

Some thoughts on *Dendrobium speciosum*

By
Ted Gregory

The very mention of the word *speciosum* is enough to start me reminiscing back to the late depression to when our rain-forests were being felled endlessly to expand the dairying and beef industry, and after this came the Second World War which sped up the process even more. In those days orchids were of little or no value and were just left to rot or be burnt by the following fires.

As most of us know by now *D. speciosum* is now divided into six varieties by the botanists for various reasons. The varieties are as follows: *D. speciosum* var. *speciosum*, *D. speciosum* var. *hillii*, *D. speciosum* var. *grandiflorum*, *D. speciosum* var. *curvicaule*, *D. speciosum* var. *capricornicum* and *D. speciosum* var. *pedunculatum*. I propose to deal with each of these individually as I go along and also to throw in some thoughts and experiences on breeding with these most beautiful orchids. As I have often said if the Americans had this orchid in their backyard it would have been number one in the world years ago. But being a nation of knockers that we are I find that *D. speciosum* is only just starting to get the recognition and attention it deserves.

Dendrobium speciosum* var. *speciosum

This superb orchid occurs from just below the Victorian border and runs fairly continually north to Alum Mountain on the central coast of NSW, where there seems to be a rather definite cut off point. Its main habitat is the rocky eastern escarpments of the Great Dividing Range that skirts the coast in this part of Australia.

It is not often seen growing on trees these days; but I often suspect it would have been rather common on trees in those beautiful rainforests on the south coast of NSW that white man so quickly destroyed. One of the favourite memories of my childhood is of the fabulous musky perfume that pervaded the Hawkesbury River escarpments in the spring evenings when countless thousands of these plants were in bloom.

Dendrobium speciosum var. *speciosum* is a very robust grower, with rather short heavy canes tapering quickly from bottom to top with normally three or four leathery leaves near the apex. The flowers of var. *speciosum* are normally a light creamy colour, with the odd clone producing deep yellows and pure whites. The average flower would be around 40mm from top to bottom with odd ones running to double that and over. This is one thing a lot of us are inclined to overlook that is the fact that there may be a million clones of *D. speciosum* out there, but they are all seedlings and hardly any two of them are exactly the same when one gets down to close examination.

One of the strongest features of var. *speciosum* from a plant breeders point of view is the strong, fairly upright raceme. To this one can add the fact that the flowers are usually well spaced on the raceme.

In my experience most of the breeding and hybridising that has been done with Australian orchids concerning *D. speciosum* has been done using var. *speciosum*. Whether its potential is fully exploited or not as yet in one of the questions that will plague all interested orchid growers for a lot of years yet in my opinion.

Even though I love hybridising our Australian natives I am rather more interested in improving the species. This is a field I think all orchid growers should become involved in Mother Nature was doing a fairly good job here till 200 years ago but from now on, the rest is up to us. I guess a lot of people would class a person as a first grade idiot to be growing *D. speciosum* seedlings that will take years to flower when you can buy a large plant off a dealer for a few dollars. But here lies one of the great differences for the future. What are the chances in nature of two top clones mating? Perhaps one in a thousand! This is where the great improvement will occur in our orchids, by selective breeding we will have much superior parents to call on, this in turn will lead to much improved hybrids - even primaries.

At the moment it is hard to say what will happen with crossing between the different varieties of *D. speciosum* a few have been done but not many flowers have been seen as yet. One case that comes to mind is that of *D. speciosum* var. *speciosum* 'Ermine' x *D. speciosum* var. *grandiflorum* which was done years ago by friend Harry Klose. 'Ermine' is a large white from the Wattagans, with a lot of purple on the labellum. The var. *grandiflorum* was also a

good form of its tribe. The results to date have been outstanding.

Dendrobium speciosum* var. *hillii

Having grown up in the foothills of Barrington Tops area this was one of the first orchids that I was to become familiar with. The fact that they were just called rock lilies yet grew on trees did not cause me any headaches at all in those days. At one stage I had to walk nearly three miles through the bush to school and have many memories of the white cascades in the heads of many of the brushwoods along on the way in the spring. I also have memories of the same walks in the winter, when it used to be getting quite dull before we were let out of school.

Starting in the Barrington Tops *D. speciosum* var. *hillii* continues north to about the Brisbane area after which it gives way to var. *grandiflorum*. *D. speciosum* var. *hillii* is much more an orchid of the rainforest than var. *speciosum*; which in the main always showed a preference for the rocky outcrops. This applies along the coast and well into the ranges but on the inland side of the ranges there are many var. *hillii* happily growing on the rocks too.

D. speciosum var. *hillii* on the average is a much taller grower than var. *speciosum*, with canes of a metre or more not uncommon in areas where the plant is growing in heavy brush. It grows into huge specimens under favourable conditions. I have seen clones that would fill the back of a small truck growing on big strangler figs and corduroy beeches.

I have often wondered if the length of cane is more or less controlled by the plants need to reach sunlight. As I said earlier it is not uncommon for plants growing on trees with a dense canopy to have canes a metre in length. Yet I could walk half a mile to a bare escarpment where the same var. *hillii* were growing as lithophytes; as squat and compact as any var. *speciosum* ever was.

I have all the known varieties of *D. speciosum* growing in our nursery and I am now developing a suspicion that plants grown under the same amount of light over a period of years tend to develop canes of the same length. This of course is a rather loose statement, as plants of var. *pendunculatum* will never quite get the length of *grandiflorum*. But any one who cares to look at our plants and compare the ones that have been shade house grown for years to recently collected plants can see a talking point. This point will be clarified in a few years as we are growing all the forms of *D. speciosum* from seed in our nursery.

The flowers of var. *hillii* are quite small in comparison to var. *speciosum*; but in my experience a plant of var. *hillii* grown in the same conditions will generally have more racemes per cane. Normally var. *hillii* flowers do not open very widely: in fact 25mm is quite a good flower and usually the spike is very crowded and rather drooping as well.

Colour is usually white changing to cream as the flowers age.

However there are some clones that open very well and also have very upright habits, in fact the best clone I have for habit comes from the inland limit of its range. I also have one clone that was given to me as a seedling from Woko in NSW that has large flowers as well spaced as a normal var. *speciosum*

Being a longtime fan of *D. X Delicatum* has perhaps given me a bit of an insight into what to expect in breeding so here goes.

In comparing natural *D. x delicatums* made with var. *speciosum* and var. *hillii* I find the only great difference is in the size and shape of the cane in the hybrid. The var. *speciosum* progeny have a much stouter cane than those produced by var. *hillii*. The ones I know of from Alum Mountain have slightly larger flowers on the average but some of the var. *hillii* progeny I have, show that no rule is without exception. Another interesting point is that many of the var. *hillii* progeny have just as upright spike as the one with var. *speciosum* parentage.

One interesting sidelight to our breeding is the fact that we are discovering clones that produce hybrids that flower much more quickly. Here is one more facet where a little more brain power would come in handy. Think of all those clones that no one has bothered to use and think of the gene pool that we may never tap!

Since coming to Tamborine Mountain I have had a bit of a chance to study var. *hillii* on this end of its range, which is regarded as being close to its northern limit - which has given me a chance to compare it with the forms from my old stamping ground on the Hastings Manning area of NSW. After all this I think I may be more confused than when I started and begin to ask myself are there such definite cut-off points between the different varieties of *D. speciosum* as some people suggest or do they gradually merge into one another as they exist up and down the

length of the Great Dividing Range? The following are a couple of examples that immediately spring to mind.

I have viewed quite a few clones on the mountain here over the last couple of years and although most of them are what we would call straight var. *hillii* a few appear to me to be more or less intermediate between var. *hillii* and var. *grandiflorum*. There is one locally collected clone in a garden on the mountain here that is a fairly deep yellow with flowers larger than most var. *hillii* I have known and that are spaced out more like var. *grandiflorum*. I have also seen clones growing on the western cliffs as lithophytes of a very similar appearance. Also, on the average I find the foxtail of flowers up here greater in diameter.

I have not set foot in the bush in the Cunninghams Gap area as yet, but as I drive through the Gap on my way south, at the right time of year, up on the rocks above the highway I can see many clones of *D. speciosum* all of the deepest gold, and a deep colour right from the word go. They look superb through binoculars, one of these days I must hope for an hour to spare and get a closer look.

Dendrobium speciosum* var. *grandiflorum

I thought the *D. speciosum* from Alum Mountain and the Hawkesbury were the peak of perfection, but after a few years and a few friends up here I am not nearly so sure! I think any southerner would be a little moonstruck at his first sighting of a good var. *grandiflorum* especially if it was a deep golden one.

This was the first thing that I learnt about var. *grandiflorum* for every deep golden one there are an awful lot of deep creams and yellows. In this regard all varieties of *D. speciosum* have this in common: that is the fact that the flowers will range from downright ordinary to purely fabulous.

D. speciosum var. *grandiflorum* occurs from around Nambour and at least as far north as Miriam Vale which seems to be about its northern limit. The plants are very similar to var. *hillii* in appearance except when in flower, with canes ranging from squat to well over a metre tall, depending to a great extent on the amount of light received by the plant. I have a few clones at the moment that I have swapped for with friends who have the time to do a bit of serious study and collecting in the bush. The plants may look like var. *hillii* but once the plants begin to flower there is quite a difference. The scrapes are so long and heavy that most of them arch over and some are definitely pendulous: I have seen a few that are like a giant banksia in habit and very effective to my eye at least. Also some have a very upright raceme which catches my plant breeders eye and sets me wandering off to the future, with visions of that perfect flower. The flower on most var. *grandiflorum*s are inclined to be a bit bunchy, but some clones combine that upright spike with a large and well-spaced blooms. In fact I have a couple that are well arranged as a good var. *speciosum*.

The flowers can run from around 40mm (which would appear to be a fair average) to well over 80mm on exceptional clones. I was lucky enough to be given a clone that regularly carries a raceme a full 600mm in length and flowers just over 70mm. And this on a division not long out of the bush! I wonder what a plant such as this is capable of when it really gets going?

The flowers on many var. *grandiflorum* open and set very nicely (wide and flat) as long as one gets sunny weather as the flowers are opening. If the weather is dull they will set in a more or less half open position, which rather spoils their appearance for show.

Maybe it is something to do with my culture; but I have found that for me var. *grandiflorum* is a very regular flowerer, with some clones flowering heavily every year as against var. *speciosum* and var. *hillii* that are inclined to be more biannual for me, making a lot of growth one year and flowering well the next time round.

I wonder just how dominant the golden colour is in var. *grandiflorum*? In theory, if it is as strong as it looks, one could mate it with an albino *D. kingianum* and get yellow or gold *D. x delicatums*!

Anyhow, I thought it well worth a try, so I did the bee act with the richest golden clone I could find and a very nice *D. kingianum* that gives every appearance of being an albino. The progeny are all planted out now (planted out in November 7) and are thriving, so hopefully we will see a new colour range in the old faithful cross in a couple of years time.

In straight species improvement we should see some fabulous colours from matings of top forms too.

The only inhibitions I have regarding these plants are as follows: will the length and weight of the racemes of this

variety produce flowers that may droop and thus offend the judges in the resulting hybrids?

And will the results be cold-tolerant? This is of prime concern to southern growers and I hope most of them will give it a go as the saying goes.

D. speciosum* var. *curvicaule

As we work further north along the coast of Queensland to the Mackay region the form of *D. speciosum* again changes quite a bit and becomes known as var. *curvicaule*: and this is the variety that carries on up to roughly the foot of Cape York.

D. speciosum var. *curvicaule* is quite often different in the shape of the canes when compared to the southern forms of *D. speciosum* in the fact that these canes taper from either end. In the old days we used the word fusiform to describe this shape. (Hope it's still current) The canes are also often rather flattened rather than round as other *speciosums*.

I have many clones of this variety that have quite strong colouration in the sheathing on the new growths, this fades as the sheaths dry out but is noticeable enough for some weeks.

Under Tamborine Mountain conditions I find var. *curvicaule* will make huge growths in the bushhouse and is inclined to be very much bi-annual in flowering for me, making many growths one year and flowering very freely the next

In my limited experience pure white flowers are more common in var. *curvicaule* than the other varieties of *D. speciosum* although the colour range is otherwise typical of all *D. speciosums*, ranging from white through to cream and yellow. There may be deep golds up there as in var. *grandiflorum* but I have not been lucky enough to see them as yet.

Spike habit is very similar to var. *speciosum* ranging from semi-arching to very upright. Some of these have just about the most appealing arrangement I have seen in this great family of orchids.

The flowers in general are not as big on average as those of var. *speciosum* and var. *grandiflorum* - around 30 to 40mm normally - but with the odd hero up to 70mm or more. The flowers appeal to me with their more rounded segments than the varieties mentioned above and make me wonder what will happen in our hybrids when more clones are used and proven out.

A clone of this var. *curvicaule* loaned to me by Harry Klose is just about the best textured flower of any *D. speciosum* variety that I have had anything to do with up till now, lasting twice as long as most of my other clones. Flowers are only normal cream in colour but well spaced and large. The poor thing is always loaded with pods but still does extremely well.

A couple of years ago I crossed two lovely clones of var. *curvicaule* and as usual I got about a million seeds and proceeded to grow a cartload of them. I have trays of var. *speciosum*, var. *grandiflorum* and var. *curvicaule* sitting side by side on the benches plus one inter-varietal and each variety has shown differences right from planting out. The var. *grandiflorum* seedlings have grown by far the quickest followed by the var. *curvicaule* with var. *speciosum* running a definite last. The var. *curvicaule* seedlings have one outstanding feature when compared to the others in the fact that they all show strong pigmentation, the same as one gets in adult plants of var. *pedunculatum*. Whether this will fade as the plants grow only time will tell.

The inter-varietal mentioned is between one of the best var. *speciosums* and the best var. *curvicaule* that I have yet seen, and by the growth of the seedlings there definitely seems to be a hybrid vigor there. They are twice as big as their straight neighbours on the bench. Having been born an optimist I am looking forward to seeing them flower and produce so-called super *speciosums*!

Even a lot of our cool-growing native hybrids such as *D. Bardo Rose*, *D. x delicatum* and so on may produce different features when remade with these different varieties of *D. speciosum*, especially if a better clone is used on the other side.

D. speciosum* var. *pedunculatum

In the days before Steve Clemesha sorted the varieties out this jewel of an orchid was just known as *D. speciosum*

var. compactum.

D. speciosum var. pedunculatum is unusual that it goes over the Great Divide more so than all the other varieties that are more inclined to favour the eastern side of the range. The Atherton tableland Herberton area is the heart of *var. pedunculatum* country, though I believe its range extends as far north as the Palmer River.

The name *var. pedunculatum* is very apt for this variety, as it describes its most important feature, the peduncle. Which, in common language, is the stalk that carries the head of flowers on the plant. In other varieties the peduncle is usually only up to 100mm long, but in *var. pedunculatum* it can be anything from 250mm to over 500mm!

Next to its peduncle the most outstanding feature of this variety is its size, or the lack of it! Many clones never produce a cane over 50mm in length, whilst an odd giant might make almost 200mm.

As one would gather from the dwarfish appearance in general *var. pedunculatum* grows almost exclusively on exposed rock faces, mostly in full sunlight where over millennia it has learnt that small is beautiful when it comes to controlling moisture loss in an environment that can be very harsh at times. The plants are rather dwarf overall, every compact in fact the canes on some of the very small clones sometimes look very like a small potato. On the larger clones the canes taper from either end as does *var. curvicaule* I find also that clones of *var. pedunculatum* that have been shadehouse grown for a number of years are gradually producing proportionally longer canes. Whether this is shade or just a better food supply I cannot really say, perhaps it is a little bit of both. On Tamborine Mountain I find that *var. pedunculatum* is not happy sitting on a bench even though my benches are chest high but prefers to be right up against the saron where it gets as much sun as nature can provide.

One feature of *var. pedunculatum* that I regard as unique is that it will flower for years off the mature growths but only from the apex of the cane. I have yet to see a genuine *var. pedunculatum* flower from anywhere but the apex eye.

Most clones of *var. pedunculatum* are rather heavily pigmented; some showing a rich purplish shade on the new growths, the flower scapes and the underside of the leaves. This could be caused by the forms' exposure to so much intense sunlight in nature. In shadehouse conditions I find it disappears from some plants over the years. In my conditions I find the plants of *var. capricornicum* from the Carnarvon area retain more coloration than the *var. pedunculatum* does.

There is no doubt about *var. pedunculatum* being dwarf in habit but no way are the flowers dwarf when they emerge! I have seen flowers from white through to cream but none of the yellows or golds that show up in the other varieties. Perhaps they are out there but I am yet to see them. To me there seem to be two different types of flower on *var. pedunculatum* one that does not seem to open very well and the other opening to a large flat flower of great appeal.

This is the form that interests me greatly as a hybridist I think a whole new field lies hidden in the makeup of this variety. When trying to evaluate a variety of *D. speciosum* the first thing I like to do is to make *D. x delicatum* with it. This is a hybrid that we all are so familiar with that we can use it as a yardstick to see if there are any different qualities in the new parent. We have already learnt that *var. pedunculatum* allows the colour of the other parent to come through strongly and can produce very large flowers.

Whether it is general in this form or not I cannot say as yet but we do know that some clones of *var. pedunculatum* will produce hybrids that flower in less than two years from flask, which is quick in my culture for a *Dendrocoryne*.

I also have a penchant for dwarf-growing plants. I think there is great charm in a compact plant covered in flowers. I have always admired this type but never got around to doing anything about it until my interest was jogged again by orchid breeders from Japan visiting our nursery and going into raptures over plants of *var. pedunculatum* and *D. kingianum var. pulcherrimum*

Dendrobium speciosum var. capricornicum

This was the last variety of *D. speciosum* to be described by Steve Clemesha in the *Orchadian* and as it is the one I know the least about I thought I would leave it till last.

As with *var. pedunculatum* the name is apt and self-explanatory as this orchid grows in a deep belt from the coast in

to the Carnarvon Gorge along the Tropic of Capricorn.

To me as a deeply interested orchid grower it seems difficult to define a typical variety of *capricomicum*, as within its stated area there are forms that appear to me to be that different from each other as to be awkward to be all put under the one banner.

Over the last nine years I have seen a lot of plants from this area which gives me a little more confidence than I should have to talk on them, as I have yet to visit this area of Australia and I hate commenting on things that I am not familiar with. There are a lot of dedicated Australian native orchid growers in this area (south-east Queensland) who have had long experience in Northern Queensland and are very methodical in the tabulating of their collections. Their experience I am making use of here. I will deal here with the two forms that I am most familiar with. Some of these were given to me years ago in New South Wales and are well known to me.

The Carnarvon Gorge form itself has a wide range of flower habit even though the clones from there all look similar to me. The plants I have seen are mainly fairly compact in habit rather like the larger forms of var. *pedunculatum* than var. *curvicaule*. Here again the very harshness of the climate would accentuate the compactness. All the clones I have of this area are pigmented to some degree, one in particular being the heaviest pigmented clone I have yet seen.

Some plants flower with a heavy scape of large, well-shaped blooms that one would be hardput not to mistake for var. *speciosum* - and with virtually no peduncle. At the other extreme there are clones with the peduncle and flowers of true var. *pedunculatum*. The range is rather incredible for just one area.

The more coastal forms in this range are more like a scaled down form of var. *curvicaule* to my eye, tidy compact plants quite often with slightly fusiform canes and not much pigmenting in the ones I have seen.

Most of these have very good habit: nice upright spikes and well-shaped flowers, very much like var. *curvicaule* with nicely rounded segments. Most of these have a peduncle of good length and carry their flowers high. I have also noted that there are a high percentage of these with clear white flowers. Where as the Carnarvon form has mostly creams and an occasional good yellow.

One thing that interests me as a breeder with this coastal form is its early flowering habit. I know clones that flower regularly late May and early June down here. I would love to know if they flowered the same time when they were in situ. If this early flowering is at all transferable we should be able to increase the length of the flowering season of our hybrids in future. We already know that these forms produce tidy compact plants. And hopefully nice flowers next spring as well.

Acknowledgements

My thanks to all the orchid growers who, over the years, have taught me most of what I know. A tinge of sadness here, as I realise how time passes one by and how many of these friends have passed on over the last few years.

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