

## *Phalaenanthe Dendrobiums* - With Ken Unsworth

My first involvement with orchids was through my father who was a foundation member of the Queensland Native Orchid Society with blokes like Les Cotton and other old-timers. That would have been around 1964 or thereabouts. He used to grow mainly native orchids and in those days hybrids were nearly non-existent. Popular hybrids such as Hilda Poxon had not been developed. I think Ellen was the first he had anything to do with. He did have a few Cymbidiums and he said to me “do you want to try and grow them”. I had always shown a little bit of interest. He said “I’ve never flowered them”. So I asked “Why are you giving them to me?” I think he just wanted to get them out of his yard. They were standards and hard to flower in Brisbane. So I went to a library, it might have been as a visitor to EDOS and got a book on growing Cymbidiums and it said that if you wanted to flower these plants in Brisbane to fill your watering can and place it in the beer fridge then pour it over the Cym late in the evening during Summer to initiate the flower spike. I did this and sure enough they flowered. When my father came around he asked “How’d you get those to flower?” and looked and looked around the bush-house.

My father always said to me that if you see plants growing and flowering well in someone's growing house have a look around and take note of how it is set up and what conditions they have achieved. So I told him what I'd done and he said he had heard of that but wasn't a beer drinker so didn't have a suitable fridge. He then gave me some speciosums, a very good *curvicaule* it came from the Eungella National Park. It was a piece that had blown off a tree and in those days the restrictions were not as tight as they are now. I think the controls that are in place now are good as some people give no thought to conservation.

He gave me many good orchids, another was *Rossioglossum grande*. A lady had that growing under a tree in Thorneside, and he saw it in flower and was so taken with it she gave him a piece. I had it for ten to twelve years when I lived at Wellington Point and it never flowered. At the time I shifted here I quickly slapped up a bush house out of demolition timber. Being in a rush the plants were just dropped in there hastily then the next year I saw this brilliant flower and thought what's that? The *Rossioglossum* was flowering beautifully so it is still there. When I thought about it the plant was on the SE corner of the bush house, it would be the coolest spot as it does not get the western sun. It flowers every year.

After I'd been growing orchids seriously for about 10 years (1985) I got into hybridizing a little bit. I started with Australian Natives. There wasn't much being done and I didn't have much success. They were most disappointing; I had never seen such a big percentage of duds. When buying seedlings the chances of getting a good one was about 1 in 10 so to increase my chances I started to hybridise my own. If I did 3 flasks I might end up with 50-60 plants and by flowering them all the chances of getting some good ones were greatly increased. I had been very critical in the selection of the plants I kept and the collection of native hybrids I have ended up with are excellent plants. The hybrids that I have made from these plants, that have been

selected out of many hundreds, produce progeny in which the number of duds is significantly diminished with 4 or 5 in 10 being worthwhile.

The first hybrid I made was a cross between Noel's Ultimate, a really old one made by a bloke called Noel Noble whose son I went to school with, and another good Phalaenanthe type. With these two good plants, about the best I could get hold of at the time, I thought this will be absolutely spectacular. After waiting 5 or 6 years for them to flower I was rewarded the worst looking lot of orchids you could ever dream of. I thought if that's hybridising orchids you can have it and I did not bother for quite a bit after that.

In 1984 my wife and I went to Thailand and I had thought to get a CITES certificate before going. It is a bit of a drama now but back then it was not as difficult. I brought in mature Dendrobiums, Vandas etc which went into quarantine. That was quite expensive but I did not lose many even though many growers warned me that they would not survive the treatment. As a result of this trip I realised that if you wanted to grow Phalaenanthe Dendrobiums you need a roof over them. Without it in Summer it does not matter but when the temperatures does not get above about 16°C in Winter and we get drizzling rain the leaves all drop and they may die altogether. About another 6 years after this David Littman came on the scene and started to show orchids at the Queensland Orchid Society and took me under his wing a little. This helped me to put together a very good collection of Phalaenanthe Dens, I used to buy three flasks of each of the Phalaenanthe crossings he made. He did a lot of crosses so that if I ended up with 50-60 plants of each cross that's a lot of Dens. It was good stuff, particularly in his early years of hybridising. I would pick out 3-4 plants that in my opinion were the best from each batch and sell off those that were still excellent



but were not quite up to the standard of those I kept. I then did further hybridising with those but if you keep hybridising with the same things they get too inbred and the gene pool starts to go to the pack. The purples were still OK but the seed count from the bi-colours and whites had decreased to the point where the pods were not viable. The remedy was to get a few other good plants; they came from George Valmardre, a few from Thailand and one or two others that introduced an

entirely new gene pool into my breeding program. It boosted the flower count and the colour but the main improvement was in the vigour in the plants.

I am flasking my own pods but buy in the agar. When I first started Allan Robinson, a well known grower in his time, showed me how to make a Glass (fish tank) flasking unit and that is what I have always used. He also told me how to make the agar mix. It was very simple; banana, the agar, 1gm per litre of Groforce or similar high nitrogen fertiliser and I think a little bit of potato (don't know why) and you would boil it up. The first year I did it the results were terrific. The next year I talked to other hybridisers (some of them rocket scientists) and started to take notice and put in a little of this and a little of that. The end result was that with my next lot it all went brown and did not even germinate. In the end I stopped making my own agar, I decided I'm not a rocket scientist, but it put me back a couple of years. I now just buy enough to make up 5 litres at a time, I add the banana, the pineapple juice and the

distilled water, alter the ph to about 5.6 - 5.7 and it is all going well. Besides the Dens I do a bit with other genera mainly Vandaceous.

My main potting mix is made up of bark, charcoal and super coarse perlite; probably 2/3 bark, 1/3 charcoal and a bucket or so of perlite. Being inert the perlite keeps the mix open if the bark starts to rot away. You should not keep your mix that long that it starts to rot away but it provides a bit of extra safety. I find I can not grow mature orchids in sphagnum moss, I think I must be too heavy handed with the hose. I hear of all these other mixes but I have never really bother with them as I like to keep all my plants in the same mix so they dry out at the same time. The only time I do use sphagnum and perlite, (I use quite a reasonable amount of perlite with the sphagnum), is when I take the plants out of flask. I find the extra moisture retention allows them to keep growing. I started off with very fine bark and charcoal even finer than what you would use in a two inch tube. Maybe I did not water them enough but they always seemed dry and did not grow well.

The first year with the sphag and perlite you could see a great improvement. Taking them out of this mix and re-potting into my standard mix does not seem to set them back. They come out of the flask in September and they come out of the community pot in September. If I leave them much longer say 13 or 14 months they start to go backwards. It must be too wet so when they do come out of the compot mix I think it must be a bit of a relief for them. As soon as they come out of the flask they get a high nitrogen fertiliser, but only a weak solution until they get used to their new environment. Up until Christmas time all the plants get the high nitrogen fertiliser and then from Christmas time until about March I alternate one week high nitrogen and one week low nitrogen. From March to the end of winter they get low nitrogen.

Phalaenathe Dendrobiums should always be confined in their pots and not over potted. When the plants are taken from the community pots they are put into two inch tubes and stay there for two years so are quite good sized plants before being repotted. This means that they are generally unstable if placed on benches so I hang mine using long wire hangers. I believe that this has the added benefits of maximising the use of the air-flow as well as the hanger serving as a solid stake to tie the canes to. With the breeze gently moving them, if they were to be hung from a length of wire they would all eventually become congested at the lowest point, so the use of barbed wire provides separators to keep the pots apart. From the two inch pots they progress to 90mm pots rather than the normal 100mm. Generally they are repotted every three years.



In my private collection I try not to tamper with them too much and do not split them up just for the sake of splitting them up. I trim the back canes off which I hang up unpotted as they have no roots. I find by doing this they shoot away and I can then put that piece into a pot. Eventually of course you get to a stage where you have no option and need to break them up to keep them manageable. Some plants tend to sulk after repotting, bigibbum is an example, so I try to stretch these out to 4 years or so as they

can stay nearly stationary for 1-2 years after being disturbed. If you leave them too long of course the bark will break down and the roots rot.

I re-pot in batches of about 50 plants at a time. These are taken out of their pots, laid on the garage floor and sprayed with a fungicide and an insecticide. This ensures that when they go into their new mix they are not taking problems with them in the way of mealy-bugs etc. I do not water for a day after potting to give the chemicals time to work and in the case of systemic pesticides to be taken up by the plants. I wear a full set of protective clothing and make sure my face mask is maintained with new filters when required. Many growers like deeper pots for their Dens but I prefer the squats. They are less likely to retain excess moisture and cause root rot.

During the warmer months I water twice a week with an automatic watering system fed with a 25mm pip and large sprinklers. The 2 bush houses are broken into two sections each making 4 in total. Each area is watered for an hour so that all the plants receive a good soaking. Also the next day after one of the waterings, fertiliser is applied at the rate of 1gm of Horticultural Solutions per litre. This takes about 800litres and is applied by hand using a watering wand. I also have under bench sprays that come on 3 times a day for 3 minutes each time to wet the gravel and maintain the humidity. In addition in summer the overhead sprinklers come on for 2 minutes at around 5 in the afternoon to cool the surface temperature of the leaves.

In regard to pest control the last few years I have been spraying more or less as needed, I used to spray each year towards the end of November when the new growths come away because its nice and green and succulent, ideal for mealy-bugs and aphids and also spray again about the second or third week in March when the Dens are in spike but the flowers are yet to open. Once again a bad time for aphids and you can get to them before the flowers would be subject to damage. I spray early in the morning before the sun is up and on them so that the spray has had time to dry reducing the possibility of burning the orchids. Last year I did not see any indication of aphids so I did not spray and had no problems. I did find a few mealy-bugs a few days ago (February 2005) and so got up early and treated all the bush houses. So my tendency now is to only spray insecticide when necessary as it not only kills the pests but all the good guys too.

In summary out of all that, for those people already growing orchids, and want to include Phalaenathe Dendrobiums in their collection, the two main points to remember are that good air movement is essential as is a roof overhead during the cool winter months. All growers should be wary of changing the way they grow their orchids. If you get good results why change? Just because I get good results in my environment does not mean that these same techniques will achieve good results in your environment.

