

## CYMBIDIUM ORCHIDS – MY EARLY GROWING YEARS

When I was asked to write an article on orchid hybridising, my first thought was while I had dabbled with various genera, it was really only cymbidiums that I had had a lot of experience with. To make my approach to this understandable, I thought I would have to tell you the history involved.

Now as many people know, if you want to make a small fortune out of growing orchids you should start with a large one. I unfortunately did not start with any fortune at all, thus nearly all of my involvement with orchid hybridising has been in areas where there is a profit to be made. I am a nurseryman and have been one all my working life, so no profit no dinner.

My involvement with orchids as part of my earning a living has varied from 100% to as little as about 15%, presently being 30% to 40% of my income.

When my father and I started Wondabah Orchids at Carlingford, we had the land and business acumen and I was the nurseryman. During the boom years when cymbidium plants changed hands for very large sums of money, prices of up to £1000 were paid for a single plant. While it is difficult to compare prices, it would have equalled approximately \$50,000.00 (fifty thousand dollars) or more in today's value. For example at that time I purchased a bit over 3 acres (approx. 1 ¾ hectares) of land on the main road at North Rocks at a price of £1200.00, I thought I would never pay it off. We realised that this was a bubble and would ultimately burst. We had been bringing in a small number of seedlings from England, they were difficult to obtain – such was the demand. We decided that to survive in the future we would have to breed and raise them ourselves.

Now raising orchid seedlings at that time was a completely different procedure to modern day practice. There were a few hobbyists who were doing it for themselves, and they were kind enough to teach me their methods.

There were no 'clean-air' cabinets, thus no green-pod culture, and very fundamental growing formulae. The seed pod was allowed to ripen; the seed was then extracted and dried. It was refrigerated till sowing time. This was done as soon as possible; however, the seed would remain viable for a considerable time, and was often posted to other parties. The growing media was the basic Knudsens C formula. The seed was sterilised in a solution of calcium hypo chloride, and then, usually in a bathroom that had just been filled with steam using the hot shower, set in erhlenmeyer flasks. There was no replating (as no clean-air cabinets) so the correct amount of seed had to be placed in the flask using a platinum loop set in a glass rod. The loop was sterilised using some form of flame, in our case a methylated spirit lamp, as we had no city gas, and there was no LPG at the time. If everything went well, there was usually not a lot of infection. The plants took quite a long time to grow and were usually fairly small when taken from the flask. The upside was there was a ready sale for seedlings when they were big enough to sell. This usually took about 18 months or more from deflasking, compared with 12 months today for a far larger plant.

Now at this time our primary interest was brightly coloured flowers. One of our more successful crosses was 'Sensation', which is 'Spartan Queen' x 'Fascination'. The first came from McBeans, the second from Armstrong and Brown, both English nurseries. This was an interesting cross and taught me quite a lot about hybridising. The flower spike of the 'Spartan Queen' came out parallel to the ground, so if the plant was a little below the top of the pot, the spike would not make it. The spike on the 'Fascination' came out at about 45° to the plant. A percentage of the progeny produced spikes at 45°. I realised to counter a fault in one parent it was necessary to over compensate with the other parent. We still do this today.

Around this time the export market for cymbidium flowers was starting to grow quite quickly. Most were going to the USA where the demand was for white and pastel colours. This put a damper on our colour breeding. We started to use the clone Balkis 'Luath' as a parent. This was an off-white flower which when combined with colours toned them down to the required pastel colour. It produced free-flowering plants with a spike habit that suited the floral trade. It was at this time I learnt another lesson. There was a pretty pink called 'Madder Rose'. Now it had a fault, the labellum was badly pinched. I had been pre-warned this fault would carry

through to the progeny. An older more experienced person, whom I knew had had the very same experience. However I was still at the age where I knew everything, and was sure the quality of the other parent would overcome this fault. WRONG.

The practice of mericlone had arrived and the scene changed again – radically this time. High prices became a thing of the past, and the export boom was gradually coming to an end. It was at this time I decided to make, what I think today is called a lifestyle change. I decided to go wholesale and started the nursery where I am today plus a second in the next street. The lifestyle thing was to work only 4 days a week. I decided that I worked to live, not live to work. At this time my involvement with orchids was at its lowest.

We concentrated on Indoor foliage plants and Ferns, which were entering a boom time. As with all booms it also ended in time, but fortunately there is presently still a good market – albeit a lot smaller. Having got back into orchids we worked ourselves into a good position. In 1995 I sold the second nursery and started to concentrate more on cymbidiums.

With mericlone came the ability to change diploids to tetraploids with the use of colchicine. This opened the way to modern cymbidium hybridising. It should be explained that till this time you had diploids which carried colour well and a limited number of tetraploids which were mostly pale colours. When mated the results were triploids, which do not breed, so were the end of the line. I sent a number of the better coloured clones to the South Australian laboratory that was doing the conversions, and the results, when they flowered, were nearly all tetraploids, and I was able to move on again to breed high coloured quality clones. As I had backed away from growing for the export trade I found there was a ready market at the retail nurseries for cymbidium plants in flower. The market was for good colours on good looking plants, as they were being used for indoor decoration. When we took up breeding in a bigger way again, this was the market we aimed for. During this time I did some breeding with varicosum type oncidiums. We had good success and bred some really nice oncids. Unfortunately the demand was very limited. They were all yellow and all flowered at about the same time. I decided to leave that field alone.

As the demand for flowering cymbidiums increased, so did the retailers requirements. Colour, floriferousness and spike habit had to be considered. Spike habit was important, and had to be fairly upright so they could be transported and handled easily. Shape had its place too, even the person buying for floral decoration could tell good from inferior quality. A good number of crosses were now being made due to the advent of laboratories set up to raise orchid seeds. This opened the door to everyone. I have always confined my efforts to a limited number of crosses that I feel really have potential.

There are just a few clones that come along that move the standard to new heights. One of these was originally a diploid – Lunagrad ‘Elanora’. This was converted to a tetraploid. It is green, but amazingly is behind some of the finest reds and yellows. The yellow side started when Lunagrad was crossed with Wallara ‘Gold Nugget’, which was a fluke tetraploid cross. One of the progeny Lunara ‘Gold Star’ has been the basis of many fine yellow crosses. We have had good success with this line.

The red side started when Lunagrad was crossed with Alvin Bryant to make Cronulla. The clone ‘The Khan’ was outstanding. It was crossed with Yowie Flame to make Khan Flame. This crossing is in the background of many, if not, most of the red and brown crosses.

The red/pink section of standard cymbidiums is fast approaching their zenith. There is little room for improvement shapewise. In the future clarity of colour, spike habit, especially the placement of flowers on the raceme, and freedom of flowering is where any improvements will be made.

Yellows are quickly improving. Pure colour whites, presently the most requested colour by the retail nurseries, are getting there slowly. The colour that is also in demand is green with red labellums. This is a colour combination that is always popular but seems to be rarely available to the trade. There are many nice intermediate clones available. I believe the way forward is to improve the standard parent then go back to the known miniature parents.

Crossing intermediate to intermediate seems to increase the plant size of the progeny. This is not what it is all about.

Now there are many fields of cymbidium breeding that we have not touched. Many are interesting but do not fit in with a commercial operation. The progeny of Devonianum are just marvellous. Sarah Jean 'Ice Cascade' has apparently sold more plants than any other single clone, as it should, as it is a very rewarding plant.

Now I should add at this point that there is a lot of luck in orchid hybridising. Even when all the characteristics of the flower and the plant are deemed worthwhile, there is still the reality that by making only 250 plants from a seed pod containing 250,000 seeds, the chances of flowering a champion are quite remote, in fact the odds are one in a thousand. However it is really good fun, and the interesting part of the year is watching the new plants coming into flower for the first time.

With the absence of a retail orchid nursery in the greater Sydney basin, and with many inquiries as to where to purchase orchid seedlings, we have decided to supply the retail market with plants. This is our 4<sup>th</sup> year in operation, and we have put out a catalogue each year listing our new seedlings and mericlones. Our nursery, trading as Keith Wallace Pty.Ltd. is at 23 Vineys Lane. Dural, in the north-west of Sydney, and we will be open for sales from May 2010.

Gordon Giles.