesis and respiration, growers often add a layer of Styrofoam peanuts to the bottom of clay pots. Clear plastic pots lets you see how the roots are growing, which can let you adjust your watering accordingly.

There are various potting mixes used to grow different types of orchids. Factors to consider include how much surface area the medium contains and how often you water your plants. Some materials can be deceptive; for example, lava rocks have numerous nooks and crevices to hold lots of water and can become saturated with salt. On the other hand, organic matter binds nutrients well, but can also decompose more readily, so you may need to repot more frequently. Sphagnum moss can be an excellent choice, as it is very acidic and inhibits bacteria and fungi that can cause rot, but you must be careful to purchase only New Zealand long-fibered AAA moss! Whatever potting mixtures you choose to use, just remember to pot all of the same types of plants in the same mix, so you can water appropriately.

To determine whether a plant needs to be repotted, consider the health of the roots and the texture of the potting mix. If it feels like soil, it's time to repot. Timing is also important: try to repot one week before the new roots begin to grow. Also note that it is not a good idea to water immediately before or after repotting and to use dry medium. Roots will inevitably be damaged during the process, and if they remain dry for between one day or one week, they will self-seal and inhibit bacterial and fungal growth. You can also brush or dust a bit of sulphur on any cut surfaces to retard disease.

repotting bench surfaces with bleach, or possibly place plants directly on clean newspaper, and use only sterilized tools. You can sterilize pruning shears by soaking them for 10 minutes in concentrated TSP (trisodium phosphate) (JB: sold in Sydney as Tricleanium and available in Bunnings stores). Sterilize old pots with 10% bleach, and don't forget to also clean your hands frequently, as they are a great surface for spreading disease from plant to plant.

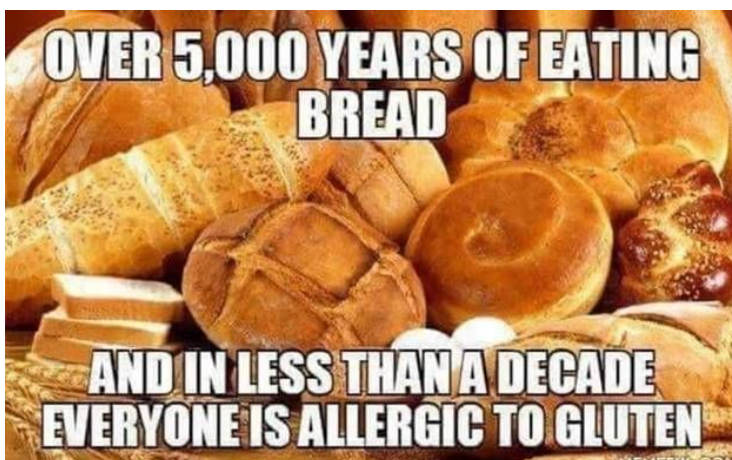
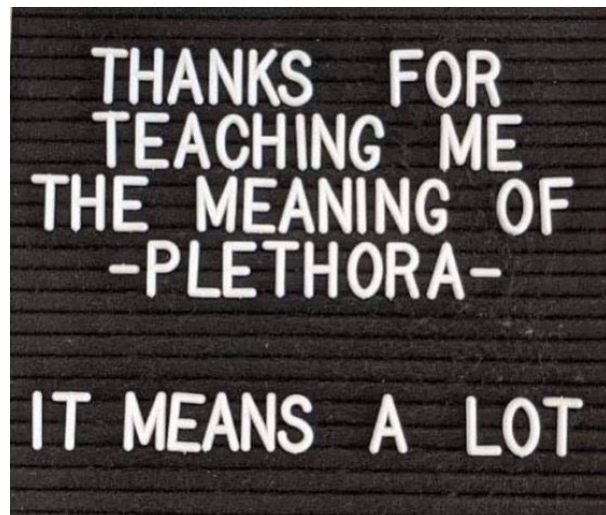
When repotting, the rule of thumb is to select a pot that will allow 2 or 3 years of new growth, so note the internodal distance. After removing old medium and dead/diseased roots, position the plant in its new pot with the rhizome just above the level of the mix, then back fill with medium. Cattleyas should be repotted with 3-5 pseudobulbs together, placing the older bulbs nearer the back side of the pot so it will support new root growth and allow the plant to expand into the new medium. If a plant lacks a good root system, support the pseudobulbs with stakes and ties or clips, then slowly add medium bit by bit over several weeks as the new roots form.

It's a good idea to keep newly repotted plants with damaged roots a little shadier while you wait for new roots to form. Also note that aerial roots are acclimated to growing in the air, but if placed in a pot with mix added a handful each week as roots start to branch, they will acclimate to the potting mix.

As you can imagine, not all orchids are the same! Dendrobiums, with their small internodal distance, should often be repotted very carefully in pots the same size as the original pot after removing and replacing old medium. Bifoliate Cattleyas only root during one time of the year and it is easy to kill them if they are repotted at the wrong time of year. You can position a new pot adjacent to the mother plant to allow the parent to grow into the new pot, or you could 'pot on' and place the whole parent pot into a larger pot.

Ending the day with a laugh

A guy walks into a lumberyard and asks for some two-by-fours. The clerk asks, "How long do you need them?" The guy answers, "A long time. We're gonna build a house."



Our wireless doorbells sitting on their chargers....



Happy Easter everyone