Bulletin of the Orchid Society of Canberra, Inc.

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Caladenia fuscata

Volume 34, Number 1 **January–February 2019**

Regular monthly meetings:

Monthly meetings of the Society are held on the first Wednesday of each month (except January) at the Seventh Day Adventist Church, corner Gould and Macleay St. Turner. Meetings commence at 8:00pm with the library and sales table open from 7:30pm.

6 Feb	**Orchids of Papua–New Guinea** (see page 3)
6 Mar	**Growing orchids in Canberra without a greenhouse**

Upcoming Events

9 Feb Potting working bee and BBQ (see below)

2–3 Mar Canberra Horticultural Show including orchids

23–24 Mar Regional workshop Batemans Bay

For further info, visit:

- http://www.canberraorchids.org/
- http://www.hsoc.org.au/pages/events2.htm
- https://www.orchidsocietynsw.com.au/Shows2019.htm

Working Bee and BBQ Saturday 9 February 2019

We'll hold a working bee and BBQ at Jane & Roger's home starting at 3pm on 9 February. The objective is to pot on the very large number of *Thelychiton speciosus* seedlings that we deflasked a year ago. They have grown well and are now ready to be moved on into fine bark.

From 5pm, all members and partners/families are welcome for a BBQ. Jane and Roger will provide sausages and cold drinks. Bring your own meat if you want something special and a salad, dessert or nibbles to share. Please let Jane know if you plan to attend the working bee or BBQ or both so she and Roger can set up appropriately.

Judges' Choice – Species December *Dendrobium lawesii* var. *bicolor* 'Georgie' AM/AOC grown by Brian & Lynne Phelan. [photo: Zoe Groeneveld]

Committee Members

President:	Jane Wright	6254 1119
Vice President:	Bill Ferris	6297 5635
Treasurer:	Scott Mann	0414793759
Secretary:	Karen Groeneveld	6299 7080
Committee:	Geoff Dyne	6231 3681
	Peter Coyne	6251 7660
	Andrea Robold	0418241694

Contributions to the next Bulletin
All contributions to the bulletin are most welcome. Deadline for the March–April edition is 22 February 2019 to Peter Coyne (petaurus@gmail.com).

From the President

I hope all of you and your plants have coping with the heat this summer. Let's hope for cooler weather soon.

Your committee has been putting together the program for 2019. We are starting the year with a most interesting talk by Jane and Peter D'Olier on their trip to the highlands of PNG in search of orchids.

The following Saturday, Roger and I will host a working bee to pot on the many *Thelychiton speciosum* seedlings that we deflasked last year. At 5pm, we are inviting everyone from the society and their partners/families for a BBQ. The idea is to get to know the other members in a more relaxed way than is possible at meetings. Details elsewhere in the bulletin.

The committee visited the other possible meeting venue that I mentioned before but decided that it was just too small for our purposes. So we will stay the current venue for the foreseeable future.

Joint Orchid of the Night and **Judges' Choice–Hybrid December** *Paphiopedilum* Susan Booth 'Paracombe' FCC/AOC grown by David Judge. [photo: Zoe Groeneveld]

Care of your orchids in February

The most important things to manage this month are heat and water. You may find it useful to provide extra shading if your plants are getting too yellow or are burning. Black pots can get extremely hot so ensure that they are shaded. Keep up the water. Watering in the evening gives your plants time to absorb the water before the heat of the following day. Depending on your growing arrangements, you may need to water twice a day on those really hot days. Don't forget to fertilise too. Most plants are in active growth and need fertiliser to grow their biggest and strongest.

You should have re-potted your Australian terrestrials by now. Keep the pots as cool as you manage, and water very sparingly until the new shoots emerge.

Don't be afraid to repot at this time of year. Lots of my orchids are starting to send out new roots, which is a perfect time to repot so the new roots head straight down into the mix. Do ensure that the plants get enough water and shade – repotting is a stress on the plant. Any plant that is not in active growth should be left alone (disasters notwithstanding)

Terrestrials Potting Workshop 9 Dec 2018

Part of the crowd [photo: Jane Wright]

The native terrestrials potting workshop hosted by Karen Groeneveld at her home was well attended with 15 members present, including many new members. Everyone took home a pot of tubers to grow and love. The considerable interest demonstrated was very heartening and we anticipate a substantial increase in the number of members enjoying the fascination of growing native terrestrial orchids.

The workshop was timed to enable members to participate in the annual distribution of tubers by ANOS Victoria Tuberbank. See also the article on native terrestrials in the minutes of the November meeting (next page).

Sandra Corbett tries out Peter Groeneveld's potting depth guide, supervised by Lan Diep and Derek Corrigan [photo: Jane Wright]

February Meeting Talk Topic

In May 2017 we visited Papua New Guinea for 3 weeks where we spent 9 days in the mountainous highlands, 7 days in a dugout canoe on the Sepik River and another 5 days in the coastal areas of Wewak, Madang and Port Moresby. Whilst this trip was pre-organised, the 2 of us travelled by ourselves accompanied by guides and drivers only.

We chose to visit New Guinea as few tourists go there and we wanted to see the unspoilt scenery that is part of a very dangerous corner of the world, experience cultures that very few others experience and, of course, to see a huge range of orchids growing in each of the regions we visited and the natural habitat they grow in.

The presentation we are giving is on the highlands section of the trip where we flew from Port Moresby to Tari and then drove overland to Mt Hagen, then to Mt Wilhelm and back again to Mt Hagan.

Throughout our trip we were fortunate enough to have guides who were very experienced with orchids in their local regions and a highlight of the trip was the vast number of orchids seen.

Our presentation will include a bit of the cultural side of the trip, as well as the many orchids we saw and most importantly, the habitat they grow in.

Jane and Peter D'Olier

Joint Orchid of the Night and **Judges' Choice–Hybrid December** *Bulbophyllum plumatum* 'Red Ribbon' grown by Karen Groeneveld . [photo: Zoe Groeneveld]

General Meeting, 5 September 2018

Members Present: 36; Apologies: 8; Visitors: 6

Society President, Jane Wright, opened the meeting at 8:05pm, and welcomed all present, including the good number of visitors. Jane introduced tonight's talks on native orchids – one on terrestrials prepared by Peter Coyne and Karen Groeneveld, and presented by Peter; and another on native epiphytes and lithophytes, by Bill Ferris.

Presentation 1 – Peter Coyne: Native Terrestrial Orchids

Peter introduced the topic by remarking that whilst terrestrial orchids might sometimes lack visual splendour, they are quite fascinating, given their interesting life cycles and adaptations to some of the most challenging environments.

While epiphytes and lithophytes live on trees and rocks (often interchangeably), terrestrials need to live in soil, where they are dependant on the presence of certain soil fungi for continued survival. Terrestrials are the efficiency specialists of the orchid family, which has evolved to produce some of the most energy efficient plants on Earth. Unlike other families of plants, where pollen distribution is often a haphazard affair, orchids have evolved to ensure that the process happens precisely with little wastage of precious pollen (and the energy needed to produce it) – pollen is produced in 'parcels' to be transported by specific pollinators with which orchids have developed a close relationship. This is most obvious in native terrestrial orchids, where their interesting floral forms reflect the fact that they often rely on sly deception – mimicking other flowers or female wasps – to ensure pollination.

Despite the potential for colony development through vegetative (clonal) propagation in orchids (eg kiekies in epiphytes and the multiplication of tubers in terrestrial orchids), cross-pollination of flowers and production of seed is essential for the long-term survival of species – this ensures genetic diversity, which provides evolutionary insurance against climate and habitat changes. However, the production of seed (like the production of pollen) is an energy-expensive process for plants. Once again, orchids have evolved a neat solution to save energy – orchids seeds are tiny and have no food reserve (or endosperm, like the yolk of an egg). Instead, they rely on an association with certain fungi to stimulate germination and to provide sugars and other nutrients to the germinating seedling. Many terrestrial orchids retain their reliance on soil fungi to access nutrients into adulthood and some retain this reliance throughout their lives.

To reiterate, orchids' relationship with other organisms can be complex:

- orchids depend on a fungus for germination and at least early growth,
- most orchid species depend on an insect for pollination, and
- flower design for insect pollination is remarkable and specific.

Australian native terrestrial orchids have evolved highly complex relationships with pollinators. As a result, Australia has some of the most interesting, if odd, flowers. For example, the genus *Drakea*, or hammer orchids, which rely on mimicking the appearance of a female Thynnid wasp, as well as producing sex pheromones, to attract the male. Male wasps are deceived into attempting to mate with the flower and are daubed with orchid pollinia for their efforts. These are then transported to another irresistibly deceptive orchid flower, which is pollinated in the process.

Pterostylis, *Diplodium* and other 'greenhood' orchids are pollinated by fungus gnats, and recent research has found that the majority of greenhood orchid species have a unique pollinating insect.

Such specific relationships with pollinators ensure that pollen goes only to another orchid of the same species, making it a highly efficient use of energy by the orchid and increasing the likelihood of effective pollination. But it can be a risky strategy, because it needs the pollinator to be present in the environment. Habitat loss and environmental impacts on the pollinator species impact the orchids in turn, and make orchid conservation a complex business.

Peter gave some examples of local orchids (from the Southern Tablelands of NSW and the ACT), which are available as tubers and suitable to cultivate in our climate:

- *Chiloglottis* species, including *C. formicifera, C. trapeziformis* and *C. x pescottiana*
- Greenhoods, including *Pterostylis curta, P. nutans, P. pedunculata, Diplodium coccinum, D. laxum*
- Helmet orchids, including *Corysanthes fimbriatus* and *C. hispidus*.

Peter then provided examples of other local terrestrials that exhibit floral mimicry (although these are less likely to be available as tubers), including:

- Sun orchids – *Thelymitra* species – which appear to mimic liliaceous species and *Hardenbergia* (native bluebells)
- Donkey orchids – *Diuris* species – which mimic pea flowers

Photos of many other local terrestrial genera followed, including *Caleana* (duck orchids), *Caladenia* (spider orchids), *Calochilus* (bearded orchids), *Spiranthes*; and two saprophytic genera - *Dipodium* and *Gastrodia* – which have no leaves and are completely dependent on mycorrhizal fungi for their nutrition. These range from relatively easy to grow in cultivation (*Spiranthes*) to impossible (the saprophytes).

Peter then spoke about some species from the North coast of NSW – *Calanthe triplicata* and *Phaius australis* both produce tall spikes of flowers and are grown by OSC members in warm conditions. We were also treated to photos of another terrestrial species that grows in the coastal regions of NSW, from the mid coast to southern Qld, and is probably one of the strangest flowers on the planet – *Rhizanthella slateri*, the eastern underground orchid, growing completely underground. It produces a flower head of up to 30 tiny flowers, that pushes up into the leaf litter where they are pollinated, probably by fungus gnats. First discovered in 1931, the species was not seen again for 52 years; about 90 individuals have been recorded and it is classified as endangered.

Terrestrials grown from tubers are summer-deciduous, so apart from repotting in late Dec or early Jan, they need little maintenance. Many are frost-hardy and can be grown in the open, relying largely on natural rainfall. The Society's book on growing orchids contains a good description of cultural practices for native terrestrial orchids; ANOS Victoria produces an excellent book; and the Orchid Society of NSW website has a page on growing native terrestrials. If you would like some hands-on practice, there will be a repotting workshop at Karen Groeneveld's place on 9 December. ANOS Victoria will be taking orders for tubers in a week or two and tubers can be ordered through the Society – Bill Ferris will circulate the list of available species when it comes in and will coordinate the order process. Another source of tubers is Les Nesbitt (nursery) in South Australia. So give it a try!

Judges' Choice – Specimen December *Stelis tarantula* grown by Karen Groeneveld. [photo: Zoe Groeneveld]

Have you moved?
Please make sure we have your current address and contact details, including email address.

Presentation 2 – Bill Ferris: Growing Australian Thelychitons and Dockrillias

Thelychiton is a genus of native epiphytic orchids that has been extensively cultivated in Australia and cultivars and species are readily available. They are relatively easy to grow and many varieties and species are tough enough to be grown in Canberra without a heated greenhouse, but with suitable shelter from frost. Bill urged new members interested in growing Thelychitons (which used to be classified as *Dendrobium*) to talk to members who have been growing them successfully, but be prepared to experiment a bit to find what works for you in the conditions you have at your place. It is important to research where orchids grow naturally, to understand the habitat and climate requirements of each species – temperatures, rainfall and seasonal changes; altitude; and what the orchids usually grow on (trees, rocks etc).

Thelychiton speciosus grows along the east coast from Victoria to Cooktown, so it's important to understand where your particular plant comes from, as the southern varieties will be more cold-tolerant than those from northern NSW and Queensland. Bill provided an overview of the distribution and habitat of the *Thelychiton speciosus* complex (which includes a number of varieties that may or may not be species in their own right) and of other *Thelychiton* species, including *T. adae, T. falcorostrus, T. fleckeri, T. gracilicaulis, T. jonesii, T. kingianus*, which have been heavily used in cross breeding to improve plant performance and to produce a huge range of flower colours and forms.

The other genus of native epiphytic orchids that is readily available and relatively easy to grow is *Dockrillia*, which was also previously classified as *Dendrobium*. Bill gave an overview of the distribution and habitat of *Dockrillia* species, which grow in forested areas along the Great Dividing Range from southern NSW to northern Queensland. Like some Thelychitons, many Dockrillias grow on rocks and cliff faces – they are tough! Dockrillias are mostly dangly plants that hang from cliff-faces or tree limbs, so they prefer to be mounted in cultivation (and hung up), rather than being grown in pots. Bill's photos explored the range of possible mounting media – from tree fern and cork slabs, gutter-guard 'bags' stuffed with coir or bark, to coconut husks, and even slabs of weathered ironbark and railway sleeper! Some people grow some species successfully in terracotta pots filled with gravel.

Bill opened discussion from the floor. Jane Wright noted that there are more than 900 registered *Thelychiton* hybrids. Hybrids generally have more vigour than species, and are easier for beginners. They perform well in flowering and there's an enormous range of flower colours and shape to choose from.

Joint Orchid of the Night in November

Joint Orchid of the Night and **Judges' Choice–Species November** *Durabaculum undulatum* grown by Karen Groeneveld. [photo: Zoe Groeneveld]

Durabaculum undulatum: This plant was given to me as a small keikie by a friend in Cairns in 2011. It has grown strongly in my hot greenhouse where it lives on the western side, soaking up the sunshine. It started flowering 2-3 years ago. *Durabaculum undulatum* is a native of northern Queensland, from Cape York to Rockhampton, where it grows as an epiphyte in a wide range of habitats in coastal regions and the adjacent ranges. It usually grows in exposed situations on trees and rocks, where it forms large clumps, of erect, arching pseudobulbs. It experiences a dry season in winter-spring (important to ensure that this is replicated in cultivation), and flowers from August to November in the wild. My plant in cultivation tends to flower a bit later than this and keeps going into December – it has only just finished flowering. My hot greenhouse is regulated to maintain around 70% humidity and a minimum temperature of 15^{o}C, although this is difficult to maintain in the dead of winter; the maximum temperature is set to 32^{o}C, and is regulated with an evaporative air conditioner. I keep one layer of 50% shadecloth on in winter and two layers in summer. Exposure to higher light levels in winter (along with a dry rest) appears to be important in stimulating flowering.

Karen Groeneveld

Mark Clements provided some more information on their taxonomy and biology. All *Thelychiton* species are endemic to Australia, with the exception of a few species that occur in New Caledonia and Norfolk & Lord Howe Islands. Thelychitons evolved in Australia and their distribution along the east coast reflects 30 million years of evolution amidst continental change.

Thelychitons are CAM plants (put simply, they use a different form of photosynthesis that evolved as an adaptation to arid conditions), which means they are tough and are able to survive in harsh, dry conditions

and cope well with neglect, as long as you avoid frost and sunburn. While they might survive harsh treatment, if you want them to thrive, give them lots of sun all year round, and water and fertiliser in Summer. *Dockrillia* is also an Australian genus and has evolved to withstand dry conditions – the terete leaves are an adaptation to dry, sunny conditions, as it reduces the leaf area exposed the sun.

Bill grows his Thelychitons in an open mix – generally bark mixed with inorganic stuff like rocks or pearlite. However, the openness of the mix you use should be balanced according to your care style – whether you are inclined to water heavily or sparsely. Slow-release fertiliser is ideal, but plants seem to benefit from the occasional application of liquid fertilisers like Seasol, and Bill believes that the application of a light sprinkling of horticultural lime a couple of times a year is helpful. Mounted plants can be dunked in a liquid fertiliser, or you can place a small amount of slow-release fertiliser in a little plastic 'cage' stuck in the top of the mount.

In finishing, Bill reminded members about the repotting workshop to be held at Jane Wright's place on 18 November – bring along the plants you want to repot, and there will be some Thelychitons available for hands-on practice.

Treasurer's report:

Balance as at 1 November 2018 – $29,600.69

There's been little activity on the account in the past month, other than making a down-payment to secure the show venue for 2019. The Society received $350 in prize money from the Southern Orchid Spectacular.

Treasurer's Report accepted: Peter Coyne moved & Andrea Robold seconded.

Secretary's report:

Welcome letters sent to 7 new members.

Received this month:

- 4 letters & cheque book for Treasurer from the CBA
- *Orchids Australia*, October 2018. Note that the Society got a mention for our 'creative way of displaying our orchids' at the AOCC in Windsor.
- *Australian Orchid Review*, Oct-Nov 2018 (Vol 83, No. 5)
- *Orchid Digest: The Paphiopedilum Issue*. (Vol 82-4, Oct, Nov, Dec 2018)
- *Bulletin of the Horticultural Society of Canberra*, Issue 366, Nov 2018–Jan 2019

Secretary's Report accepted: Scott Mann moved & Robyn Noel seconded

Joint Orchid of the Night in November

Joint Orchid of the Night and **Judges' Choice–Hybrid November** *Epigenium treacherianum* grown by Karen Groeneveld. [photo: Zoe Groeneveld]

Epigeneium treacherianum is a native of Borneo and the Philippines, where it grows in primary forests as an epiphyte on large branches high up in the canopy. It needs high humidity and bright light to do well. I grow it in my hot greenhouse (conditions described above), mounted on a slab of cork (I have another mounted on tree-fern, which does equally as well). It hangs high up on an A-frame shelf, where it gets plenty of light and humidity from mist sprays. It likes plenty of water, with a bit less in winter. Fertilising is managed through use of Magamp slow release fertiliser in the watering line – so it gets little, often. The long spikes of large, hot-pink flowers start to form in winter, and all the flowers open pretty much simultaneously once mature enough in the late spring.

Karen Groeneveld

Other Business

1. The President presented a number of awards to members, from the OSC annual show in September and from the Southern Orchid Spectacular held in Sydney in October:
   - From the September OSC show: Grand Champion Ribbon to David Judge, and award for Champion Display to Karen Groeneveld.
   - From the Southern Orchid Spectacular:
     - Mark Fraser: 1st prize for *Phalaenopsis*
     - Bill Ferris: 1st prize for Australian *Thelychiton*
     - Scott Mann: 1st prize for *Cattleya coccinea*
     - Mark Clements: 1st prize for Australian native terrestrial for *Pterostylis baptistii* (also Champion Australian Native for this entry)
     - David Judge: 1st and 2nd prizes and Champion Slipper; Champion Vandaceous
     - The Society won 3rd place for its display.
     - An AOCC certificate of merit is to be awarded to Karen Groeneveld for her pot of *Pterostylis nutans* x *baptistii*, which has now been formally described and renamed *Pterostylis* x *ralphcranei*, thanks to Mark Clements & David Jones.
2. The Minutes of the September & October meetings were published in the last *Bulletin*.
   Minutes accepted: Ben Wallace moved & David Judge seconded
3. November saw the sad passing of Tony Wood – a mainstay of the local terrestrial orchid community of interest, he ran an email group for many years. Many of you will be familiar with his annual walks on Black Mountain and his exceptional photographs of local terrestrial orchids. The Society is sending a condolences card, which you can sign here tonight.
4. Upcoming activities –
   - The final Horticultural Society show for the year will be held this weekend. Members are encouraged to enter their orchids in the show.
   - There will be a repotting workshop at the home of Jane Wright on Sunday 18 November. This is aimed at newer members, in particular, but all members are welcome. Please bring along orchids that you want help with repotting, and there will likely be an orchid or two that will be divided and repotted as well. Details in the Bulletin.
   - There will be terrestrial orchid repotting workshop at the home of Karen Groeneveld, in Queanbeyan, on 9 December. Bring along terrestrial orchid pots or tubers that you want to pot up, and there will be some pots to be divided to share. More information in the Bulletin and a reminder at the next meeting.
   - The December meeting will be the Christmas Party, with the usual range of fun quizzes and a plant give-away. Everyone brings a plate of food to share and the Society will provide some non-alcoholic drinks.

Next meeting: Wednesday 5 December.
CHRISTMAS PARTY

Meeting closed: 10:20 pm

Judges' Choice – Specimen November *Cymbidium canaliculatum* grown by Karen Groeneveld.
[photo: Zoe Groeneveld]

Christmas Party 5 December 2018

Our Christmas Party was great fun as usual. We ate great food provided by members and played trivia games. The plants for the prizes came from Tinonee orchids this year.

We also celebrated achievements of our members.

The annual popular vote winners were: Karen Groeneveld (Open) and Andrea Robold (Novice).

Four members attended every monthly meeting and won a prize plant: Derek Corrigan, Yvonne Day, Zoe Groeneveld and Brenda Thompson. Three committee members also attended every meeting: Bill Ferris, Karen Groeneveld and Scott Mann.

Two of David Judge's paphiopedilums received awards at the recent judge's meeting Canberra. *Paphiopedilum* Susan Booth 'Paracombe' received a First Class Certificate (FCC), which is the highest award possible. His *Paphiopedium philippinense* 'Coco' received an Award of Merit (AM). Congratulations David!

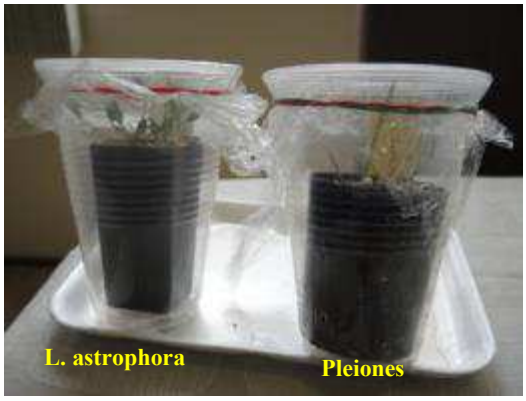
Miniature Glasshouses and *Lepanthopsis*

by Jim Brydie

At the NSW Species Orchid society auction in October this year, I purchased a sales lot that was just listed as *Lepanthopsis astrophora*. This is a cute little miniature Pleurothallid species from coastal areas in Venezuela and Colombia at elevations between about 700 & 1500 metres. As many of you would know, I grow quite a few 'Pleuros', including another *Lepanthopsis* species, and I was pleased to acquire this little rarely seen treasure. However, while this purchase did inspire me to write this article, the species itself has nothing to do with it.

The inspiration was the fact that the sales lot comprised 2 tiny, but healthily growing, baby plants that were only deflasked earlier this year. They were being sold in a pot sitting inside a clear plastic disposable drink cup with cling wrap plastic fastened over the top by an elastic band. A simple but brilliant idea.

I don't know why this lovely little improvisation struck me so much. I am a keen gardener as well as an orchid grower, and like all gardeners I have long used cut off drink bottle 'glasshouses' to strike cuttings and raise seeds. When deflasking orchids I have also occasionally protected some fragile babies temporarily by placing community pots of them into those commercially produced little plastic mini glasshouses (picture next page). However, I have never liked to leave them shut up like this for long because I reasoned that they needed to be weaned out of a flask like environment as soon as possible to help them make the adaption to the more open environment in which they must eventually grow.



I must say however, that with some of the orchids I have tried to deflask and grow on, my present methods might be described as something less than a roaring success. Especially with some of the softer orchids, and those from specialist environments like *Dendrobium cuthbertsonii*.

My precious little new *Lepanthopsis* on the other hand have probably grown an extra centimetre in the 5 weeks since the auction. They are thriving in their little closed glasshouse cup and I haven't watered, misted, or fertilised them either. The idea inspired me so much that the day after the auction, I potted up 2 little pots of *Pleione formosana* bulbils and set them up in clear plastic cups and cling wrap in the same way. I put one of those cups in the club raffle at last month's meeting, and grew the other cup on my dining room table alongside the *Lepanthopsis* and some flowering *Phalaenopsis*. I don't know what is happening to the raffle pot, but the bulbils in my retained pot have all sprouted and when I tipped them out today, two had roots over 3 cm long. That is the best I have done with bulbils for a long time. A pretty convincing methodology it seems to me.

But, does it have to be a clear plastic cup and cling wrap?

Before I wrote this article I did a google search to see if anyone else had already documented the idea. After all, there is no point in writing it again if I can ask for permission to reproduce someone else's work. I didn't find what I went looking for but boy, weren't there some interesting similar ideas. Here are just a few, pictured and discussed, that I thought you might also try.

These first few are all close variations of the same idea. For example, instead of just cling wrap across the top of a single cup, how about a second cup upside down on top of the other, and sealed with cling wrap around the middle? It gives you twice the height and

air space and you may be able to leave the orchid or cutting in it longer.

Or perhaps variations on the cut off drink bottle glasshouse by using a clear plastic cup instead of the drink bottle. The resulting mini glasshouse is smaller, but that might be an advantage if you want to share whatever you are propagating. The bottom vessel can be either a traditional plastic plant pot, or a not-see-through drinking container like one of those foam coffee cups or even just a paper based throwaway cup. In all cases the containers must naturally be chosen to fit one another.

And then, there are the more exotic, imaginative alternatives.

Now be honest, would you have ever thought you could make a snazzy mini glasshouse out of clear plastic CD containers, or even one of those CD spindle cases that you used to get when you bought a 50 or 100 blank CDs. These are just two of the ideas explored on https://balconygardenweb.com/easy-diy-mini-greenhouse-ideas-creative-homemade-greenhouses/

As you can see from the picture borrowed from the website, the CD case glasshouse is really cute. More like a sort of miniature Wardian case, and it would make a great display in the home. There are detailed instructions on the web site but it is essentially just a matter of empty CD cases and glue.

Likewise, the spindle case is simple. The black base is the part with the spindle on which the stack of CD's sits. You will need to cut off the spindle but then you have an instant top and bottom that clip together. A beautiful little tiny glasshouse.

Now when I started this article, I never intended to include deflasking or plant culture information. That sort of stuff has been included time and again and is readily available on the internet, however there is one 'culture tip' that I wish to offer that is relevant to growing in a closed or near closed air space. My friend and 'master grower' — Trevor Onslow — convinced me ages ago that in potting freshly deflasked orchids, you should sterilise the medium you pot into. Trevor sterilises bark mixes by placing the moist medium in a plastic bag in a microwave and running it on high for 8 to 10 minutes, and then letting it cool. He has found that especially with baby plants this really helps prevent damping off and rots. If you are putting baby orchids (or even other garden propagations?) into one of the mini glasshouse environments above, sterilising the medium first might be a very good idea.

Be bold, give it a try.

CD case glasshouse

CD spindle house

New Paph species discovered in 2018

The slipper orchid *Paphiopedilum papili-laoticus* found on the black market in Laos.
[Photograph: Adunyadeth Luang Aphay/RBG Kew]

The slipper orchid, *Paphiopedilum papilio-laoticus*, was discovered in a black market in Vientiane, the capital of Laos, by Andre Schuiteman, a scientist from the Royal Botanic Gardens, Kew, who described the plant as an "outstanding but gravely endangered species of great horticultural potential". That species is threatened because of commercial plant collectors illegally trading wild-collected native plants on local markets and over the internet.

The Guardian 21 December 2018

Popular Vote - November 2018

Category	Plant	Owner
NOVICE	*Miltoniopsis* Pink Cadillac	Andrea Robold
OPEN		
Laeliinae	*Leptotes bicolor*	Bill Ferris
Cypripedium	*Cymbidium canaliculatum*	Karen Groeneveld
Paphiopedilum species	*Paphiopedilum phillippinense*	David Judge
Paphiopedilum hybrid	*Paphiopedilum* Bel Royal	David Judge
	Paphiopedilum Susan Booth	David Judge
Phalaenopsis	*Phalaenopsis parishii*	Jane Wright
Oncidiinae	*Tolumnia* Ky-Elle's Dawn	Jane Wright
Pleurothallidinae	*Masdevallia* Pichincha 'Cape View'	Jane Wright
Monopodial Vandeae	*Aerangis* Elro	Mark Clements
Exotic *Dendrobium* species	*Dendrobium densiflorum*	Peter Coyne
Australian Native: *Sarcochilus*	*Sarcochilus* Glowing Embers × Kulnura Festival	Karen Groeneveld
Australian Dendrobiinae species	*Durabaculum undulatum*	Karen Groeneveld
Terrestrial: Australian Native	*Microtis parviflora*	Karen Groeneveld
Any other orchid	*Epigenium treacherianum*	Karen Groeneveld
Orchid of the Night	*Durabaculum undulatum*	Karen Groeneveld
	Epigenium treacherianum	Karen Groeneveld
Judges' Choice - Hybrid	*Epigenium treacherianum*	Karen Groeneveld
Judges' Choice - Species	*Durabaculum undulatum*	Karen Groeneveld
Judges' Choice - Specimen	*Cymbidium canaliculatum*	Karen Groeneveld

Popular Vote - December 2018

Category	Plant	Owner
NOVICE	*Miltonia* Eternity	Andrea Robold
OPEN		
Laeliinae	*Rhyncattleanthe* Bua Luang	Rob Rough
Bulbophyllum	*Bulbophyllum plumatum* 'Red Ribbon'	Karen Groeneveld
Paphiopedilum hybrid	*Paphiopedilum* Susan Booth 'Paracombe' FCC/AOC	David Judge
Oncidiinae	*Miltonidium* Guann Shin Diamond	David Judge
Pleurothallidinae	*Stelis tarantula*	Karen Groeneveld
Monopodial Vandeae species	*Angraecum didieri*	Bill Ferris
Monopodial Vandeae hybrid	*Phalaenopsis* unknown	Rob Rough
Exotic *Dendrobium* species	*Dendrobium lawesii* var. *bicolor* 'Georgie' AM/AOC	Brian & Lynne Phelan
Australian Native	*Cymbidium canaliculatum*	Bill Ferris
Any other orchid	*Coelogyne brachyptera*	Karen Groeneveld
Orchid of the Night	*Bulbophyllum plumatum* 'Red Ribbon'	Karen Groeneveld
	Paphiopedilum Susan Booth 'Paracombe' FCC/AOC	David Judge
Judges' Choice - Hybrid	*Paphiopedilum* Susan Booth 'Paracombe' FCC/AOC	David Judge
Judges' Choice - Species	*Dendrobium lawesii* var. *bicolor* 'Georgie' AM/AOC	Brian & Lynne Phelan
Judges' Choice - Specimen	*Stelis tarantula*	Karen Groeneveld

Spring Exhibition & Rose Show — November 2018

Class			Plant	Owner
65	One *Cymbidium*	1	*Cymbidium* Brown Beauty (= *canaliculatum* x *floribundum*)	Karen Groeneveld
67	One intermediate *Cattleya alliance*	1	*Brassocatanthe* Delicate Damsel × *Cattlianthe* Trick or Treat	Karen Groeneveld
68	One miniature *Cattleya alliance*	1	*Epidendrum* Topaz Glory 'Stunning Red'	Karen Groeneveld
70	One *Paphiopedilum* alliance species	1	*Paphiopedilum philippinense*	David Judge
		2	*Paphiopedilum haynaldianum*	David Judge
71	One *Paphiopedilum* alliance hybrid	1	*Paphiopedilum* Susan Booth 'Paracombe'	David Judge
		2	*Paphiopedilum* William Amber 'Tassie 'Dazzler'	David Judge
72	One *Phalaenopsis* hybrid	1	*Phalaenopsis* Pink Clouds	David Judge
		2	*Phalaenopsis* Leopard Prince	David Judge
73	One Vandaceous alliance hybrid	1	*Sarcochilus* Glowing Embers x Kulnura Festival	Karen Groeneveld
		2	*Sarcochilus* unknown	John and Lyn Edwards
74	One Vandaceous alliance species	1	*Staurochilus dawsonii*	Jane Wright
		2	*Phalaenopsis parishii*	Jane Wright
75	One *Oncidium* alliance	1	Tolumnia Ky-elles Dawn x Leanne Johnson	Jane Wright
		2	*Oncidiopsis* Highlander	Jane Wright
76	One Native Orchid	1	*Microtis parviflora*	Karen Groeneveld
		2	*Sarcochilus ceciliae* 'Pink'	Jane Wright
77	One Pleurothallid species	1	*Restrepia brachypus*	Jane Wright
78	One Pleurothallid hybrid	1	*Masdevallia* Pichincha 'Cape View'	Jane Wright
		2	*Masdevallia* Andean Adventure	Jane Wright
81	One *Bulbophyllum* alliance	1	*Bulbophyllum echinolabium*	Jane Wright
	Champion Orchid		*Paphiopedilum philippinense*	David Judge

Internet resources

Three tricks orchids use to lure pollinating insects. Lesley Evans Ogden. 2015
(BBC but this is about Australian orchids)
http://www.bbc.com/earth/story/20150202-three-ways-orchids-trick-insects

Video — Pollination of sexually-deceptive trap-flowers by fungus gnats (Diptera) in the south-western Australian orchid, *Pterostylis sanguinea*). Daniela Scaccabarozzi and her colleagues show how the mobile labellum of this orchid temporarily captures its pollinator (at 0:45–0:55). After a while, visible inside the flower, the gnat gets released (at 1:42), loaded with pollen. https://www.youtube.com/watch?v=qfm2wy61CfE

Warty hammer orchids are sexual deceivers. Ryan Phillips. 2018
While many orchid enthusiasts have a soft spot for these quirky members of the Australian flora, what has brought them international recognition is their flair for using some of the most bizarre reproductive strategies on Earth.
https://theconversation.com/warty-hammer-orchids-are-sexual-deceivers-107805

Pollination by Sexual Deception in Australian Terrestrial Orchids. Dr Rod Peakall. 2007,
http://biology-assets.anu.edu.au/hosted_sites/orchid_pollination/

Molecular mimicry and sexual deception. Zoë Tulip — including discovery of chemical combinations never before found within plants, including some that were beforehand unknown to science.
http://biology.anu.edu.au/research/molecular-mimicry-and-sexual-deception