



## **COFFS ORCHID NEWS SEPT 2024 PUBLICATION OF THE COFFS HARBOUR ORCHID SOCIETY**

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### **EDITORIAL:**

#### **Keeping an Open Mind:**

Regular readers of this newsletter, will be aware that each edition has a feature article about some aspects of orchid growing. The underlying premise of these articles is that everybody does not know everything about orchid culture. We can learn by listening to or reading what others say about a particular topic. Many orchid growers are set in their ways and fail to seek out or listen to new ideas. These ideas may vary from their own approach which means that some growers are not open to new ideas and technologies or are not even prepared to accept that someone else may have different ideas to what they have always done.

A regular contributor to this newsletter has been Jim Brydie who is the Editor of the Kur-ing-gai Orchid Society from the northern suburbs of Sydney, NSW. Jim is a well known and highly respected grower who regularly shares his knowledge and expertise with others. In this month's article Jim writes about the types of potting materials which can be incorporated in a mix for growing epiphytic orchids. Jim states that what he has written is not a list of "if you have this use that". Eventually what you use comes from trying new ideas and then evaluating the results using understanding, purpose, & reasoning.

Prior to reading Jim's latest article, I must admit that I had set ideas on what orchid mix I would use and regularly recommend this formula to other growers. For example, I refused to use peat or coconut chips in my mix as I believed they held too much water. Yes, I could claim to be an 'experienced' grower because I tried it once and didn't like the result. After reading Jim's article, perhaps I have been too hasty to condemn other ideas that didn't work for me on the first time. Perhaps, I didn't follow the recommended procedure or persist for long enough to get meaningful results.

Jim's article is a lengthy one and it may have been better to print it in two parts. However, my thought was that you should read it now in its entirety in this edition. Please read it with an open mind and perhaps you may then decide that you should experiment and set up a trial with a variety of mixes using various orchid types. It is my suggestion that every member read Jim's excellent article.

#### **Spring Show 2024 :**

It is now less than four weeks until the CHOS Spring Show. Your Show preparations should now be in full swing and you should have a rough idea of what you may be able to bench on Show Day. All members will have received an email outlining the registration procedures for the plants you wish to enter into this Show. While this may be a new procedure for many growers, and may appear daunting to some, this is the way of the future for all well-run orchid Shows. It provides accurate information for judges and for the viewing public and produces a professionally printed label to attach to your plant. It also provides a data entry into the Show computer program which will then enable the speedy collation of results, payments to prize winners, etc. Please spend some time compiling your entry form and ensuring that it is as accurate as you can make it. The Society is confident that this method will work and will be efficient. If you have any problems completing your entry form then please contact Paige Sinclair for assistance.

#### **Sales Plants :**

You may also be preparing plants that you hope to sell at the Spring Show. The Sales Table is always popular and well supported by the public. It is important to complete the sales tag so that it includes your sellers code, etc. Tags can be obtained from Paige Sinclair prior to the Show. **Best wishes to all members for a successful Spring Show.**

## CHOS COMMITTEE 2023-2024

|                    |                  |              |                          |
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## CONTACT DETAILS

### SPONSORS

#### SHEARWATER RESTAURANT

Brekkie and Modern Australian dishes in a bright, upscale location with outdoor tables and lovely views over Coffs Creek. 321 Harbour Drive, Coffs Harbour.  
[www.shearwaterrestaurant.com.au](http://www.shearwaterrestaurant.com.au) or Phone 6651 6053.

#### COFFS HARBOUR PRODUCE

Coffs Harbour Produce is at 26 June Street in Coffs. They carry a good range of fertilisers, insecticides and fungicides for orchids, as well as general garden needs. Phone 02 6652 2599.

#### COFFS COAST MAZDA

For new Mazda vehicles, also second-hand vehicles and ALL your servicing needs. Ring for an appointment 02 6652 3122 or visit 211 Pacific Highway, Coffs Harbour  
**You won't be disappointed .**

#### DARK STAR ORCHIDS

Dark Star Orchids. 0416 195832 or (02) 65644088.

Hans and Sue run a small nursery west of Bowraville. They specialise in rare, unusual and hard to find species of many orchids particularly Bulbophyllums, Dendrochilums, Stanhopeas, Coelogynes and lots of other genera.

[www.darkstarorchids.com.au](http://www.darkstarorchids.com.au)

email [darkstarorchids@skymesh.com.au](mailto:darkstarorchids@skymesh.com.au)

#### BRUCE HALL

Bruce provides raffle prizes for Autumn and Spring Shows.

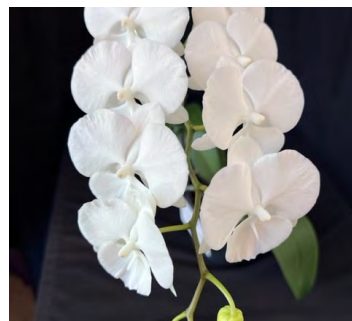
#### OFFICEWORKS

Officeworks carries an excellent range covering all stationery needs, computers/monitors/printers, and associated technology. They sell a wide range of smart phones and watches, plus furniture and workspace solutions. If you are looking for low prices on everyday essentials, it's all there at Home Base, Coffs Harbour. Phone 66 919100 or check out the full range at [officeworks.com.au](http://officeworks.com.au).

### CALENDAR, 2024

- 17 Aug—Port Macquarie Visit
- 5 Sept— Deflasking Workshop
- 6-8 Sept—Spring Show
- 17 Oct—Giant Auction
- 7 Nov—AGM/Display Judging
- Dec— Annual Awards Presentation
- [Date/Venue TBA]

Note: The Committee meets on Tuesday following the Monthly Meeting.



### CHOS BANK DETAILS

**BSB No: 533-000**

**ACCOUNT No: 32817199**

### ROSELLA ORCHIDS

#### Spring and Autumn Show Sponsor

Located in South Grafton and can supply a wide range of orchids but specialises in Cattleya and Vanda genera. They also stock a large range of hardware and accessories for orchid growers. Nursery is closed to the general public except by appointment.

[www.rosellaorchids.com.au](http://www.rosellaorchids.com.au)

## CHOS COMMITTEE REPORT

The following is a summary from the CHOS August Committee Meeting conducted on 6th August 2024 at "The Workshop".

- ◆ Apology from Carole Davis.
- ◆ There was a good response from members following the "Tips and Tricks" and "Judging" presentations at the August General Meeting. Thanks to those who made contributions.
- ◆ Spring Show organisation is in hand for the 6th to 8th September event.
- ◆ New venue for 2025 Autumn Show—Coffs Harbour Guide Hall.
- ◆ Bunnings BBQ Fund Raising Event will be held on 12th October. Funds raised to go towards the CHOS AOC Conference Display.
- ◆ 2024 Annual Presentation will be at the Greenhouse Tavern on 7th December [However, enquiries are also being made about the Golden Palace Chinese Restaurant as a possible luncheon venue].
- ◆ Orchid display for this years WDOS Show—working group have already had two meetings and are making great progress.
- ◆ CHOS Annual Program for 2025 will be published in the near future. This will feature a wide variety of Guest Speakers and activities for members to participate in during 2025.
- ◆ Trip to Port Macquarie will still go ahead on 17th August.
- ◆ New club shirts will be available for collection in the near future.
- ◆ Next Committee Meeting will be held at 'The Workshop' on Tuesday 10th September 2024.

### The Dilemma

A senior citizen said to his eighty-year old buddy: 'So I hear you're getting married?'  
'Yep!' -- 'Do I know her?'  
'Nope!' -- 'This woman, is she good looking?'  
'Not really.' -- 'Is she a good cook?'  
'Nah, she can't cook too well.' -- 'Does she have lots of money?'  
'Nope! Poor as a church mouse.' -- 'Well, then, is she good in bed?'  
'I don't know.' -- 'Why in the world do you want to marry her then?'  
'Because she can still drive!'

### The Benefits of a Good Vocabulary

I recently called an old engineering buddy of mine and asked what he was working on these days. He said it was treatment of ceramics, aluminium, and steel in a constrained environment. It turned out that he was washing the dishes at home under his wife's supervision.

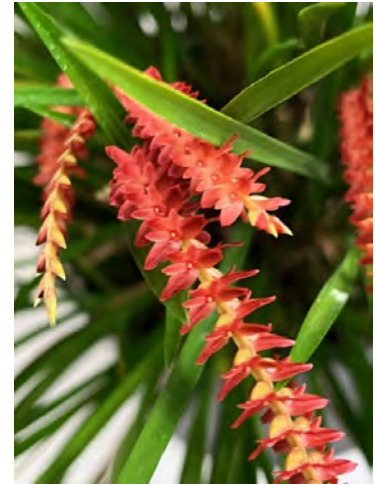
## REVISED SPRING SHOW ROSTER

Some minor changes have been made to the Show Roster. An updated version is included with this newsletter (Version 4). Thanks to all those members who have volunteered their time.





Popular Vote at  
the CHOS  
August Meeting  
was awarded to  
Peter Baker for  
his amazing  
*Coelogyne  
wenzelii*  
Congratulations!



*Coffs Harbour  
Orchid Society Inc.*  
*presents the*  
**Spring  
Orchid Show**  
**Saturday 7 September**  
**10am to 5pm**  
(Plant Sales from 8am)  
**Sunday 8 September 2024**  
**9am to 3pm**  
*at the*  
**Coffs Harbour  
Botanic Gardens**  
**Hardacre Street**  
**\$2 Entry Fee (Children U16 Free)**

**SPONSORS**  
ROSELLA ORCHIDS • BRUCE HALL  
COFFS COAST MAZDA  
COFFS HARBOUR PRODUCE  
OFFICEWORKS • DARK STAR ORCHIDS  
SHEARWATER RESTAURANT

## RECENT CHOS GREENHOUSE VISITS

CHOS Members visited the Greenhouses of neighbours Peter Gough and The Frame Family at Sandy Beach.



**Peter Gough in his orchid house**



**Bill Bright and Chris Hatton investigating the greenhouse**



**Frank, Paul and Paige enjoying morning tea**

## SPONSORS' SPOT: ROSELLA ORCHIDS

### Spring and Autumn Show Sponsor

Located in South Grafton and can supply a wide range of orchids but specialises in *Cattleya* and *Vanda* genera. They also stock a large range of hardware and accessories for orchid growers. Nursery is closed to the general public except by appointment. One of the best suppliers of orchid hardware on the North Coast. Online orders at: [www.rosellaorchids.com.au](http://www.rosellaorchids.com.au)

**CHOS SEPTEMBER MONTHLY MEETING—Thursday 5th Sept starting at 7.00pm.**

**Deflasking Workshop**

**Conducted by Paige Sinclair**

**It would be greatly appreciated if you would bring a contribution for members supper.**

**Don't forget to bring your Competition Plant, *Cattleya* Beautiful Sunset for it's next judging.**

**Duty Persons for this meeting:**

**Judges:** SUE FLANDERS and FRANK PAPPALARDO

**Packing Up:** Volunteers on the night **Cleaning Up:** Volunteers on the night

**REMINDER : THE SEPTEMBER MEETING COMMENCES AT 7PM**



# Coffs Harbour Orchid Society Facebook

August 2024 – Currently, the Coffs Harbour Orchid Society has 2,943 likes. This is up by 58 people since July 2024. Our ‘What’s on Bloom’ page, is up by 1 person to 343 members, for the same period.

**Home**

**Orchid Snow**  
 Saturday 7 September  
 10am to 5pm  
 (Plant Sales from 8am)  
 Sunday 8 September 2024  
 9am to 3pm

**Coffs Harbour Orchid Society**  
 2,943 Facebook followers

**Estimated audience**

- Perth, Western Australia: 17.8%
- Adelaide, South Australia: 6.2%
- Brisbane, Queensland, Australia: 5.7%

**Top countries**

- Australia: 100.0%

**Top liked Facebook Pages**

- Tasty in Media/news company: 11.0%
- 9 News in TV programme: 8.7%
- Samsung in Electronics company: 8.6%
- Coles in Retail company: 8.4%
- Facebook in Internet company: 8.4%

**Age and gender**

Women: 55%  
 Men: 44%

Age groups: 18-24 (8.4%), 25-34 (20.6%), 35-44 (21.4%), 45-54 (16.4%), 55-64 (15.5%), 65+ (17.7%)

**CHOS What's In Bloom Group**  
 Private group by Coffs Harbour Orchid Society  
 343 members

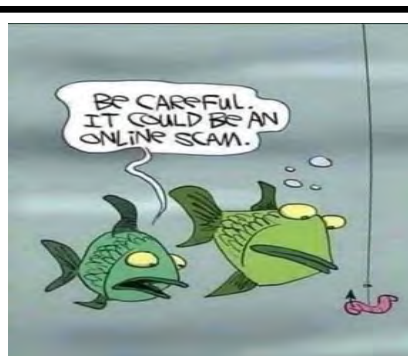
## CHOS SUPPLIES OF ORCHID BARK: NEW SUPPLIES—FRESH BARK JUST ARRIVED

The CHOS now has a NEW supply of Kiwi Bark and Charcoal. Kiwi Orchid Bark is a hard, clean, uniformly graded *Pinus radiata* bark suitable for growing orchids. Due to price rises The Society has had to increase to price of 50 litre bags and these now sell for \$50 each.

Kiwi bark comes in four sizes— No.2: 3 to 8mm; No.3: 8 to 20mm; No.4: 20 to 25mm; No. 5: 25 to 50mm. Supplies of 15mm charcoal (Orchid Char) are also available. These are in 19kg bags and sell at \$45 per bag.

Supplies are available from Paige Sinclair— Mobile: 0427 591 901

You can pick up the bark from 4 Jean Street, Coffs Harbour or make suitable arrangements with Paige regarding delivery. Payment can be via cash or Direct Deposit (Bank details Page 2).





# NAMBUCCA VALLEY ORCHID SOCIETY

# SPRING ORCHID SHOW

NAMBUCCA SENIOR CENTRE 11 KENT STREET

**PLANT SALES**

**ADVICE**



**FLOWER ARRANGMENTS**

**RAFFLE**

**Entry \$2**

OPEN TO THE PUBLIC.

|          |             |                 |
|----------|-------------|-----------------|
| THURSDAY | 29th August | 9.00am - 4.00am |
| FRIDAY   | 30th August | 9.00am - 4.00am |
| SATURDAY | 31st August | 9.00am - 2.00am |

## ORCHIDS BENCHED AT THE CHOS AUGUST MEETING



Rlc. George King 'Serendipity'  
owned by Kerrie Gosling



Rc. Burdikin Future 'Snowdrift'  
benched by Philip Payne



*Coelogyne niveum* benched  
by Rhonda Smith



*Coelogyne convallariiforme*  
grown by Rhonda Smith



*Coelogyne wenzelii*  
benched by Peter Baker



Peter Gough's *Vanda*  
Lavender Lady



Woolgoolga District Orchid Society Inc.

2024 2-Day  
*Orchid*  
Show & Workshop

Saturday October 5 & Sunday 6

Sat. 9.00am to 3.00pm Sun. 9.00am to 3.00pm

At **WIIGULGA**  
**SPORTS COMPLEX**  
Solitary Islands Way, Woolgoolga

- 7 World-renowned Speakers
- Cultural Advice
- Potting Demonstrations
- Participants invited to bring Orchids for our Show
- Sandwiches for Sale
- Coffee Shop onsite
- Admission \$2



Nurserymen's Orchids on Sale

For more information contact - [woolgoolgaorchidsociety@gmail.com](mailto:woolgoolgaorchidsociety@gmail.com)

**LOCAL ORCHID SHOW DATES:**

Put these in you calendar for future reference. Being a member of CHOS you are eligible to enter each of these Autumn Shows. Or perhaps you may wish to just visit and see what other growers have produced.

**29th—31st August:** Nambucca Valley Orchid Society Spring Show. Benching on 28th August.

**30th—31st August:** Grafton District Orchid Society Spring Show. Benching on 29th August.

**7th—8th September:** Coffs Harbour Orchid Society Spring Show. Benching on 6th Sept. 3—6pm.

**5th—6th October:** Woolgoolga District Orchid Society Spring Show and Conference.



# TIPS AND TRICKS by Paige Sinclair

Photos of the things I cannot grow orchids without in my orchid house. They just make my orchid life easier.

## KMart

Puppy Training Pads 60cm x 90cm 20 Pack

\$12

★★★★★ 4.8 (213)

SKU : P\_42779629



Search Google for best deal, Ebay, Temu, and Amazon all have similar products.



Reusable Fastening Tape Cable Ties Double Side Hook    
AU \$7.59 ★★★★★ (24)

Color: Random Color



Quantity: 1pc

1pc

Size: One-Size

One-Size

## Bunnings - \$9.40

Pillar 45m Black Soft Fabric Tree Ties

★★★★★ 4.3 (17)

I/N: 0039808

PILLAR



Compare



Orchid Den - \$45.00 for both and the refill is \$12.00




NUTRIFLOW HOSE FERTILISER DISTRIBUTOR

SKU: 787099758967 / Category: Fertilisers

\$45.00

Botanex - \$81.95




Dramm  
DRAMM Syphonject with 170PL Water Breaker

**\$81.95 AUD**  
Tax included.

Used water bottle with the top opened up so the slow release fertiliser can come out.



Ebay



1 of 2

**CARL CP100A Colouris Pencil Sharpener GREY with 2 stage sharpness adjuster**

**ozbestbuybazaar (5368)**  
99.2% positive Feedback

**AU \$45.00** Free postage

Bunnings - \$98.57



**Silvan**  
The Spraying Specialists


**13 LITRE HEAVY DUTY TROLLEY SPRAYER**

**\$98.57** EACH

Used Baking Powder Container with holes punched in the lid. Or old spice bottles would work well too!



Soldering Iron -Bunnings



1/5

**\$12.95**



[Reproduced with permission from the Kur-ing-gai OS Monthly Bulletin]

**Designing Mediums for Epiphytic Orchids** - Here is an Amazing Scientific Discovery – not a single epiphytic orchid grows in a pot in its natural environment. Epiphytic orchids grow on trees, rocks, and occasionally in the upper layer of organic detritus on the surface of soil. There are some orchids that genuinely grow in soils but these are called ‘Terrestrials’ as opposed to ‘Epiphytes’. Orchid growers grow orchids in pots purely for their own convenience. AND, because of our desire to ‘pot’ orchids, we have also had to devise a range of materials to put in the pot that will accommodate the roots of each special kind of orchid. Various kinds of artificial root environments are acceptable to each kind of orchid. There are many experienced growers who can offer you their accumulated knowledge and interpretation on this subject. Each is probably a little different in expression but they may all be sound because there is always more than one answer. For example, there is another excellent and extensive article on pots and mediums by Seong Tay here in Sydney if you can find it. I will try and get permission to put it up on our website. This article is not a list of “if you have this use that”. Answers come from understanding, purpose, & reasoning.

**Q1 - what kind of environment do Epiphyte Roots need?** The natural epiphytic environments that various wild orchids have made their own is almost ridiculously varied so it is impossible to generalise on needs or preferences. And even if we narrowed the discussion to one particular type of orchid, we can't reproduce the wild root environment for that orchid in a pot or in any kind of man made culture. But what we can do, in our artificial growing houses, is to provide “close enough”. Assess the kind of orchid you are working with and plan the root environment you are aiming for. You want a benign root environment that the orchid can tolerate, with an appropriate balance of air, moisture, and mechanical support. Luckily for us, orchids are pretty adaptive little devils and most will take to our pot culture without too much fuss. A very small number of orchids seem to insist on being mounted on a wood or cork plank etc, and a few have rather narrow bands of tolerance, but these exceptions will only confuse the process I want you to follow so for the moment they are excluded. Once you gain experience at engineering orchid regimes, you can extend yourself to cover them.

### **The 3 Potting Medium Factors – Air, Moisture, Physical Support.**

**First, Physical Support** - In nature each orchid has developed a root system that (usually) holds the orchid to face a direction (to light?) and not fall over or off. When we put an orchid into a pot, the roots will eventually bind to medium and to the walls of the pot, joining it all into one and sufficiently supporting the orchid as well as in nature. But a freshly potted orchid may well need temporary artificial support with stakes and ties. On this basis, we rarely choose physical support as the factor upon which to design an orchid's potting medium.

**The other two factors (Air and Moisture Retention)** are the real keys and are pretty much bound hand in hand. In general if you increase one you reduce the other, so what we are choosing is the make-up of the medium blend to get the balance suitable for the orchid we are potting. The balance of air and moisture in the pot seems to be the critical factor. Orchid epiphytes will nearly all put up with being saturated temporarily when we water them, just as they would get drowned when it rains hard in the rainforest. But they need excess water to be shed pretty quickly. As the pot dries out in the days following watering, the medium needs to provide an airy but moist environment in which the roots can live and thrive and do their job of taking in water and minerals and sending the supplies up to the top parts of the plant. The need for moisture hardly needs explanation but keep in mind that air is an equal necessity.

Roots are a living organ of the plant and they have to breathe as they function. In a well functioning medium, fresh air will be drawn into the pot as the medium dries out, and will be exchanged evenly throughout the pot. Excess water draining out the bottom pulls in air at the top, and similarly, as air is used within the roots, more will be drawn in. Ideally there will be no stale pockets of air. Different plants require different rates of drying out and it is this that we design into the various mixes we use. Any number of the commonly used potting materials will do the job provided that :

- you get the air/water balance within bounds acceptable to the plant concerned,
- you give the plant regular food and water. Note: the mediums we generally use have no food for the orchid. WE need to supply fertiliser to keep the orchid's internal factory running.
- the mix must provide a reasonable pH in which the roots can live and grow and have a capacity for ion exchange. Both of these are characteristics of the potting materials themselves.

**Roots are still the vehicle for taking up water and nutrients and transporting them to the upper parts of the plant and those involved in chemical processes.**

**Which finally brings us to the discussion about the various potting materials.** I am going to describe 5 different key materials that I recommend that you regularly stock as supplies. These are Pine Bark, Peat Moss, Perlite, Sphagnum Moss, and Coconut Fibre. The latter is sometimes called Coco fibre or Coco Coir. However, although I call them "5" base mediums, many of these come in multiple forms or 'chunk' sizes so depending on the nature of your orchid collection you may well need to stock multiple different forms/sizes of each. Pine Bark in particular, comes in a variety of chunk sizes. In addition, different brands process the bark in different ways before it is bagged for use and so different brands/types work slightly differently. I suggest that you stock at least 2 sizes of bark and if it is composted bark like Debco brand, then also stock a bag of less processed Orchiata brand bark – perhaps 9-12 mm size. You are going to need a "shed" for all the tools and bags of supplies.

**Why so many mediums?** - In any reasonably sized, mixed orchid collection you will have orchids from vastly different natural environments (or orchids developed from those orchids). The scope is far too wide for any one medium to suit all. You need a wider choice of materials for that wider range of requirements. Its as simple as that. Each medium type has different characteristics and its own pros and cons. There are also a range of other "add-in" materials that are useful, such as styrene foam, pebbles, sand, etc, but I consider these to be fringe additives as opposed to major components and I am sure you can succeed without them until you decide you want them. One complicating challenge in a mixed collection is that the plants are usually all jammed together in one growing area. Watering takes place for all at the same time, regardless of the different moisture requirements and drying times for different orchids. Some differences can be accommodated through choice of different microclimates within the growing area. For example, hanging specific plants higher, placing them in the bright end versus the shady end, or nearer the fan etc, but beyond that, it is by choosing particular design in your potting medium that can give the greatest difference in growing characteristics for different orchids. So, let's have a look at each medium component.

### **Common Orchid Epiphyte potting Mediums**

**1 – Pine Bark** 'Bark' is readily available, relatively cheap, and comes conveniently graded by the size of the bark chunks. It is usually a byproduct harvested from huge man planted pine forests harvested for timber for construction works and for paper manufacture. One brand grades their bark as 'fine', 'medium', or 'coarse'. The 'medium' from that range is shown in the picture here and the coins are Australian 5, 10, 20 cents. In US coins, their 'dime' is about the same size as our 5 cents, their 'quarter' roughly the same as our 10 cents. That makes the chunk size in Medium as about 18 mm to almost 30 mm with most around 25, but as you can see, it has quite a wide range of particle sizes. Another bark supplier (Orchiata) lists their components by approximate chunk size in millimetres – such as 6 to 9 mm,



9-12 mm, 12-18 mm, 18-25 mm. There are also other brands and types. One specialised bark based mix is labelled “Miscellaneous Mix” (a combination of bark sizes and other components perfect for Australian native Dendrobiums). Another bark type is “Cymbidium Mix” (from various brands and in various forms). In most forms the pine bark has been at least partially composted to reduce its tannin content, but Orchidata brand looks quite raw (un-composted) and that can be a useful characteristic in blending components to extend the useful life of a blended mix. I am presently experimenting with Debco Coarse and it seems to be pretty much the same as an older ‘medium’



**Medium Bark**



brand I had been using. Bark is a good staple for orchid epiphytes -

but with these qualifications. - Pine bark quality isn't what it was 20 years ago. Most orchid barks come as a bagged product and the product in the bag is usually rather dirty. It carries far too much dust, useless fine materials, and other accidental byproducts like stone and wood chips. In my opinion all barks should be washed off and sieved before using them. In addition there are frequently accidentally included chunks of wood left from the originally harvesting off the felled tree trunk. If left in the mix

these wood chips can become infested with wood decomposing fungi and will change the way the mix works as an orchid medium. Some growers ignore them and leave them in and I imagine that most of the time that works well enough provided you keep an eye on potted orchids for signs of the bark acting funny. For me, although it is tedious and time consuming, once the bark is rinsed and sieved, you can easily see the wood chips by colour so I manually pick them out and discard them. I haven't found any more clever way to do it but I still think the effort is worth it. I also discard the odd stones mixed in by heavy 'bucket' equipment during processing. I use medium and coarse grade barks as a base for Laelias, Cattleyas, Vandaceous, and other coarse rooted, dryer growers, and I use bark in a blended mix of smaller bark sizes and other components for various other orchids. If you are a heavy waterer, highly composted bark can tend to go off in the pot more quickly. Depending on your watering and practices, it may go off even as quickly as just two years. The bark will gradually stay wetter and wetter after each watering as it begins to further decompose. However, there are ways to extend the life of the mix in the pot. The options, either alone or together are : - including a good proportion of raw bark in the mix - judiciously sprinkle just a little garden lime or dolomite over the top of the mix once a year. This not only extends bark life, it will also aid in balancing the pH. But care must be taken not to overdo the use of lime. Too much will end up creating an alkaline mix that may kill the roots or change nutrient uptake. - Add other components like styrene foam. Especially in the bottom of the pot to ensure drainage. With bark, the pH in the pot is a serious factor and it will gradually become more and more acid (lower pH) and can eventually sink down to as low (acid) as pH 4 in 4 years or so unless you are very clever with the addition of lime. For more information on Understanding pH, see the separate article on our website. When you use bark, make sure you feed the plants regularly and watch the wetness of the pot. When fresh, the bark mix drains quickly so will need regular watering. As the bark ages, it holds water longer and longer, and so watering should be reduced to match. If the pot looks like it is staying too wet it almost certainly is. Either try to water less often or place the plants where they will dry out more quickly.

**2 - Sphagnum Moss** - Sphagnum Moss is an amazing medium. It has terrific remedial properties for sick plants and there is nothing better for striking back bulbs and divisions. As little as 10 years ago (2015?) it could be obtained as freshly harvested live moss but nowadays it is generally purchased as dried

compressed bales. The dried product keeps well for long periods, and you can just rehydrate the amount you need from your dry bale, portions at a time as needed. Our website has an article on how to properly rehydrate Sphag. Every grower should have at least a small supply available. Even for healthy plants it is a very good medium in its own right but like all media, it has its drawbacks. It is expensive and it is getting harder and harder to obtain good quality moss. Good moss lasts about 1 year being used wet in a pot. Perhaps a little longer if you are very careful with water and very dilute with your fertiliser. If it gets too much fertilizer or is over watered the sphagnum moss dies and begins to quickly decompose. Dark green algae grows over the surface, the sphag looks a darkish brown and it goes airless. Once the sphagnum moss has “gone off”, you need to get the plant out of it quickly. Its positive qualities reverse, it quickly becomes untenable and roots die. In summary, a great medium to have in your armoury for specific purposes but if used widely as a potting medium it needs care and an experienced eye.



**3 – Peat and Perlite (“P&P”)**

- Perlite is an expanded volcanic glass that is completely inert & pH neutral. The perlite most Aussie growers use comes from Chillagoe in Queensland and comes graded in particle sizes called “coarse”, “super coarse”, and “jumbo”. Jumbo is the largest particle size (around pea size) and is most orchid grower’s perlite of choice. Perlite on its own doesn’t provide any organic interchange buffer for fertilizer and once it starts to dry out, perlite by itself

goes from moist to dry very quickly. As a result, perlite is used in combination with peat moss to provide the moisture retention management



and the organics in the medium for ion interchange. The mix most people seem to use is 1 part high quality peat moss (Lithuanian) to about 5 or 6 parts jumbo or super coarse perlite. I



have experimented with ratios of 12, 16, and 20 : 1, but I concluded that it doesn’t work properly with less and less peat. Be Aware – there are many forms and types of ‘peat’. Peat forms in wetland conditions where flooding or stagnant water obstructs the flow of oxygen, slowing the rate of decomposition. Peat properties such as organic matter content and saturated hydraulic conductivity can exhibit very uneven distribution within a wetland area. Peatlands, particularly bogs, are the primary source of peat; although other wetlands types, also deposit peat. Peat is mainly the decayed remains of Sphagnum moss but it also contains many other species of decayed plant material. Because the organic matter that forms peat accumulates over thousands of years, peat deposits provide important records of past vegetation and climate. But for horticulturists the interest is different. The best peat for use in potting mediums is what used to be called German peat or European peat and was probably laid down many thousands of years ago in sphagnum moss bogs when Europe was part of Pangea and the Earth was much warmer. This created a very evenly constituted stable peat product. The only peat of this type that seems to be available in Australia at present is sold as Lithuanian Peat and it comes in at least two or more grades, in large bales. Buy the coarser type. P & P mixes are very stable. The perlite is inert and the ancient sphagnum peat has already reached a point of almost nil decay over thousands of years in the ground. The combination has a slightly acid pH around 6.0 (perfect for most orchids) and lasts virtually forever. However, you still need to repot relatively regularly because plants outgrow pots and because dead orchid roots eventually accumulate in the mix and need to be cleaned out.



Another characteristic to note is that peat and perlite mixes when used properly are generally wetter (comparatively) than fresh bark mixes. But if they get too dry they can initially be hard to wet again. As with any potting medium, the watering frequency depends on prevailing weather, your watering tendencies, and judgement. Don't dry it right out. **Variations** – to get slightly different results for unusual plants you can vary the peat/perlite ratio, or use finer or coarse grades of perlite - add styrene foam or washed quartz pebbles to the mix. Each will give you some control over how quickly the mix dries. I use P&P mainly for finer rooted orchids like Pleurothallids, Dendrochilums, and others. Some growers use it successfully for everything.

**4 - Coconut Fibre (often called coco fibre)** -- Although commercial nurseries here and overseas have been using this product for quite a few years, coconut fibre is a relatively new medium to many. It obviously has potential. There are two types of coco fibre products. For epiphytes we use the version chopped into more or less cubes as shown in the picture at the left. However, Cymbidium growers often use a version called Coco mulch – see the picture below the chipped version pic. As a medium, either product is fairly long lasting, slow to bio-degrade, and depending on the brand and the washing process, has a pH of about 6.0 – 6.5. The material comprises two natural materials which form the husk of the coconut. A coarse, stiff, woody, thread like material we call coir, which is the same fibre used to make coir doormats etc., and a peat like material that fills the spaces between the coir fibres in the coconut



husk. The commercial orchid potting material, is basically the chopped up fibrous husk off coconuts. It is a byproduct of the copra production plantations in India and Sri Lanka among other places. It comes in dried, compressed blocks of either chopped cube like chunks or of more finely ground up material . There are various brands available. Bunnings hardware stores used to sell both types but may not have the cube chipped version these days. The chipped type can be found online from various other suppliers but avoid niche, blended 'multi component' versions.

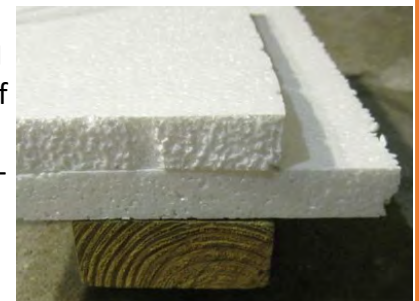


Buy the compressed 4.5 kg brick form. (ie the solid thing, far left, lower pic) Coco material needs to be soaked and rinsed before you use it. Stories are told that some supplies are contaminated with sea salt from the discarded coconut husks being stored too close to the ocean before they are processed and compressed for horticultural use. Hence there is a need to wash and rinse to remove high levels of Sodium. To prepare the material for use, I soak a half of a

compressed dry block (or the whole block if you are in a hurry) in a garbage bin for one to three days to let it thoroughly stew, then tip it out through a sieving process to get rid of the stewed water. I have tried several ways to do this but the method described to our members by Cymbidium guru Geoff LeMarne sounds the winner to me. He uses a 70 litre garbage bin for the soaking and a second 70 L bin with holes in the bottom and a big plastic sieve jammed in its bottom as the drain off. Just tip the soak bin into the other so the water is disposed of, rinse it through with fresh water, then tip the drained coir back into the first bin for a second soak. He has found that two 1 day soaks and rinses is sufficient to clean out contaminants. Be careful when you rinse it however, especially the cube chipped version that we use for epiphytes. All these coconut fibre products include a significant proportion of the fine peaty material. It continually sheds from between the coir strands and you need to retain a decent proportion of these fines as an integral part of the mix. If you remove too much of the fines by washing and sieving, the mix dries faster than is practical for most orchids and doesn't retain sufficient water. A dry mix can be a useful trick for one or two oddball orchids, but it isn't suitable for most. Another good tip that Geoff gives us is that after cleaning, the coir product needs to be 'buffered' before it is used. Buffering is the addition of the macro minerals that are missing for the washed product. It simply means adding a 12 tablespoon of so of a quality soluble fertiliser like Peters Calmag Finisher to a final soak to let the coir

absorb a base dose of minerals. This stops it buffering itself by sucking the life out of the mix when you apply your first fertiliser after putting an orchid in the mix. As with bark, or perlite mediums, you can adjust the moisture content of your coconut fibre potting medium by choosing the coarse or fine grades (size of chunks), or by reducing the peaty component, or by adding other components like perlite or crumbled styrene foam. I have only used the cubed version but have experimented with mixes of various size cubed coco-fibre, with added coarse perlite and styrene foam. I was very impressed with results in the first 6 months or so but after that I began to experience rots killing off some plants and others just suddenly stopping their forward progress. I am not sure why, but I suspect that part of the problem was the finer, peaty materials gradually washing out from between the coir strands and accumulating in the bottom of the pot creating an airless bog zone and leading to root decline. Perhaps this could be solved by improving drainage mechanisms at the bottom of the pot but I am only guessing. At present, I have just about cut out my use of coco-fibre. I only use it as an additive to some of my specialist mixes aimed to deliberately retain a little more moisture – eg for Paphs. However, I know many nurseries and other growers are still getting excellent results in coco-fibre mixes. Perhaps my problem was just the way I was using it. Concerning the excellent results obtained by commercial orchid nurseries, I am suspicious that part of their success may be because they raise very large batches of deflasked plants, all potted at the same time, and frequently potted on to larger sizes. They are growing forward so quickly they never sit in the old mix too long.

**Additional Fringe Materials** - As I mentioned earlier, there are dozens of side components that experienced growers use as additives or even as major components. For example: shell grit, charcoal, pebbles or stones, wine corks, crumbled cork. Over the years, I have tried just about all of them as each wave of “new discovery” swept the orchid grower world. I probably still have half bags of some of the stuff stashed away in the shed somewhere. Many are useful, and have their place, but none are the new magic potting material that they were once thought to be. For example, shell grit is fossilised micro shell husks and can be very useful in supplying a slow release source of Calcium to delay acidification of bark mixes. However, there is one ‘side material’ I do use in nearly every blend, and that is crumbled styrene foam. I use it in quantities from 10% to 25% in nearly every combination and I am convinced it provides a substantial positive benefit - mainly in improving drainage and air content in the pot. However, before you rush off to smash up one of those white foam boxes the fruit stores carry produce in, or to buy a bag of bean bag balls, let me stress that there are many types of styrene foam. The fruit boxes are very dense, heavy, strong foam with little air space between the styrene particles. They are unsuitable for my purpose. Nor do I like bean bag balls. Their roundness and shiny surface makes them too hard to blend with other components and their hardened surface seems to repel water. The foam I use is the softer more easily crumbled type that is often used as packing material in glassware, or electrical equipment. But even this more easily crumbled foam can vary a lot. I search out the types made from ‘larger’ rather than ‘finer’ bubbles of styrene, and that can be fairly easily broken up by hand, or shredded on the equivalent of a cheese grater. note size of styrene ‘granules’ – the sheet is 4 cm thick. The one big problem when handling styrene foam, smashing it up, or when grating blocks or sheets of styrene, is electrostatic attraction. It makes the stuff cling all over you and can be very annoying. But there is a practical solution and that is water. You do your shredding or crumbling directly into a tub of whatever bark or potting mix you are adding it to and make sure sheets of soft, coarse textured styrene the mix is adequately moist. You need to keep mixing the foam into the moist mix as you shred or crumble the styrene. Just take your time. The moist mix will absorb and balance the electrostatic charge.



Did you hear that the neighbourhood barber just got arrested for selling drugs???

We had been his customers for 8 years and we had no idea he was a barber.