

# 'Cymbidium Chatter'

Edition 13 - July 13 2020



(Kulnura Paradise x Kulnura Alchemy) 'Dreamy'.  
In flower today. - Barrita Orchids  
Photograph: Scott Barrie

**Welcome** to this edition of Cymbidium Chatter, unfortunately we are once again in lock-down and it could be quite sometime before we are able to meet again! Let's hope this time around everyone observes the government directives. "We are in this together!" and I'm sure that working together and having consideration and respect for those around us, we will get through it! Stay safe and well!

The impact of this virus cannot be overstated, and I'm sure we all need to prepare for a new sense of normality. This was brought home to me very clearly when we took Delilah, our beloved labrador, to the Vet. for her annual vaccinations. We had to stay in the car and ring up on our arrival. Within minutes the Vet appeared at the car window. While standing on the footpath she enquired about Delilah's general health and once satisfied, she took Delilah in to the surgery for her needles. A short time after Delilah was delivered back to our car, none the worse-for-wear! A very different consultation!

Back to the orchids! Australian hybridisers have done an outstanding job in improving the quality of our early Cymbidium flowers and in this edition of CC you can enjoy some photographs from Greg Bryant, Bryants Orchids, Scott Barrie, Barrita Orchids and of course a few more from the 3 Amigos. It is worth noting that New South Wales and South Australia have a significantly earlier flowering season than Victoria.

Joshua White has the second part of his 4 part series about viruses in Cymbidiums. We are very fortunate to have Joshua as a member of COSV, as he is diligent in his research of all things Cymbidiums and his employment at Monash University allows him access to research papers not readily available to the general public.

I did receive a query from an experienced Cymbidium grower regarding the photograph of the virused leaf. The grower felt that this was not a virus but Glomorella (a fungal infection that causes significant problems in NSW). Rather than second guess about this, I contacted Greg Bryant for his advice. Greg felt that the leaf was definitely showing signs of virus and he went on to explain that Glomorella is the fungus and that Anthracnose is the disease. Greg also added that there is no mistaking virus for Glomorella although it could occur that the plant has both. During the course of our exchange Greg congratulated Joshua for the article! It's great to have someone of Greg's standing and knowledge to refer to - thanks Greg!

On the final page of this edition, Weegie Caughlin, California, has a very interesting proposal that I hope everyone will give serious thought to. In these unprecedented times it is vital that we explore ways of staying in touch and also how we further advance our knowledge of orchid growing - thanks Weegie for the creative suggestion!

# — Orchid Viruses —

*By Joshua White*

## Part 2: Testing for Viruses

In the first part of this series, I covered some general recommendations to avoid introducing or spreading viruses in your collection. Testing plants for viruses is an important part of this process; it is also the only way to confirm that a plant in your collection is infected. So how do you go about getting plants tested and should you test everything?

### Targeted Testing

Hobbyists and enthusiasts with only small collections may find it possible to test every plant in their collection and thereby ensure that they don't have any virused plants. For those with larger collections or commercial growers, however, this can be an expensive and time-consuming process. Instead, they can take advantage of a form of statistics called population sampling – the selection of a smaller number of plants that will provide a reasonable indication of the condition of the whole collection.

The key is to ensure that the subset of plants used accurately represents the whole collection; this is the hardest part of the process. Look for ways in which the collection is naturally grouped – for example, by age, supplier and genetic makeup. If half your collection are historical plants that have been inherited, then half of the plants you select for testing should fall into that category. If a third are from a certain supplier or lab, then a third of the plants to be tested should be from that supplier or lab. Additionally, try to select plants at random within each of the groups to remove any bias.

The actual number of plants you will need to test depends on the size of the collection and how confident you need to be that the results accurately represent the whole collection. There are a number of online calculators for determining a statistically significant sample size; for example, if you have 1000 plants and want to know roughly what percentage are virused with 95% confidence, you would only test 278 plants.

It is also important to test any plants that have been selected for breeding or cloning. It is thought that one of the key reasons OFV has spread so much is due to virused mother plants being cloned. Getting the mother plants tested before clonal runs helps to ensure that viruses are not being propagated and ending up in the collection of unwitting buyers. Furthermore, both CymMV and ORSV can transfer via pollen, so both parents in a cross should be tested to ensure one does not infect the other.

### Virus Testing Options

There are two main options for individuals who wish to test their plants for viruses: either 1) send samples off to a lab, or 2) purchase the home-use test strips.

In Australia, the Department of Primary Industries, Parks, Water and Environment (DPIPWE) Tasmania provides testing for plant viruses across a wide range of genera. Their orchid virus test service covers ORSV, CymMV and OFV and, at the time of writing, cost \$24.81 per sample (the price is higher for other types of plants). Usually there is a small price rise of less than a dollar early in the financial year, so for the 2020-2021 year prices will probably be slightly above \$25 each.

DPIPWE stipulates that:

- Leaf samples must be 10cm or longer and sealed in individual, clearly labelled ziplock bags (shown right)
- Samples must be free of pests and debris
- All sample bags must then be placed into another ziplock bag (below right)

You don't need to provide the name of your plant; a code-name will suffice, as long as it is clearly identifiable. I recommend numbering all the samples and including a cover letter with the list of samples. This makes it much easier for DPIPWE to report results.

It is recommended to send samples via express post to reduce the time in transit. To arrange for testing, contact Peter Cross at [Peter.Cross@dPIPWE.tas.gov.au](mailto:Peter.Cross@dPIPWE.tas.gov.au) or visit the website: <https://dPIPWE.tas.gov.au/biosecurity-tasmania/plant-biosecurity/plant-diagnostic-services>

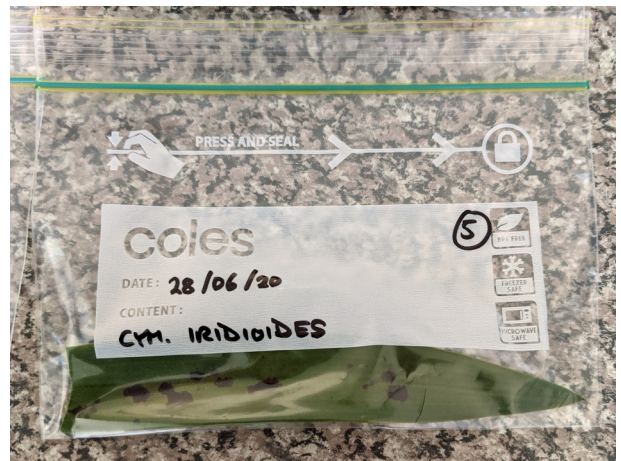
Growers can also source ORSV+CymMV test strips (to the best of my knowledge there is not yet one available for OFV). DPIPWE is the official distributor for the Agdia test strips in Australia, but clubs and societies sometimes purchase them in bulk to distribute. Regabio tests are also available in Australia, once again from clubs or smaller suppliers. The test strips are designed to be rapid (under 5 minutes for Agdia, or 15 for Regabio) and must be stored between 2°C and 8°C (Agdia) or 2° and 30°C (Regabio).

Orchid Extras in Victoria stocks the Regabio tests (photo courtesy of Andrew Wagstaff) and can ship them within Australia. At the time of writing, prices were as follows:

- 1 for \$7
- 10 for \$69
- 20 for \$135
- 50 for \$325

There are pros and cons to the test strips, so it is up to the individual grower to decide which approach to take. Test strips do not cover OFV and they have a limited lifespan, but they are convenient for testing small numbers of plants. A good use case for the test strips is in checking plants from older collections, as they are less likely to have OFV present. US grower A'na Sa'tara documented her experience testing her entire collection (at <https://www.aeorchids.com/orchid-culture/orchid-virus-testing/>)

and noted that the Agdia test strips are sensitive enough to combine samples from up to 6 plants (although Agdia does not recommend this approach, nor do they guarantee an accurate result if you do it). She notes that the key is to ensure that “the sample quality is good (enough cellular liquid content and well crushed)” and to “take extra care to crush each plant's sample individually, and then thoroughly mix the buffer solution in the test kit.”



This combination approach can allow you to more quickly and cost-effectively assess groups of plants where it is thought that there are few to no infections. A negative result allows you to exclude those handful of plants, whereas a positive means that you will need to go back and retest the plants individually.

Always remember to observe good plant and tool hygiene when collecting samples for testing; **never** go directly from plant to plant when taking samples. I always clean and thoroughly flame my scissors between taking samples to ensure that I am not cross-contaminating plants.

## I Might Have a Virused Plant in My Collection! What Do I Do?

If you find a plant in your collection you suspect may be virused, first make note of where it is and what other plants are around it. You will need this information later, especially if the plant tests positive. Isolate the plant and get it tested as soon as you can.

Once you have confirmation that your plant is infected, you need to destroy it. The best approach is to bag up the plant – including the pot and any stakes – and place it in the rubbish (I do not try to salvage the pots, as it is just not worth the risk for the price of a new pot). Do not leave the infected plant out for a passer-by to pick up, nor give it away. Do not compost virused plants, either, as pests can feed on the plant material and risk spreading the infection. It is essential that virused plants be destroyed to prevent further spread; every virused plant that can be destroyed is a step towards eliminating these pathogens in cultivation.

Every plant that was adjacent to the infected plant should be quarantined and tested, as they may have been exposed to the virus a few different ways. I recommend waiting long enough for any potential virus infection to have become systemic (spread throughout the plant) before testing the quarantined plants – this allows you to avoid the risk of a false negative. For Cymbidiums, this means that if your plant tested positive for CymMV, you need to wait 6-8 weeks before testing the adjacent plants; for ORSV, this waiting period is 7 months and for OFV, it is until the next cycle of new growths are large enough to test. Waiting until any viral infection is systemic means that you can have confidence in the test results, as otherwise you may risk taking a sample from part of the plant that doesn't have a high enough level of virus to be detected.

Once you have removed the infected plant and its neighbours, the next step is to thoroughly clean the area where the infected plant was sitting or hanging. If it was a hanging plant, the hook (if kept) should be disinfected. If the plant was on a bench, the segment of mesh should likewise be disinfected (depending on the design of the bench, this may be challenging, so flaming the mesh may be the only viable option). Any in-pot dripper should be discarded and replaced.

## In the Next Part...

In Part 3 of this series, I will look at the two older viruses – Cymbidium Mosaic (CymMV) and Odontoglossum Ringspot Virus (ORSV).



Pure Origins "Leah" x Ocean "TP"- first flowering cream with contrasting gold labellum.

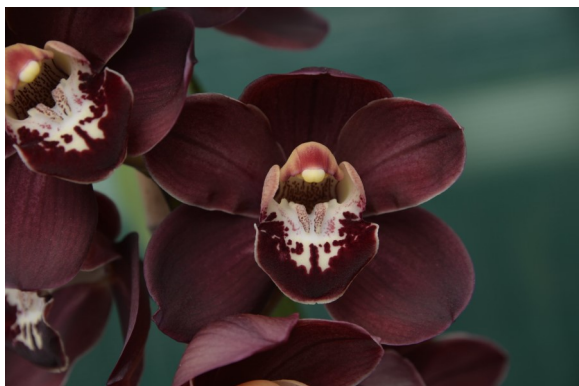


Purely Dreaming "Phoenix"

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First flowering - very compact plant .(Mem. Joan Bryant x Flaming Vulcan) "Gallant" x [(Spring Surf x Sylvan Star) x Mem. Joan Bryant]



First flowering - Flaming Vulcan "TP's Kirra" x Street Tango "Desiree"



Yowie Progress "Epiphany"- large flowers on a compact plant.

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Cronulla Star "Blessing"



Second flowering season - Justis Pearl x Cronulla Era



First time flowering - Justis Pearl x Cronulla Era.

All of the flowers above were in flower during the first week of July, showing just how far Greg Bryant has been able to improve the quality of early season flowers!



The 3 Amigos - Chee, John and Shane

## More from the 3 Amigos



Foxfire Amber 'Dural' x Dural Gold 'Dural'



First plant prepared for first show 2020, Cymbidium Orchid Club of SA Winter Show/Display - Starting Wednesday 16th July at Munno Para Shopping Centre.

Cym Templestowe Opal 'Hearts on Fire'



First flowering of Flaming Amber



First flowering seedling - Mighty Angel 'Lisa' x Poetic Ghost 'Eve'.

Hi Geoff,

I hope this finds you well and the orchids all well cared for. In response to your musings about where societies are headed in the future, many of the local societies here in Northern California are holding Zoom meetings. I presented the talk last night at one and it went well for my first time as a presenter. It gives us all the opportunity to get online speakers from all over the world if timing can be worked out. 7 PM our time fits with 12pm the next day for Sydney time. The reverse may not work as well.

With that thought in mind, I am looking for speakers from Australia whom you feel might be amenable to presenting an informal talk to our Gold Coast society in Northern California, which meets at 7 PM Pacific Daylight time, every third Friday, Sept through May. I have already asked Greg B but I know there may be others who have been really shy in the past: someone from the Three Amigos, TP, Keith Wallace, and Randall and Scott for sure along with possibly David Wain and you?

Let me know what you think and if this would work. Perhaps you have some other names of active hobbyists including the two who contributed to your last letter. It is always good to hear about virus and different takes on groups of species.

All the best and hope to hear from you soon.

Stay safe,

Weegie



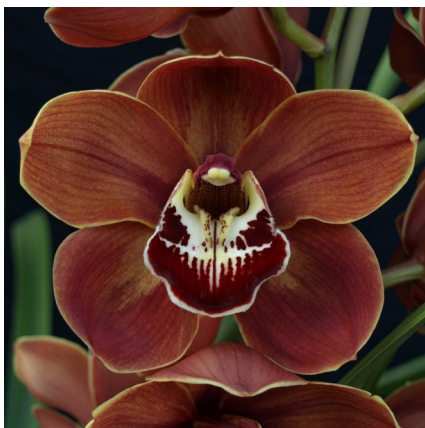
Barrita Cutlass 'Ming Pastel'



Khan Wall 'Choc Brown'



Dural Ice 'Jumbo'



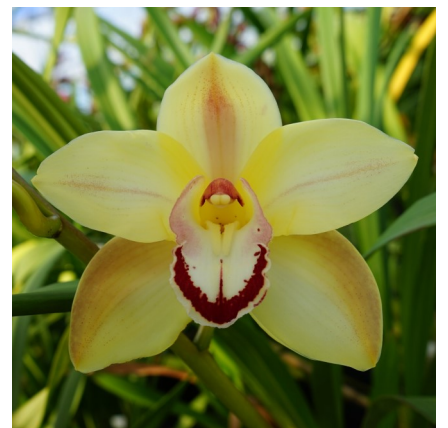
Khan Wall 'Orange Flame'

## **Barrita Orchids**

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website - quality plants!**

**Just some of the clones  
available - outstanding  
service assured!**



Kimberley Splash 'Sunray'