



Group Facilitator—Allan Watson

aj.watson@xtra.co.nz

Group Editor—Alan Locke

lochaven999@gmail.com

8 Grey Street,
Kihikihi

Te Awamutu 3800

Ph 078713721

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Message from the Group Facilitator: Allan Watson

Miltoniopsis: What a difference a year makes?

Last year I was lucky enough to have an article published in the OCNZ year book the article was entitled “Miltoniopsis Gets a Rebirth” Not realising what door had been opened and what progress could be made. In conjunction with long time orchid grower Alan Locke it was decided that joining the social media set may be the way to go to generate some interest in Miltoniopsis in New Zealand. So a facebook page was created with the view that the two Al’s would be facilitators in the process and not manage, control or direct. Although we did these things in the initial phase to generate interest and start meaningful conversations. In part we applied the principle of from humble beginnings. This page while titled NZ Miltoniopsis Growers has attracted interest and input from around the world. Sharing, those real time experiences providing both interest and added value for those not interested in the social media platform a newsletter has been generated and sent out to those who wish to receive it.

One of our original objectives was to find out where the Mps collection of the late Euan Perrot had got to, as we noted that he had undertaken a number of registered crosses and the names of these do not seem to appear in any general collection.

In part we have been successful (The names of those in possession of these plants will remain private at their respective owners request). Our, next objective is to obtain photos of these plants in flower and if possible mericlone them so they can be circulated to the wider Mps growers in NZ.

Mps. Aotearoa, (Mps. Zorro x Mps. Capitola) 2. **Mps. Meryan Leigh**, (Mps. Dumas Bay x Mps. Nancy Binks) 3. **Mps. Sleeper**, (Mps. Memoria Scottie Griffiths x Mps. Capitola) 4. **Mps. The Universe** (Mps. Harold Ripley x Mps. Demie de Pas) 5. **Mps. Whale Bay**. (Mps. Pam's Bay x Mps. Grouville)

Miltoniopsis awarded in 2017. (At the time of printing we know of one being awarded in 2018)

Only one Mps was awarded by OCNZ Judges that was Mps Taranaki Pride AM/OCNZ. The awarding of this plant raised a couple of interesting issues:

The original plant was not registered therefore an application had to be made to RHS to register before it could be awarded and;

When submitting the breeding it was noted by RHS records that Mps Charlesworthii as part of the cross which was on the original plant label was indeed a ‘cultivar’ name given to Mps. Jules Hye de Crom and only corrected as a result of the computerisation of the RHS data base.

If you grow Mps please present them for judging even if they bloom out of the show schedule as Judges welcome the opportunity to judge something different. If you have had one awarded please let's know.

Editor's Ramble.

A Hobbyist view of breeding Miltoniopsis.

One of the problems facing people wanting to grow Miltoniopsis is the limited number of plants available in this Country. This has been further compounded by MPI (border control) separating them from Miltonia—which were allowed in—into Miltoniopsis which at this stage, are not.

So, what to do—put up with existing stock or breed our own. This usually brings a cry “that we don’t have plants of good enough quality to make this viable”.

While we don’t have a great range of plants, we do have those that have been imported for the pot plant trade and the qualities that are required for this trade will suit us admirably. The qualities that they are looking for are:-

- A) Vigorous growth and good disease resistance.
- B) Ability to flower well on the first or second growth.
- C) Floriferousness. Ability to produce 2 spikes per growth and at least 3 flowers per spike.
- D) Strong spikes, held above the leaves and needing minimum staking.
- E) Large, flat flowers, well presented, with good clear colours and attractive markings.

These are all characteristics that we are looking for, so we do have a range of ideal plants available.

The next question raised is “ploidity—how do we know whether we are dealing with 2n, 3n or 4n plants—3n won’t breed and crossing 2n and 4n will result in 3n seedlings which won’t breed another generation.

In answer to this I go back to the Mansell and Hatcher Odontoglossum catalogues of the '80's. The description of the crosses often read “one of our latest crop crossed with one of our proven breeders”. In other words they were crossing unknown breeders onto known breeders thus limiting the chance of one being 3n to 50%. To cross 2 unknown breeders would raise the risk to 75%. There is still the risk that some crosses will result in 3n seedlings but at least we will be a generation further forward.

How can we use this information? If you have access to a program like Orchid Wiz, you can research the plants that you want to use to see if they have been used to successfully breed. Unfortunately, only the crosses that have been named will be documented, but at least you will know that that plant is fertile and has produced worthwhile results. You may find that you are able to remake some of these crosses and so improve your chances of a good outcome if you wish you go this way.

Which to cross with what? If you want yellows then you have to use yellow parents. You may get yellow by crossing yellow with white but crossing yellow with red is unlikely to produce orange or yellow. To get waterfall patterns you will need to use waterfall parents although using a waterfall parent with a plain parent may give a percentage of waterfall seedlings. Mps. phalaenopsis is credited with creating the waterfall patterns however, if you are looking to breed waterfall types, you need to use at least one waterfall parent, the mere fact that it has Mps phalaenopsis in its background is not enough to succeed. Having selected the pod parent which should be a strong mature plant, look for a pollen parent that will enhance its strengths and counter its weaknesses. You can use similar or completely different colours—the results will be less predictable with different colours. Going by the pictures in OrchidWiz, many crosses produce a range of colours far greater than might be expected from the parents used. Don't put more than 2 pods on one plant.

When to pollinate. Usually 1 to 2 weeks after the flower is fully open, later may still work but tends to be less reliable. Pollen should be taken at about the same stage and can be stored in the fridge—wrap it in paper and label with the name and date and put it in a lidded jar. It should be good for at least 3 months.

After pollination and if the pollen takes, the column will thicken and the flower collapse. If after a month it hasn't dropped off, it is probably successful. 9 months after pollination—you recorded the date when you did it—didn't you? - you can harvest the pod and send it to the lab. More about that in a later issue.

Miltoniopsis phalaenopsis



Milt. Phalaenopsis Okika
[G.Barfield]

Miltoniopsis phalaenopsis

Miltonia, ph

ORIGIN/HABITAT: Colombia. Originally found in central Colombia on the western slopes of the Cordillera Oriental near Ocana. Plants also grow near Velez in humid, temperate forests at 3950-4900 ft. (1200-1500 m).

PLANT SIZE AND TYPE: A 6-12 in. (15-30 cm) sympodial epiphyte.

PSEUDOBULB/STEM: Up to 1.5 in. (3.8 cm) long. The rather small, pale green pseudobulbs are egg-shaped, strongly compressed, and completely hidden by sheathing, leaflike bracts.

LEAVES: To 12 in. (30 cm) long by 0.2 in. (0.6 cm) wide. A single, pale green, linear leaf is carried at the apex of the pseudobulb. The leaves taper to a pointed apex and are longitudinally folded at the base.

INFLORESCENCE: Somewhat shorter than the leaves. The scape, which is slightly flattened, emerges from the base of a recently matured pseudobulb along the axil of a basal sheathing bract. Two flower spikes may be produced by each flowering growth.

FLOWERS: 3-5. Blossoms have white sepals and petals that open flat. The lip is also white with bright red-purple streaks and blotches on the lateral lobes and mid-lobe. The callus at the base of the lip is yellow marked with fine reddish lines. Flowers are 2.0-2.6 in. (5.0-6.5 cm) across. The sharply pointed, egg-shaped to oblong sepals are about 0.8 in. (2 cm) long by 0.3 in. (0.8 cm) wide. Petals are broadly egg-shaped to oblong with bluntly pointed tips and are 0.8 in. (2 cm) wide by 0.5 in. (1.2 cm) wide. The spreading 3-lobed lip is 1 in (2.5 cm) long by 1.1 in. (2.8 cm) wide across the widely spread midlobe. The lateral lobes are somewhat smaller than the midlobe and rather round. The larger, widely spread midlobe has a deep U-shaped notch in the center of the apical margin, giving it the appearance of being made up of 2 rather square lobes. The callus at the base of the lip is made up of 3 small blunt teeth. The small, erect column has very short wings near the apex.



Mps. phalaenopsis f. alba [P. Ortiz]

The Species Heritage

Miltoniopsis phalaenopsis

This species has been the third most used in hybridizing with 27 F1 crosses and a total of 1837 progeny and is the species responsible for the beautiful waterfall patterns in some of our modern hybrids.

When crossed with *Mps. vexillara* produced *Mps. Venus*—Registered by Charlesworth in 1917.

Mps. Venus was crossed with *Mps. Pearl Ono* in more recent times, to produce *Mps. Steve Skoien*



Mps. Pearl Ono [L. Cinert]



Mps. Steve Skoien
'Cat's Eyes' [L. Cinert]



Mps. Venus 'Envy' [L. Cinert]

The photos show the wide range of colours that can occur in a cross



Mps. Steve Skoien 'Poetry in Pink' [W. Curtis]



Mps. Pearl Ono [O'Shaughnessy]

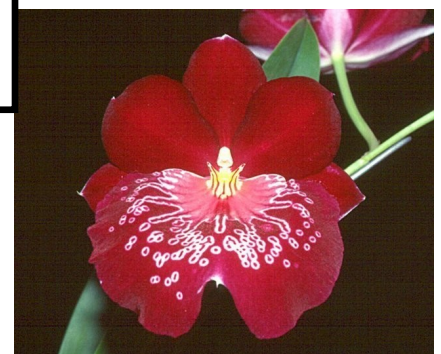


Mps. Benito Que 'Red' [M. Blietz]
0.9% *Mps. phalaenopsis*

Mps. Breathless 'From Love' [Cheng Chua] 1% *Mps. phalaenopsis*



Mps. Augres
'Trinity'
[N.Z.O.S.]
7% *Mps. phalaenopsis*



Mps. Firewater 'Red Butterfly' [Q.O.S.] 2.7% *Mps. phalaenopsis*

Mps. Phalaenopsis is the source of the waterfall patterns which seem to persist in hybrids that have as little as 1% or less in their background so the genes responsible for this feature must be very strong and dominant, however you need to use at least one parent with the waterfall pattern to have a reasonable chance of getting at least some waterfall seedlings.

How do you create a Miltoniopsis plant worthy of an award ? : By Allan Watson

Like many I have often gone to orchid meetings and seen other growers being given OCNZ awards for their plants and wondered what they are doing different in terms of growing etc. than I am.

In short I have found the answer to be: not a lot. Success all seems to stem from where the plant originated from, growing conditions, the orchid culture being applied and LUCK.

Some will say that's more than not a lot and yes they may be quite right.

For me this topic will cover Miltoniopsis although I suspect can be applied to many other genera.

You need to gain a good understanding of the genera you wish to focus on.

If practical you need to replicate this genera's prime growing environment

You need to be able to create a watering and fertilizer routine

You need to continually observe changes to your plant

You need to have luck as there will be failures from which you need to learn.

You need to have an understanding of the OCNZ judging requirements

You need to gain a good understanding of the genera you wish to focus on.

In the case of Miltoniopsis this is in the view of the writer fairly simple. With only 6 primary species in this genera coming from the top North Western side of South America. (Panama, Ecuador, Peru and Colombia) growing naturally within the Andes range of mountains between 300 and 1000 meters, with temperature range of 14 to 24 degrees at night, dappled light conditions and a humidity of 80%.

If practical you need to replicate this genera's prime growing environment

To achieve the above unless you have a single growing environment is not always that practical so compromise is required in particular with night temps and level of humidity. Plants need to generally be conditioned while this may appear like they are sulking they are really, getting used to your conditions and this may take more than one growing season. Time has shown for example that the collection of Mps that I have, accept night temps between 9 and 15 degrees and Humidity of around 60% along with a dappled light level of 1250 lux. These conditions also suit a range of other genera kept in the same environment.

You need to be able to create a watering and fertilizer routine

This process requires a level of discipline on you the grower. I have found the Mps like their roots to be moist not wet and the foliage dry. To achieve this I have installed an in pot gravity feed water system which consist of a plastic domestic supply tank feeding into plastic irrigation pipe with micro tube and pot feeders off feeds to each pot. This process takes the water and or the fertilizer mix straight to the plant roots. Since putting this system in place the loss of plants via root rot has been almost eliminated. Fertilize with a phosphate high fertilizer around, ¼ strength and water every two days during summer, weekly during the winter months.

You need to continually observe changes to your plant

I am of the opinion the plants are like humans, they too go through growth spurts. As these occur there are natural changes occurring within the plant. This may well be a sign of growth or plant spike

or lack of water. The lack of water being quite visible with the plant displaying crinkled leaves. *See right*

Spikes are also quite difficult to spot at first as they tend to hide within the crease of the leaf. I have found that it is important to observe a spike as soon as possible and gently free it from the leaf fold allowing it to grow straight and stronger. If left spikes can twist, buckle and even snap. *See below*



You need to have luck as there will be failures from which you need to learn.

In other newsletters we have commented on potting mediums and it's not the intention of the writer to retrace past comment apart from strongly suggesting that you try several mixes if you have multiple plants to see what works best for you, accepting this may take a growing season then put your plants all into the same mix as you repot. I work on a 3year cycle which includes splitting plants and repotting into 1.3lt plastic pots with a no. 3 grade bark and

pumice mix (3pts to 1pt). Others may well have a mix that works better for them.

You need to have an understanding of the OCNZ judging requirements

You may follow all the above and get an end result that you think is worthy of an award. However it will be your local OCNZ judging group that decide. This process has become interesting to say the least as many of the judges have never judged a Miltoniopsis nor had the opportunity to judge one. I base this comment on the point that only 11 Mps have been awarded in New Zealand since 1985. I make that comment as an observation not a criticism as I do respect the work the judges do on our behalf.



Knowing what the judges are looking for is very important so as to avoid any disappointment.

The OCNZ have strict criteria to be applied when Judging Miltoniopsis and I quote direct from their;

Judges Handbook 2017 Red Book:

Miltoniopsis

Miltoniopsis (Pansy orchid) are generally large, full flowers and come mainly from Northwest South America.

Form

The flowers should be a well-filled-in oval form. The sepals and petals should be balanced, wide, but may reflex slightly at their tips. The lips should be predominantly large and symmetrical.

Colour

The colour should be definite, crisp and fresh. Any mask should be sharply defined and symmetrical. Odd colour blotches, as distinct from waterfall lip markings are common in many Miltoniopsis and should not be penalised unless they are a distraction.

Substance and texture

The velvety texture of good Miltoniopsis should be recognised and rewarded.

Balance, proportion and arrangement of inflorescence

The inflorescence may be upright or gracefully arching. Flowers should be well spaced and well displayed.

Floriferousness

Miltoniopsis must have at least three flowers and/or buds on the stem.

Further from the Judges Blue Book Resource Guide:

Miltoniopsis

Line breeding and the introduction of polyploidy clones have improved the modern hybrids through increased size, fuller flowers and less reflexing. Floriferousness has improved and presentation tends to be better with flowers held well above the foliage.

Form

The flowers should be a well-filled-in oval form.

The charm of Miltoniopsis comes from their oblong to ovoid shape where the prominent lip balances the smaller overlapping petals and sepals. The sepals should form a slightly flattened triangle that occupies the upper portion of the flower.

The sepals and petals should be balanced, wide, but may reflex slightly at their tips. The petals should be flat or slightly reflexed and should fill the gaps between the sepals overlapping them slightly. While some reflexing of the sepals and petals is normal significant reflexing is a fault.

The lips should be predominantly large and symmetrical.

The lip should be flat and symmetrical. While the edges may be wavy they should not be floppy and there should not be a prominent midrib. The lip can have a waist near the base which is a fault if it compromises the symmetry or fails to overlap the sepals.

Colour

The colour should be definite, crisp and fresh. Any mask should be sharply defined and symmetrical. Odd colour blotches, as distinct from waterfall lip markings are common in many Miltoniopsis and should not be penalised unless they are a distraction.

The colour should always be clear and if multi-coloured they should be clearly defined or pleasantly blended. While Miltoniopsis are known for their striking intense colours there are clones that are equally striking in subtle pastel shades. Don't confuse a pastel flower with a muddy one. If blushing is present it should be uniform and never blotchy. Waterfall patterns or masks on the lip should be in a pleasantly contrasting colour.

Substance and texture

The velvety texture of good Miltoniopsis should be recognised and rewarded.

Texture may sometimes be crystalline but is normally matte. The substance tends to be lighter than in some other orchids and as a consequence the flowers are prone to bruising or heat damage.

Balance, proportion and arrangement of inflorescence

The inflorescence may be upright or gracefully arching. Flowers should be well spaced and well displayed.

The flowers should alternate along the inflorescence and only slightly overlap. A cluttered or poorly spaced inflorescence should be penalised.

Floriferousness

Miltoniopsis must have at least three flowers and/or buds on the stem.

Modern breeding has significantly improved this area so that multiple inflorescences on pseudobulbs can be expected. To score highly well grown plants should be expected to carry two inflorescences of four flowers each.

To conclude:

When sourcing your plants look for quality in the plantlet.

Strong upright plant with at least two growths

Leaf to present silver grey green appearance (no wrinkles)

If a seedling at least 100mm tall

If in spike have at least three buds

Look for named plants from quality supplier(s).

When growing generate the most suitable conditions practical

Maintain water and fertilizer as plant develops

Observe what is happening and make change for the better as and when required.

If you have not joined our NZ Miltoniopsis Growers facebook page please do so to gain more of an insight into this particular orchid genus.

Allan Watson



Mps Breathless 'From Love' HCC/OCNZ October 2018 grown by Allan Watson

Growing a collection of Mps. In New Zealand.

This becomes a little more difficult than first thought although there are a number of New Zealand commercial nursery's out there, not all are holding stock of Mps and due to bio security measures, not a lot of flasks are being imported. Yet international members on our face book page able to show over 100 different Mps hybrids where we are lucky to find 30 plus available varieties from or nursery suppliers. (This in part is understandable if you look at the few growers in NZ growing Mps) Yellows seem to be the colour in short supply. It should be noted that in major garden centres in Auckland, Mps are now available for purchase as flowering pot plants.

The other restriction is in part ourselves and the set-ups we have established for our various collections. There is ongoing debate as to whether to provide heat or not to heat. I comment from my perspective living in Taranaki. A level of heat is required in particular during those winter nights. From my experience I have found that a minimum night temperature of 12° c maintains a constant growth environment for my collection. I use a small fan heater on a timer that activates from Midnight till 8am and if it looks likely to be a frost I cover the plants with frost cloth.



Networking with other growers plays an important part in the establishment of quality collections. Swapping of plants establishes not only collections but friendly competition between growers. Sharing of knowledge helps with maintaining sustainable collections.

Alan Locke and I have put together a number of supportive articles which have been published either on facebook or in the Mps newsletter for non-facebook users. Sharing of knowledge helps us all.

Having growers start to focus on a particular genera, such as Mps also has its issues with some growers rightfully wanting to maintain a minimal number supporting a wide variety of other genera within their respective collections. (Totally understandable) Those that wish to, or need to have available a specifically Mps friendly growing environment. Light levels and max min temperatures being the most critical elements.

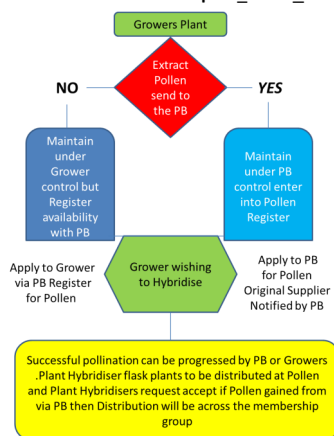
Watering and fertilisation become part of the norm cultivation processes then there is the unsung element of orchid growing patience.

During the last year a small number of un-registered Mps crosses have surfaced one in particular was Mps Pink Cadillac (Mps. Lady Snow x Mps. Second Chance) We found although this plant is widely marketed in the UK as Mps Pink Cadillac, it had never been registered. Thanks to the efforts by Ninox Orchids Mps Pink Cadillac is now officially registered.



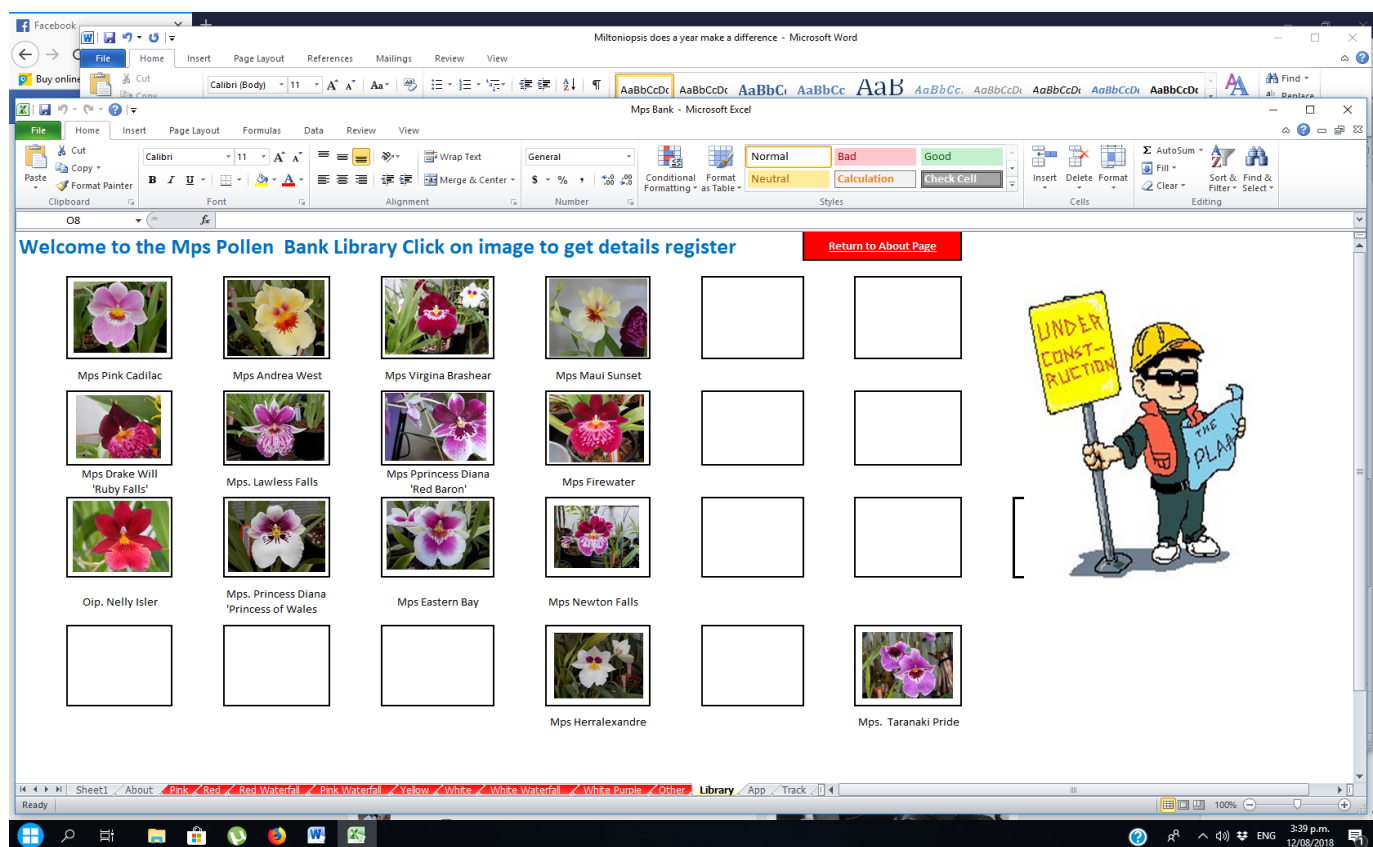
The next critical phase with Miltoniopsis growing is Hybridisation. While I understand it's not everyone's cup of tea, if we cannot bring flasks in, then our only option to increase the varieties within New Zealand, is the establishment of a breeding program including the subsequent management of pollen.

Flow Chart for Miltoniopsis Pollen Bank



Establishment of an Mps Pollen Bank.

During the past year we found that there were a number of growers interested in hybridisation but felt they did not have the variety of plants at their fingertips. After a brief consultation with a couple of keen Mps growers it was decided that an Mps Pollen Bank may be of value. The concept being offered had two options you own and control distribution of your pollen but register with the bank or you allow the bank to manage the distribution of your pollen. The key foundation process is that of being able to track hybridisation and minimise repeat breeding unless specifically asked for.



The above is a screen shot showing what pollen is available at the bank or being held by a grower the concept being a simple click on the picture and the required details are accessed and the pollen transaction occurs. It's envisaged that no charge will occur for this part of the process any other costs will be between those sharing the pollen. As with any bank, as interest and deposits grow, so will the variety able to be produced. These are all from the writer's collection we are awaiting your photos should you wish to participate. Contact Allan Watson by email : aj.watson@xtra.co.nz.

A hobbyists view of growing *Miltoniopsis* plants in NZ: Allan Benson

If you are looking for the technical data on how to grow these wonderful plants then you need to talk to the two or three commercial nurseries that do this very well in NZ – they are now starting to produce 100's of these fine plants for the trade. (Larson's and Ninox for example)

However once you have purchased your plant it will be removed from these very controlled and regulated environments and re-homed under your loving care in whatever growing environment you have - from heated glasshouse to un-heated greenhouse to windowsill or household table.

For me, I have had a soft spot for these plants for many years and from the first one I owned, (Mltps Emogine Smith x Brennan Springtime) left a lasting impression on me, however unfortunately several years later I had it freeze on me, with a severe frost one night that left the top part of the plant looking good but the roots totally rotted away after being frozen in the mix. These plants have never been far from my mind. The appeal of their large bright showy flowers is a remarkable sight. Some 40 years ago, these were hard to find and even harder to buy so there were very few available and no large collections to my knowledge. So you had to pick them up wherever you could, nowadays they are becoming more freely available and in a wide variety of colour options and waterfall patterns.



Some of Allan's Miltoniopsis



Mps. Saint Helier 'Red Gem'

The temperature requirements for *Miltoniopsis* are very narrow and to make matters more challenging as they grow over our winter months, which makes watering interesting. They require daytime temperatures somewhere between 70°F to 80°F (21.1°C to 26.7°C) and night temperatures between 55°F to 60°F (12.8°C to 15.6°C) to be grown "ideally". Cattleya light but not full sun and a regular fertilizing program is essential. They need to stay moist but not wet all the time and the root system is very fine and prone to rotting if too wet, so no challenge really eh!

As with the case of my first plant it was too wet in the pot - the frost froze the water in the pot and 2 days later the plant collapsed because the root structure was dead, despite the top of the plant looking normal.

So you need to be on your toes with these guys over winter unless you are able to provide some form of heating plenty of air movement.



Mps. vexillaria

However if you are like me and grow a very mixed group of plants – that is anything with the name “orchid” in it – then you have to consider a few things.

1 – I grow in a self-made polycarb greenhouse – 9mtrs long by 4 mtrs wide and about 3.5mtrs high. You need to understand the different levels of temperature that this greenhouse delivers. We are fortunate to live next to the sea and have usually 3 frosts a year that can drop the temp down to zero other than that, 4 degrees is the normal low. In the summer outside temperatures around 28 – 30 these will deliver 45+ in the apex of the greenhouse, so good ventilation is critical.

This house has no electricity to it so everything is passive with a self-opening solar window at the northern facing end and a solar chimney at the southern end which extracts the hot air continuously and keeps airflow moving. In addition to this I have about 6 large Mussel Buoys filled with water installed underneath the benches which act as heat sinks and warm

up during the day and release heat during the night - this tends to try and smooth out the extremes of temperature that we all suffer in a greenhouse.

2 – I have found that the Mtps love growing at about shoulder height in these conditions which in great - any lower is too cool and any higher, they are too hot. So to get them through those cold winter nights I add one domestic gas heater which I have at the south end of the bench and I duct the heat through an old flu underneath the bench where the Mtps sit - this gives them that little bit of added protection. I try and keep the total temp above 5 degrees on the cold nights.

3 – Potting mix, I have tried most different types and my suggestion here is use what you get the best results from that partners with your own watering and feeding style – for me I have gone around the block several times and keep coming back to Sphagnum moss as being the best. I do have another moss substitute that I get from the bush that seems to work OK but for me Sphagnum is king.

Couple of rules with it though - you will need to repot every year and if you feed heavily then the moss will probably collapse towards the end so don't wait.

Check your plants before you water - keep all the moss growers together so that you can gauge their need for water – don't let it dry out completely, it can be really hard to revitalize moss that has dried hard – and finally use rain water if you can, like sphagnum - it is the king and your plants will love you for it.

4 - Culture - so these little gems have their main growth cycle when we have our winter so the art is to keep them moist but not wet and supply just the right amount of feed that won't kill the moss. - if you grow in bark or pumice then it is much easier to control as they will dry out much quicker. All the time trying to keep the temp up as close 12.8 degrees min.

They are very tolerant plants and as long as they aren't cold and wet at the same time, they will survive. If they are too dry then they will tell you by the classic concertina leaf fans that will be seen on the new growths .

They flower as regular as clockwork and not unreasonable to expect flower spikes from both sides of the mature bulb on a healthy plant. If they are young plants or very small plants then it may pay to snipe the spike off before it grows too much and give the plant a chance to get a new growth started a bit earlier for next season on a larger bulb.

Some of my earlier flowering plants may have the odd distorted flower as they have been forming in the cooler nights of September and October however the bulk flower for me mid November and through to Jan and these are displayed in fine colours and shapes – it is a pity they do not last as cut flowers.

So I hope some of this makes sense to you and helps you grow these wonderful plants - good luck and happy growing.

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What direction does this Mps Group intend to take?

This is a question I suspect on a number of people's mind and is not one that can be easily answered as the direction from my perspective can only be driven by you the readers providing feedback and articles describing your experiences and possible solutions to problems felt.

As far as practical Alan Locke and I can provide a certain level of knowledge and support but there are no doubt growers out there that can provide more.

I am certainly not into reinventing the wheel. Time just does not permit me or I suspect most of us that luxury. A photo of your growing conditions, comment on the fertilizers you use and photos of your plants in flower are all good topics as well there would be others. Please support Alan Locke in his request for info so we can keep this newsletter going

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I hope to get the next issue out in early March but that will largely depend on you, the reader.

I need your input—your views, comments, questions, photos and ideas. In particular, photos of Miltoniopsis in shows or awarded, also how you grow your plants. Only by sharing will we progress.

Please send your contributions to me at lochaven999@gmail.com by or before mid February

Come-on now, don't be shy, people want to hear about what you have to say.

Get the thrill of seeing yourself in print

Hybridization of Miltoniopsis: the #8 wire approach

One of the things I now regret as an orchid grower is that I did not attempt any hybridisation activity while I was starting off growing orchids. When I reflect back I find I cannot offer any practical reason. So here I am 20years down the track just starting.

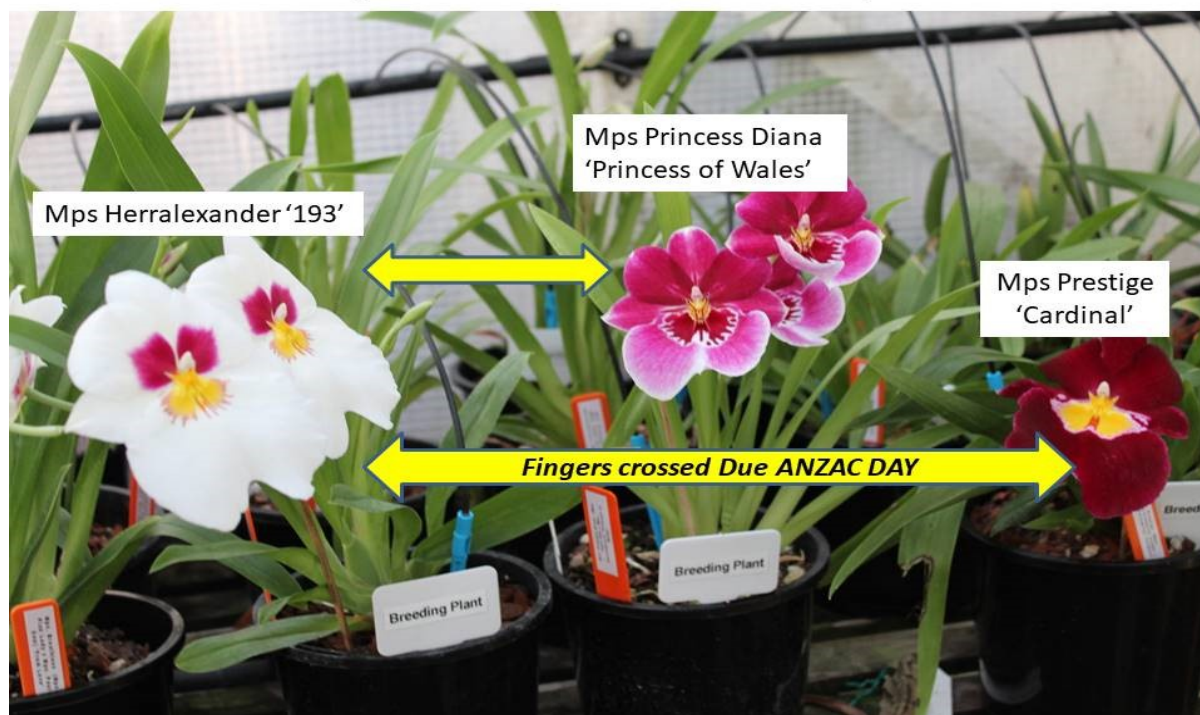
I have chosen the genus Miltoniopsis, because I have developed a passion for them and the obvious restrictions, we now as orchid growers face in terms of being able to bring flasks into New Zealand.

Being lucky enough to have accumulated some 75 Miltoniopsis plants at various stages of growth provides me with the foundation of sufficient flowering plants to have a go.

With absolutely no experience I enlisted the help of a local grower who had done a considerable amount of Hybridization be it with other genera not Mps. We tried two crosses, each way Oncidopsis [Oip.] Nelly Isler and Mps Lawless falls. Both attempts failed. I suspect as a result of old pollen (flowers had been out over a month).

So it became a stop and rethink time while some Mps spiked and flowered, then with further advice "Hybridization take 2" occurred. This time the plants were fresher, with flowers only out two weeks the outside temps were higher (a fine day 17°C) and with a better understanding the process was launched as per the picture below.

Hybridization attempt

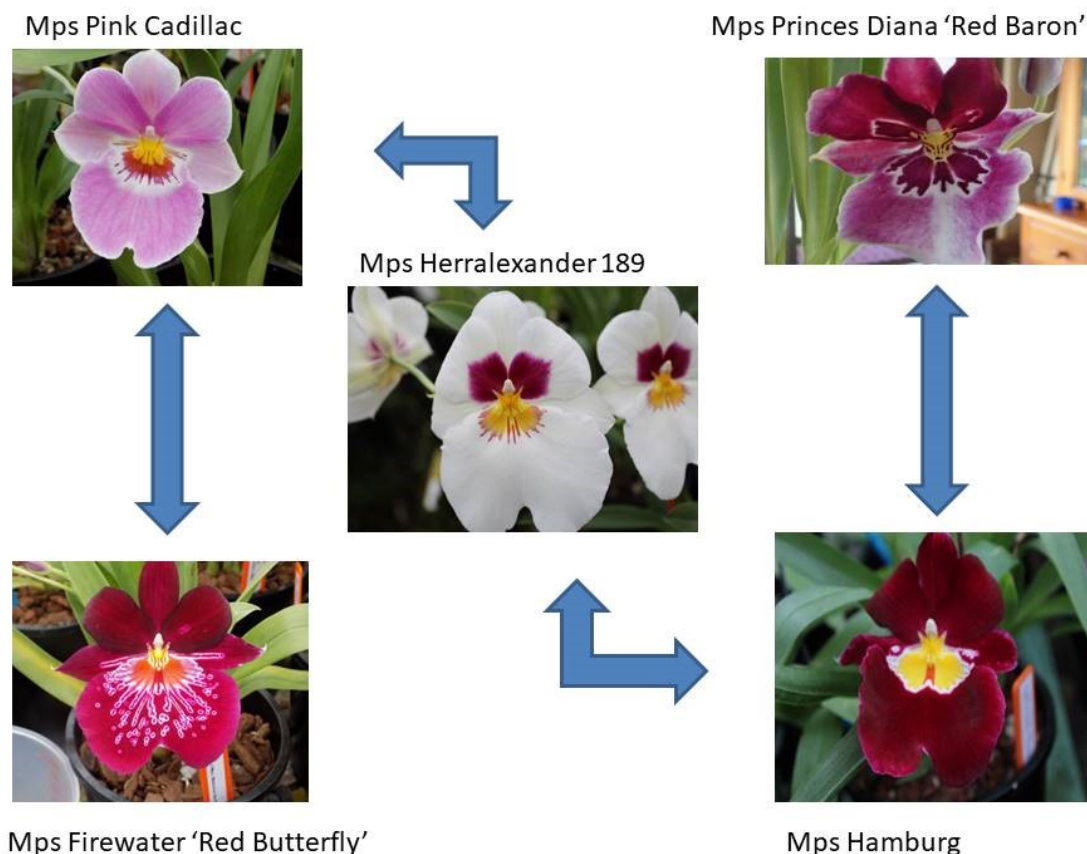


Eight days later there appeared sign of flower wilt and a change in stem colour. The pollinated flower stems appeared to get darker than the others on the spike after about twenty days the stems started to show distinct signs of swelling and have continued to do so with the flowers on those stems now almost completely wilted. An all-round take (fingers crossed) seems to have occurred.

The 170 day wait now starts as shown in the above picture Anzac day 2019 will be around the time the seed pods should be due for harvest.

So what I have learnt.

Plan your hybridization pathway in other words; look at the flowers and imagine what you might get if you cross this one with that one. Before you commit check either Orchid Wiz or the RHS registry to see if the cross has already been made. Below is my suggested pathway for my next round of Hybridization. I have all these Mps out at the moment.



Pick the strongest flowers to provide the pollen.

Undertake the Hybridization exercise within 3 weeks of the flower being fully open. Pollen being banked is also best gathered at this time.

Carry out the Hybridization exercise on a warm calm day, in good light, preferably on a table with either a cloth or newspaper under the plant just in case you drop the pollen.

Once the Hybridization process has been completed, place your plants back where they are least likely to be disturbed and stand back, observe the changes.

Gathering the Pollen

The following picture provides the simple steps I follow when gathering the pollen and setting the pollen on to a recipient flower. Others may follow a different process and that's fine. It comes down to what works for you.

Hybridization Protocol:

Pollen is at its best when collected at its freshest. Suggest within three week of flower opening. This Pollen can either be used or stored in an envelop in fridge conditioning cabinet.



Step 1: Remove Pollen Cap from selected flower with tooth pick and gather pollen on the end of the tooth pick.

Step 2: Place the Pollen into the opening just below the pollen cap. Tag and Date pollination



Step 3: Sit back and wait. Within the next 7-10 days should see flower wilt and stem fattening. If this happens pollen has taken and a seed pod will form.
170 days later pod should be ready for harvest.

Points to remember: Strongest flower

Temperature of the day and good light

Setting everything up before you start

Tooth picks

Tag/label so you can identify the cross and note the date undertake and 170 days out for possible harvest

Envelope if you are going to bank the pollen

Follow the NZ Miltoniopsis face book pages for updates as the process progresses. Also note we now have pollen available in the pollen bank.— web address: <https://ajwatson6.wixsite.com/website>

Allan Watson

Milton® Growing Media 1 L

Ingredients:

- 900 ml Tap water
- 20 g plain white sugar
- 40 g Banana (blend with small amount of water)
- 1 g activated charcoal powder
- 8 g Agar
- 2 ml Bio-Plus orchid food Spring mix (A)
- 2 ml Bio-Plus orchid food Spring mix (B)
- *40 ml/L Milton® concentrate (after agar has cooled to below 50°C)



Method:

Milton concentrate:

Add 1 tablet Milton® to 80 ml water allow to dissolve.

Blend banana with a small amount of water till smooth before adding to the mix.

Place all ingredients (Except Milton® solution) in beaker and stir. Top up with water to 1L and adjust pH to 5.8

Heat on stove or microwave, stir regularly required temp is 91°C.
Stir to ensure all sugar and agar is dissolved.

*Add 40 ml/L Milton® concentrate once cooled to below 51°C. Then dispense into flasks

Clean working surface:

Use Virkon S® 10 g per L water, or Budget sodium hypochlorite 10-20 %, or 70 % meth's (ethanol). Using a tooth pick add a small amount of Dish washing Detergent

Note: if you are using Milton Solution to clean work surface then use 3 Milton tablets per 100ml of water or 16.6 gm per Litre of Sodium dichloroisocyanate (SDICN) active ingredient).

Dispensing:

Place clean empty flasks on cleaned working surface.

Pour required amount into flask. Making sure none touches the sides

Cover with lid but do not seal.

Agar sets at 42°C.

Allow to cool and set.

Seal lid

Try not move hands over top of flasks to reduce contaminants falling in. Place the lids with the inside down on a sterile surface to reduce contaminants falling into the flask. Wrap with cling film to prevent contaminants getting in recesses under lid.

Information provided by Brian Pryor, 16 Bern Rd, Hamilton. bioplus@xtra.co.nz

Phone 07 8299729

Register of Known Miltoniopsis Crosses in New Zealand from 2018

Mps Parent (receiver)	Mps Pollen (provider)	Date crossed	Successful / Aborted	Hybridizer	Date for Pod Harvest
Prestige 'Cardinal'	Herralexandre '193'	2/11/2018		A Watson	21/04/2019
Herralexandre '193'	Prestige 'Cardinal'	2/11/2018		A Watson	21/04/2019
Princess Diana 'Red Baron'	Herralexandre '193'	2/11/2018		A Watson	21/04/2019
Herralexandre '193'	Princess Diana 'Red Baron'	2/11/2018		A Watson	21/04/2019
Herralexandre '193'	Pink Cadillac	22/11/2018		A Watson	11/05/2019
Pink Cadillac	Herralexandre '193'	22/11/2018		A Watson	11/05/2019
Firewater 'Red Butterfly'	Pink Cadillac	22/11/2018		A Watson	11/05/2019
Pink Cadillac	Firewater 'Red Butterfly'	22/11/2018		A Watson	11/05/2019
Hamburg	Princess Diana 'Red Baron'	22/11/2018		A Watson	11/05/2019
Princess Diana 'Red Baron'	Hamburg	22/11/2018		A Watson	11/05/2019
Hamburg	Herralexandre '193'	22/11/2018		A Watson	11/05/2019
Herralexandre '193'	Hamburg	22/11/2018		A Watson	11/05/2019
Herralexandre '193'	Princess Diana 'Red Baron'	22/11/2018		A Watson	11/05/2019
					18/06/1900
					18/06/1900
					18/06/1900
					18/06/1900
					18/06/1900
					18/06/1900
					18/06/1900

Dates from here down will change once

new input has oc-

This is to keep track of which crosses are successful—allows identification of possible sterile parents.

Also shows which crosses have been made and so allows hybridizers to select different combinations to give the greatest number of hybrids possible.

If you are attempting to make crosses, please let Allan Watson know so he can update the register and forward you an updated copy. We would also like you to send photo's of the parents as we have become

aware of a number of plants that are either wrongly named or have seriously mutated during the cloning process. In the main, these seem to be recent introduction's to this county.

We may try and put together a reference library of verified photos of the named varieties of Miltoniopsis available in this country to help confirm the identity of your plants. However, if your plant is not identical to the photo, you will still need to decide whether the differences are due to (a) culture, (b) mutation or (c) wrong name.

To have a successful breeding program, we need to be sure that the plants that we are using are correctly named otherwise the integrity of our efforts will be seriously compromised. We would hope to have this information available on our web site <https://ajwatson6.wixsite.com/website/>

Miltonia V's Miltoniopsis



- **Leaves Dark Green**
- **Flower Shape**
- **Two leaves, arising from a pseudobulb**
- **looks more like an *Oncidium***
- ***Growing Conditions Cooler***
- ***Found in lower part of South America***



- **Leaves Silver Green**
- **Flower Shape**
- **One leaf, arising from a pseudobulb**
- **Can appear to be like an *Oncidium***
- ***Growing Conditions Warmer (night time)***
- ***Found Top part of South America***



Always remember the old saying "It is the exception that proves the rule". Rules are made by humans not plants so you will occasionally find Miltoniopsis with pseudobulbs that have 2 leaves from the top and Miltonias that have only one but it doesn't change what they are and it may not occur on all the pseudobulbs of that plant