

How do I deflask my orchids and look after the seedlings?

By Sandra Rowcliffe

Along my forty-year journey as an avid orchid grower, I have found that the greater growing effort usually delivers the most satisfaction.

When I first started growing orchids in the 1980s, I was not a member of any society, and sadly many orchids I collected went to plant heaven. After joining an orchid society in 2010, I still had losses, but as my experience and knowledge grew my successes have increased.

As with any orchid genera the most important step is understanding what growing conditions the plants grow best in and making sure your growing environment suits the various genera. Positioning in the greenhouse is of utmost importance. Anyone who can use a computer can get knowledge of growing environments through google searches. In orchid groups usually the knowledgeable members are happy to share tips, just remember to ask questions.

The next steps are understanding the care of the orchids, the potting mediums, using fertilisers, calcium, and treating pests and diseases with baits, insecticides, miticides, fungicides, (chemical or environmentally friendly) etc.

Most of my collection is housed in an 8m x 8m greenhouse which has a welded 50 x 50 steel tube frame with a high sloping roofline clad in frosted white polycarbonate sheeting, I put 90% green commercial grade shade cloth on the walls. In the 9 years since the greenhouse was built the shade cloth intensity has decreased to around 70% now. The floor has weedmat covered with river gravel.

My orchids are grown on mesh shelves as well as hanging above shelves on chains and below the shelves on hooks. I complete the watering by hand, as an irrigation system would encounter problems with the way the orchids are displayed.

From May to September, I wrap this greenhouse on the Southern and Western Walls to stop the cold breezes over winter and this keeps the interior warmer. I use "Jack" 3.0m x 4.0m Clear Medium Duty Weatherview Screen that I buy from Bunnings for \$28. It has a life of about three seasons before it starts breaking down. It has eyelets which we attach to wires running across the sides of the greenhouse by cable ties.

Initially I purchased my orchids as advanced plants, then individual seedlings. In 2013 I bought my first compot of Cattleyas and had good success with the plants when repotted.

Attending shows, I noticed nurseries with flasks, but this was still a daunting step for me to take and something that I put off for several years. Ultimately the desire grew stronger, and I wanted to have a go at growing orchids from flasks.

At the June 2017 TQO Conference in Townsville there was a flask of *Dendrobium Ruppiosum* (*Den. jonesii* x *Den. speciosum*) in the Plant Auction at the Conference Dinner. I thought that I would bid on this and surprisingly I won it for just \$28. When I took possession of this flask the agar was starting to break down, so I was advised it needed potting quickly. Yeek!! I was thinking that I would have time to adapt to the fact that I was now going to try deflasking for the first time.

It was winter and even though temperature wise it is reasonably mild in Central Queensland it was still not the perfect timing to look at completing the task. I proceeded to gather some information on how I would proceed. Following are what steps I took: -

- On my repotting bench I made a clean area which I placed newspaper on.

- I have a bottle of steriliser ready with my secateurs soaking in it.
- I thoroughly wash sphagnum moss into a bucket of water & algicide for three times.
- I filled a clean tray with warm water and added a weak solution of algicide, this is for washing the seedlings.
- I filled another clean tray the same as the above step and added the washed sphagnum moss.
- I then wrapped the glass flask in a towel and used a hammer to tap the end off the bottle, this is to prevent cuts from the shards of broken glass.
- The released seedlings are then put into the first clean tray where I agitate all the agar off the roots, being very careful not to break the roots or leaves.
- I cut off any dead roots with sterilised secateurs. It is important that all the agar is washed off to stop fungal or bacterial problems occurring.
- After the roots are cleaned the seedlings are placed onto paper towel to dry for around 15 minutes.
- I then pick out each seedling and wrap in sphagnum moss (not too tightly) and put into small seedling pots. These pots are stored in trays, where I make sure the larger plants do not overshadow the smaller seedlings.
- If you don't have room for trays, just put the plants into a compot, but remember later you will have to repot out of the compot. It is important to consider your available space when doing flasks.
- The trays are put on middle shelves in my greenhouse away from direct light, so the new leaves do not burn.
- It is important that the moss is kept moist but not saturated and never leave dry out otherwise the roots will die. I water daily in summer and every four days in winter, we get a lot of strong breezes through the greenhouse all year round.
- I use a weak fertiliser of a quarter strength to fertilise weekly to ensure good growth.
- I monitor the plants for fungus and if required use fungicide.
- The temperature ideally should be between 20 to 25 degrees Celsius - I normally deflask from mid-August. In the case of my first flask the temperature would have been a minimum of 5 degrees but with the wrapping of my greenhouse, the inside temperature would have been as low as 10 degrees.
- When the seedlings have grown to a good size, I then repot into a larger pot using a fine medium suitable for the genera, usually bark, charcoal, perlite.
- I use Plantcote slow release fertiliser on the seedlings when repotting as well as the weekly liquid fertilising.

There were about 30 plants in the flask from Townsville and I am pleased to say that I had not one plant lost. The plants were flowering two years after deflasking.

After losing a lot of Cattleyas and Dendrobiums to a condition where the new shoots died, I found out the use of calcium is essential, which is done on a weekly basis. But never mix the calcium with anything else when mixing in the watering tank otherwise it could solidify.

My orchids normally get fertilised once a week in summer and once a fortnight in winter.

It is essential to check for vermin, snails/slugs, mealy bugs, scale, thrips, mites, and aphids and treat quickly. For rats and mice, I use baits tied to the shelves. For snails and slugs, I use pellets, and for the other problems I use the appropriate control products. It is important if you spray regularly that you change the brands to stop resistance by pests.

I have since gone onto purchasing and growing flasks of many genera – Catesetums, Paphiopedilums, Phalaenopsis, Cattleya, Dendrobiums, Tolumnia. And even though I have had not a 100% success like my first flask I have grown on many seedlings from flasks. Give it a try it is something that I strongly recommend!



First flowering seedling of *Dendrobium ruppiosum* from the flask bought in Townsville.