



PRESIDENT'S MESSAGE

How quickly CLIVIA EXPO (13 September, the second Saturday in the month and a week earlier than in the past) is creeping up on us. As we finalise this newsletter in mid-July, I hear that some members living in and around Melbourne can already see numerous buds on their *Clivia miniata*, while others of us hope to see many more in the coming weeks. The guidelines for CLIVIA EXPO and another item concerning the management of blooming time are found in this newsletter. It is vitally important that members support this main event and, in particular, help to fill the roster for various activities throughout the day. At this point in time it appears that we are quite short of people to assist on the day, so we sincerely request your support.

This year's meeting program is proving to be excellent, with Mark Cant introducing some of his important breeding work to us at the June meeting. A short summary can be found in this issue. Mark was also very generous with his donations to the raffle and members appreciated the opportunity to buy some choice seedlings of his. The opportunity to purchase one *C. mirabilis* seed was another feature of the evening. The July meeting, which will deal with the theme of variegation in *Clivia*, will have also been held by the time this newsletter is distributed. We certainly hope to be able to enjoy seeing a range of plants and seedlings, and discussing aspects of variegation at that meeting.

We are constantly indebted to members of the club for sharing their knowledge and experiences with us. Here, Peter Haeusler outlines in detail his methods for germinating seed and growing young seedlings. I am sure that both novices and experienced growers will find his contribution to be of most interest.

In the final issue of the newsletter in late November this year we wish to produce an issue entitled "Celebrating *Clivia*". For this, we invite you to submit a description, preferably accompanied by a photograph, of a *Clivia* about which you were excited this year. It could be a first flower, a cross of your own hybridisation, or else a special flower or plant for some reason or other. In other words, the selection is up to you. We are giving this advance notice so that you will be able to make a decision at any stage about which flower or plant to write up. Of course members can still submit such texts and photos for inclusion in the next newsletter (submissions due 22 September, a little later than normal) or in any other newsletter for that matter. Members who can never make it to meetings because of geographical or other reasons could also contribute to this activity.

We hope to see a lot of members at the general meeting on 15 August in the Uniting Church (corner of Blackburn road and Burwood Highway, Burwood) which will focus on preparation for CLIVIA EXPO but where we will also cover the topic of pollinating techniques. It should be possible to assemble a good display of interspecifics on this occasion so please do bring anything for the display table if you can. The Trading Table will be available, as usual, for members to buy or sell *Clivia* material.

Last, but not least, we sincerely hope to see as many members and visitors as possible at CLIVIA EXPO on the 13th September. As mentioned above, we are dependent upon many of our members and even their family members and/or friends assisting with various roles throughout the day. We also welcome members and visitors from further afield who may never have attended CLIVIA EXPO to join us, as the assembly of many beautiful *Clivia* blooms is a wonderful sight. We have included

here details of the motel located right next to the venue which could be utilised by anyone travelling a long distance.

For many of us - even lovers of *Clivia* interspecifics - the *Clivia miniata* season is definitely the highlight of the year for *Clivia* blooms. I hope that you will enjoy it as much as I expect to.

Helen Marriott



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ACCOMMODATION NEXT DOOR TO CLIVIA EXPO

Anyone who is living a fair distance from Melbourne could consider staying a night or two in Burwood.

Right next door to the church venue where CLIVIA EXPO is held is the Burwood East Motel, located at 355 Blackburn Road, Burwood. This venue can be booked by phone (03 98038211) or else directly online (www.booking.com/hotel/au/burwood-east-motel.html). The website shows that room prices for the weekend of 13 September range from \$110 to \$140.



MEMBER PROFILE

Isabel Collins

Some years ago an elderly Canterbury lady divided up her extensive Clivia bed and gave a quantity to a friend of mine who passed some on to me. Until that time my only knowledge of Clivia was that they had nice dark green strappy leaves, grew in shady places, needed very little care and were very colorful in the depths of winter. So I planted about 20 under a young gum tree that was shooting up very close to the house and, sure enough, they tolerated my rotten care and provided me with an abundance of orange flowers for a number of years. And the gum tree grew.



Fig. 1 Isabel Collins

Through a few years of health problems I neglected my garden and it became rather a jungle. Then in 2013 I took things in hand and had a garden makeover. The gum tree was now twice as high as the house and although it provided the shade which the clivias seemed to like, it was too close to the house and drains and it had to go. It was a sad day when it was removed and, furthermore, my possum wasn't too happy about having a good day's sleep disturbed either. The clivias thought it was a sad day as well and slowly went into

a decline due to too much summer sun.

Close by, in a dry shady spot under another large gum tree, was a bed of irises that weren't flowering, so I decided to swap the clivias and irises. Stupidly I carried out the move a few days before our last horrendously hot summer weather in January this year. The iris have benefited from the move into the sun and are currently providing a lovely winter display but the clivias didn't adjust so easily and are only slowly coming good after the shift. I don't think they'll be flowering this year which is disappointing, but I have hopes for next year.

The reason for joining the MCG was to learn more about caring for my plants and now I'm slowly learning about the various species and varieties, colors and petal shapes and so on. Last year's CLIVIA EXPO opened my eyes. I was amazed by the variety and color range as I previously thought the only Clivia color was an ordinary orange one, like mine. Of course all you enthusiasts probably think I should discard my "run of the mill" plants and start again with much more interesting varieties. And in due course I may well start switching but at least I can practice on my lowly specimens and take pleasure in their bright flowers during the depths of winter.

A day spent in the garden provides very satisfying results and from a few discarded plants passed on in a cardboard box, I am now developing a deeper understanding of this lovely plant. I will never meet the elderly lady who so generously gave away her unwanted Clivia plants and she will never know the pleasure she has given me. So when you're next giving away a cutting or unwanted plant consider how a simple gift may possibly enrich the receiver's life and lead them to a new passion and a new community.

GENERAL MEETING
Friday 15 Aug 7.30pm
Uniting Church
Cnr Blackburn Rd &
Burwood Hwy
Burwood

Preparation for EXPO;
Pollinating Clivia

COMMITTEE

Helen Marriott - President
Lisa Fox - Vice President
Michael Barrett - Secretary
Lynn Rawson - Treasurer
Vu Dang - Committee member

Melbourne Clivia Group Phone
Number - **0410 929 510**

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OUR ADDRESS

Melbourne Clivia Group Inc.
Burwood East LPO
PO Box 4225
Burwood East, VIC 3151

www.melbournecliviagroup.org.au
secretary@melbournecliviagroup.org.au



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NEW CLIVIA ENTHUSIAST GROUP

The Clivia Enthusiast Group was a Yahoo Group formed back in 2000 by Rudo Lotter of South Africa. Its website describes it as being "for all clivia enthusiasts, to share knowledge, photos and the pleasure of growing clivia". For many years now, Pen Henry from WA has been the active moderator of this group.

At a time when Yahoo itself is making changes to its groups, recently both Rudo and Pen have had computer and server problems as well as email address changes, with the final result being that they cannot get access to the former group to continue their work as moderators. Rudo's solution was to form a new group (New Clivia Enthusiast Group) but it seems that everyone needs to sign up afresh to this group, that is, former members of the Clivia Enthusiast Group, as well as anyone else who wishes to join.

They have provided the following information to subscribe to this new group:

1. visit

<http://groups.yahoo.com/group/newclivia-enthusiast/join>

OR

2. send email to

newclivia-enthusiast-subscribe@yahoogroups.com

For further assistance, please visit

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WHEN IT (FLOWERING) DOESN'T GO TO PLAN Ray Perks

This article represents the combined wisdom of my experiences as well as that of Laurens Rijke, Peter Haeusler, Helen Marriott and Lisa Fox, to whom I'm indebted for their preparedness to freely share their knowledge and experiences.

So, are you ready for the best time of the year? NO, not the footy finals! I mean the Clivia *miniata* flowering season. You are prepared, right?... repotted, blended your best ever potting mix, fertilised and sprayed regularly, played their favourite music... done it all? So, what's this? That flower is opening too early, it has a short stem, it's a stuck flower (Fig. 2).



Fig. 2 An example of a short stem or interrupted flower.

Why does this happen? The unanimous view of my experienced advisers was that you are not to blame. It's the weather. That is, it is most likely your plant made a false

start at flowering when there was a short burst of warm conditions. It got stuck when the weather resumed its usual cold winter climate.

Yes, we know that all your clivias experienced the same burst of spring conditions but only one or two developed stuck flowers. There are several possible explanations for this variation in plant behaviour. Most likely, those plants that made a false start towards flowering shared a similar micro climate within your shade house or they were those types which were preparing to be the first flowerers anyway.

Alright, stop grumbling, it's not the worst thing that can happen to a clivia grower. One can normally salvage a stuck flower providing you found it early enough and it is a flower you want to save. All solutions recommended by my advisers involved moving your plant to a warmer location, preferably indoors to a heated room. No one suggested the "remedy" that appears in some clivia literature, namely, to place your plant in a dark room or wardrobe. The alleged "science" behind this method is that the flower stem will grow as the flower searches for a source of light.

In addition to warmth, Laurens suggested a good watering and continuing increased humidity. To be sure, I usually dunk the plant in a solution of soluble high potassium fertiliser. Peter reports a remedy which was suggested to him by Harry Erasmus where he adds a dash of full-strength beer directly to the base of the plant. The non-drinkers out there could readily substitute molasses, honey or a sugar-syrup to provide the sugar "hit" seemingly offered by the beer.

The final thing one should do in respect to short stems or stuck flowers is to make a note of the event on the label or in your "book" so that if in the rare circumstance this plant



has a stuck flower next season you might reconsider this plant's place in your collection and breeding program.

Now, what is this? Where is that flower going? It has got a curved flower stem.



Fig. 3 A curved stem.

There are numerous possible reasons for curved or distorted flower stems and this time you may have to experience some guilt. Most such occurrences seem to be the result of pest damage and you are the officer in charge of pest control in your backyard. Pests that might contribute to curved stems most commonly are snails, slugs and earwigs, however grasshoppers, crickets (especially mole crickets) can also cause considerable damage to stems, if endemic to your area.

Fig. 3, however, appears to show stem curvature resulting from a more uncommon cause, namely, gritty debris between the leaves of the plant, and Figs. 4 and 5 show the results of severe slug damage. Stem curvature resulting from physical damage can't be reversed but you might minimise the curvature if you address the cause in a timely manner.



Fig. 4 Last year's flower stem from the same plant as shown in Fig 3.



Fig. 5 A close-up of slug damage.

Some plants may develop curved or distorted stems as a result of their position in the shade house. Others, it is believed, have a genetic predisposition for abnormal growth. For those flower stems which you believe are simply turning to face the light, you might rotate the plant, say 180 degrees, so the flower stem has to straighten if the flower is to realign itself to the light source. If you wish, warmth, fertiliser, beer etc might be administered to give you an improved chance of enjoying flowers on curved stems.

Again, you should make a note of the incidence with the plant and be prepared for a tough decision if it occurs again.



Fig. 6 A flower head on one of my best seedlings with slug damage.

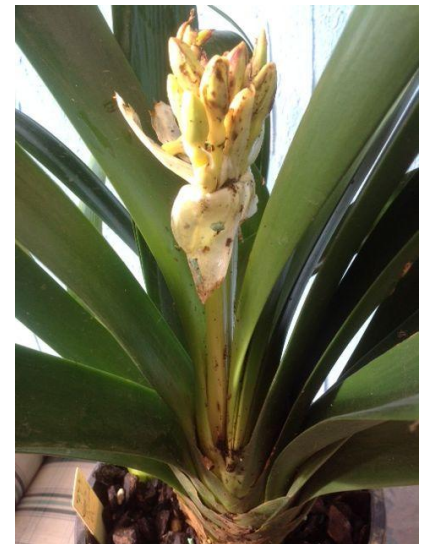


Fig. 7 See organic matter, including a small gum nut, at the base of the stem and flower sheaf.

Most authorities will tell us that to successfully flower clivias one should reduce watering coming into winter and retain a dry plant until flowering. But, but most of us grow under shade cloth which is often overshadowed by trees, so how can we "dry off" our plants in preparation for flowering? Figures 5 and 6 are really self-explanatory when it comes to illustrating the perils of growing under shade cloth. It is impossible to control the amount of water your plants receive but it is possible to ensure your plants are not



contaminated with leaf litter and bird droppings which, when mixed with water, will form a perfect habitat for micro pests and which will coat and degrade your emerging buds.

Remember Murphy's Law? When interpreted for our hobby it might read: *Of the five things that might go wrong when flowering clivias, those one or two things that will cause the most damage will happen only to your favourite or best plants.*

One might temporarily cover some or all of your shade cloth with clear plastic or move your best plants to a more sheltered spot to control the amount of water delivered to your plants. One should make every attempt to clear organic matter from between the leaves of your plants. A child's paint brush can be used for this task.

Above all, you should inspect your plants at least twice a week from this time forward. I know it's dark when you leave for work and arrive home. Inspecting plants at night, even if it is raining, is a great opportunity to detect hitherto unseen pests. Ideally you should also detect stuck flowers and curved stems as early as possible to improve the chances of reversing those conditions. Time to buy new batteries for the torch.

Finally, carefully apply snail and slug bait around your plants. Since the event shown in Fig. 5, I am now even trying to place one pellet inside each emerging flower sheaf.

CLIVIAS, THE FIRST 12 MONTHS: FROM SEED TO SEEDLING

Peter Haeusler

Clivias are basically hardy, tolerant plants, and will cope with remarkably diverse conditions. There is no single, absolute, or perfect path that I or anyone can say you must follow to get results. We are all constantly learning, and it is through

innovation, experimentation, sharing our knowledge and experiences, and above all through careful reflection on practices and outcomes that we gain new insights, increase our understanding, and hopefully achieve great results with our clivias.

In the course of the following paragraphs I will outline the approach I have taken in that crucial first 12 months, when we take each clivia from little more than potential - a seed - through to a robust seedling with several leaves and well on the path to realising that potential. Over the past five years I have germinated about 700-800 seeds each year, with an overall germination rate consistently around 95%. On average I would, in all honesty, lose less than 10 seedlings each year - touch wood!

There are several inter-related goals when it comes to propagating clivias, and these underscore the importance of your management practices. These goals include:

- i. Maximising your germination rate, achieving at the same time relatively quick germination;
- ii. Achieving a good, consistent growth rate post-germination;
- iii. Minimising losses through insect attack, rot and fungal disease; and ultimately,
- iv. Growing strong seedlings, with good leaf colour (and lustre), and healthy root systems.

Preparation

As with so many areas of endeavour, sound preparation and consistent effort bears fruit. You need to think carefully about your seed germination arrangements, with different methods having their strengths and limitations. By all means experiment as you work out what suits you, and do take into account the time you can commit to this stage as some propagation methods will be more demanding of your time than others. Shelter, yet

good ventilation and sunlight are essential ingredients. As always the mix you use must be well aerated and well drained, and you must manage carefully the amount of water your seeds are getting. Finally, the need for sound hygiene cannot be over-emphasised. This last aspect often fails to get the attention it deserves, yet it is a crucial element.

Propagating box

I have built my own propagating boxes (Fig. 8). Essentially it's a simple box arrangement built around a heated, thermostatically-controlled propagating tray (Garden Express at Monbulk sell single, double and four tray models). The propagating box has a simple hinged lid, with a clear corrugated polycarbonate sheeting (Laserlite) cover - the corrugations allowing a good amount of air circulation, but the overall effect of the lidded box arrangement is still to retain a good deal of warmth and humidity (the temperature remains set at 23°-25°C).



Fig. 8 Propagating box.

You can, of course, germinate your seeds without the aid of a heated propagating system. Several years ago I compared seed grown in my heated propagating boxes with seed that I germinated without heat (the latter were outside in pots, but still under clear Laserlite sheeting to control the amount of water). I found that I got *noticeably better germination* with the heated tray arrangement and faster early growth. However, I also found that by the time the seedlings were 12 months old I could see little overall difference between the heat-assisted and non-heat-



assisted batches. If, however, you are spending money on good seed and scarce or unusual crosses then maximising germination and early growth is vitally important, in which case some form of heat-assisted propagation is desirable.

Cleaning pots

It is essential that your pots are perfectly clean. Where I am re-using pots I always scrub them thoroughly in a trough of warm soapy water (using sugar soap, a good general purpose cleaner), and then rinse them in a bleach solution. They are then put on a table outside to dry in the sun.

Propagating mix

I use Debco's propagating mix which has a bit more body (including a good proportion of coarse grit), than some of the commercial 'seed raising' mixtures. It is professionally produced, clean and free of pathogens, very well drained — which is essential — and I have found it to be of a very consistent standard over the years. It has no added wetting agent or fertiliser. The last thing you need is a wetting agent at this stage, and I don't apply any fertiliser until about the 3 month stage (more on that later) as the seeds already contain the nourishment needed for their initial growth.

Seed preparation

In the case of my own seeds, after removing them from the berries I simply wash them in lukewarm water to which I have added a few drops of dishwashing detergent, rinse them, and then let them dry on a paper towel. I do not immerse the seeds in a fungicide solution, nor do I soak them in Seasol or such. I am a great believer in relying on the goodness and vigor that is bound up in the seed itself. If your seed needs all manner of such additives to kick-start life then it is not worth growing,

and the resultant plants will in all likelihood only cause you grief later on.

In terms of seed that I purchase, providing it looks well cleaned with no traces of plant matter then I simply plant the seeds without further ado. If, however, the seed looks a bit 'spotty', feels sticky, or hasn't been well cleaned I will wash it in warm soapy water, then soak the seed in a fungicide solution (e.g. Mancozeb) for say an hour. Then, when the seed is dry, I'll plant it up. *However*, my experience with seed which is a bit spotty and/or sticky is that even when treated in this manner I still seem to experience problems with the seedlings down the track in terms of fungal infection. I do not continue to deal with any grower who sells me seed which is 'suspect' in such ways, or indeed seed which is otherwise 'scrappy'. There are good reputable sellers out there and if you are unsure about who to buy seed from then seek advice from some of the experienced members of the Group.

The first three months

Planting seeds and germination

I like to start my seed planting in July after the Winter solstice. The days are slowly beginning to lengthen and, as we know, plants everywhere start to respond to those early signals that Spring is coming. Any seed that I receive prior to this time is kept in a cool area out of direct light until I am ready to start planting — making sure that if they are stored in plastic bags there are a couple of holes for aeration.

The pots I use for seed propagation are 80mm square and 100mm deep. Twelve of these fit neatly into a 290mm X 350mm plastic tray (with slotted, not solid, base), and these in turn fit neatly into the heated propagating trays I mentioned earlier.

Each pot is filled to close to the top with the propagating mix. I put up to about 6 seeds per pot, always keeping the one cross to a pot so that I can keep a good sense of how the cross is proceeding, variation in pigmentation, leaf form and so forth. Details of the cross are recorded on a plastic label inserted into a slit on the pot rim. This includes: the cross; the breeder; the date the seed was planted; and, number of seeds planted (if I have, say, 12 seeds of the cross I will record the number of seed as 6/12 which reminds me that there is another pot of 6 seeds of this cross).

There seems to be a lot of discussion about how to 'situate' the seed in the mix. Basically I sit it on the mix and press it down lightly, with the top half of the seed still visible. If I can see an 'eye' (the bud or germination point) then I will point that roughly downwards. While this was something I was anxious to 'get right' in the early days, I am now less fussed as seeds are, unsurprisingly, adept at 'getting it right' themselves. In addition, sometimes the 'eye' is not easy to locate in which case I will generally put the smoother rounded surface of the seed facing up. Once I have put the desired number of seeds into the pot I then barely cover them with a mix made up in equal parts of coarse sand and the propagating mix. This is a bit heavier and doesn't wash about easily when watering, thereby helping hold the seed firm as it germinates.

Germination will generally occur between 4-6 weeks, even up to 8 weeks (I have found some varieties to be consistently slower than others so patience may be needed). The radicle (primary root) develops, followed by the first seedling leaf. You need, however, to watch the seeds as they germinate, as sometimes the radicle will push the seed right up out of the mix. In such cases I have a screwdriver at hand and simply make a bit of a hole and pop the seed



into it, root first of course, taking care not to fully bury the seed. Then just firm the mix – ever so carefully – around the root and seed.

So, just to be clear, I *do not* germinate my seeds in sphagnum moss. Time is at a premium for me so seeds are put straight into the pots (and mix) that they will germinate in and indeed remain in for up to the first 10-12 months of their lives. This minimises handling and disturbance. Moreover the approach has borne very good results in terms of germination, plant development and overall health. Even if I had more time I would not now change this method. The (individual cross-based) community pot approach also affords a good sense of how each cross is developing, and allows easy assessment of pigmentation results for instance.



Fig. 9 Interspecific of Shige Sasaki's breeding (TK Yellow x Hirao) X (Gardenii x Hirao). Flowered this year at 3.5 years

You can, of course, use larger community pots for larger numbers of seeds. Be very careful, however, about the size of your pots as a large quantity of mix can translate to a wet and cold mass, leading in turn to fungal and other problems. The other advantage of the smaller pots such as I use is that each cross has a degree of isolation from the others. If a fungal problem emerges that cross can be readily isolated from the others and treated.

Watering and humidity

While they remain in the propagating boxes I water my pots of seed twice weekly. On the weekend when I have

a bit more time I remove the trays of pots and dampen (not saturate!) the matting underneath. Then I put the trays of pots back in place and water the actual pots. This helps generate some humidity – you will see the condensation on the underside of the Laserlite on cool days and evenings – which makes for a good growing environment. BUT be very careful not to create an overly warm and overly humid environment otherwise you will soon have fungal problems in your seedlings, and at this age it is nigh on impossible to save a seedling once afflicted. This is very definitely a case where prevention through careful management is better than cure!

For the watering I use a 1.5 litre soft drink bottle with a plastic rose type of watering fitting screwed on (these bottle top waterers can be obtained from The Diggers Club). This is a gentle way of watering the seed which doesn't wash the mix away from around the seed.

Pest and disease management early on

Rather than insect pests, it is rot and fungal disease that you particularly need to guard against early on. If fungal infection takes hold it can cause a great deal of damage quickly as emerging seedlings have little capacity to fight infection, unlike a mature plant. For this reason rigorous attention to the pillars of good preparation – clean pots, good clean mix, clean and healthy seed – is *vital* important.

If you start to encounter something like damping off then, yes, apply an appropriate treatment such as Fongarid. But, remove affected plants immediately – on no account leave seedlings you are treating alongside healthy plants. Above all, look carefully at your practices and try to get to the underlying cause of your problem. If numerous seedlings across different crosses are 'falling over' due to fungal infection then the

chances are that there is something in your practices that needs to be changed. Perhaps you are over-watering or the seed-raising environment is too humid. In such cases seek advice from a couple of experienced growers.



Fig. 10 'Evertan Green Goblin' breeding from Val Thurston. First flowered last year at 3 years.

In terms of insect pests, I have not experienced insect-related problems while seedlings are at that early stage in the propagating box. Quite a few growers talk about the adverse impact of fungus gnats. I do get very small fly-like insects darting around the propagating boxes but have never seen any sign at all that these are having a harmful effect on the seedlings (either leaves or roots). However, as a precaution I locate several insect traps in each box. These stiffened plastic sheets are about 100mm X 200mm, bright yellow (the yellow is said to be insect-attracting), and very sticky. They are designed to control for thrips among tomato plants for instance (Bunnings sell a version, but I obtain mine from Muir & Sons in Silvan). I certainly find that a large number of these tiny flies get trapped on the sheets so in that sense they are very effective.

After three months



Hardening off

When the seedlings are about 3 months old the pots are removed from the propagating box, although I try and avoid doing this during a cold spell. I tend to be guided very much by the size of the seedlings, and as we know different crosses will develop at very different rates. Essentially I am looking for the seedlings to be about 75mm high before moving them out.

For a couple of weeks the pots being removed are left in trays on top of the propagating boxes where they will still derive a little heat (note that my propagating boxes are in an outdoor area which is semi enclosed and itself has a Laserlite roof, with shade cloth pulled across when the weather heats up). Easing the seedlings out in this way serves to harden them off somewhat.

Location for young seedlings



Fig. 11 Seedlings

When my community pots of seedlings are moved out of the propagating area, they are then located in a special area within one of my shade houses (Fig. 11). In addition to the shade cloth cover this special seedling area has a clear Laserlite roof (*never* use the darkened polycarbonate roofing as this will block too much UV, leading to poor leaf colour and weak growth). This means that I can continue to control the amount of water the seedlings get which I believe is particularly important while they are getting

established and developing their root systems.

My seedlings stay in this area until I am ready to pot them into individual 100mm pots at 10-12 months. This area where I keep them remains relatively cool even in the hottest parts of summer. There are a couple of large deciduous trees nearby. This, in combination with the shade cloth structure (the cloth only goes down to the shelf height, about 45cm above ground level), means a reasonably bright, generally airy, yet sheltered and cool aspect. This, I believe, provides an excellent growing environment. Plants develop nicely with great root and leaf development, and I barely lose a seedling once they are out in this setting.

Watering and fertilising

From this stage onwards the seedlings are watered weekly, and twice weekly in the summer. It is a generous watering (using a fine rose head) to the point that the water runs through the bottom of the pots. Seedlings need to be kept moist, but on no account should they be growing in soggy conditions. This, once again, is why it is so important to have a well-drained mix. On no account should your pots of seedlings be sitting in trays or situations where the water may lie around the base of the pots.

Only once seedlings reach the 3 month mark and are moved out of the propagating box do I apply fertiliser. Rather than chemical fertilisers, my strong preference is for organic products such as Seasol and PowerFeed (or something like Charlie Carp) which I feel are easily absorbed and 'softer' on the young plants. These are applied roughly fortnightly at half strength.

Pest and disease control

The two main pests you need to watch out for are mealy bugs and small caterpillars. The latter can quickly do a lot of damage to a young seedling so you need to be vigilant. Where seedlings are concerned both pests can be controlled pretty effectively by hand - literally squashing them. I do not find that mealy bugs are much of a problem among seedlings in that first 12 months, but if they emerge in any number then a spray with a systemic insecticide like Confidor is effective. Caterpillars, on the hand, can be persistent and seem to love those tender leaves. I have tried eco-type sprays aimed at caterpillars but to be frank have not found them to be very effective. Rather than saturating seedlings with sprays, my preference is to control the caterpillars by hand.



Fig. 12 Seedlings at 3 months, 12 months and 2 years.

As always, you need to watch for signs of fungal infection. Mancozeb is not overly 'heavy duty' and I prefer to use it if the need arises. If, in the summer months, we get a spell of particularly humid weather I may spray the seedlings with Mancozeb as a preventive, otherwise I spray plants only on a need basis.

Twelve months, and beyond

By the time your seedlings reach 10-12 months old they should be a good height (15cm plus), with up to 4 leaves, and nicely developed root systems (see Fig. 12 of seedlings at 3 and 12 months, and a 2 year old plant). Of course there will be considerable variation depending on the cross. Some seedlings will be lower and spreading, with perhaps broad leaves. Others, such as *Clivia*



gardenii, *Clivia robusta* and interspecifics can be much taller with amazingly developed root systems. At this stage I pot them up into individual pots (100mm) using a well-drained, moderately coarse, and above all well-composted mix. And for the first time I will apply a chemical fertiliser, a slow release fertiliser (I use 8-9 month Osmocote Exact which has added micro nutrients).

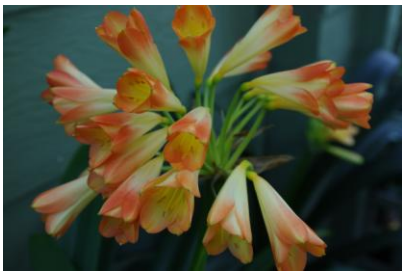


Fig. 13 Interspecific flower of Sean Chubb's breeding. First flowered last year at 4 years. Has had a magnificently elevated umbel last year and again this year!

If you have grown your plants well from day one they will reward you and power along now. Moreover, time and again I see that seedlings which have got off to a great start are less prone to fungal and rot problems later on. The majority of my plants potted up into 100mm pots at 12 months are literally bursting out of these pots a year later, at which time they will be moved on to 150mm pots. But that's another story!

REMINDER to bring your spare berries or seed to the CLIVIA EXPO in September for demonstrations and give-aways.

MARK CANT'S BREEDING EXPERIENCES AND CLIVIA CULTIVATION

Helen Marriott

Although Mark Cant is well known to the MCG, it was the first time for many of us to have the opportunity to meet him and hear directly of his *Clivia* breeding and growing experiences. With 20 years in the nursery industry in NSW (about 2 hours north of Sydney), Mark operates a wholesale nursery, Heritage Plants, where he grows perennials which predominantly flower in spring.

His interest in *Clivia* goes back 15 years or more, but for him, *Clivia* is more of a hobby, even though he does sell a few plants or seedlings here and there. In this regard, members of the MCG have been fortunate to have obtained some of his seedlings in the past. When he first started to develop this interest in *Clivia*, he was fortunate to meet Bill Morris who lived nearby, and thus he started off with three of Bill's yellows as well as oranges, which were strong and vigorous plants. In addition, he learned a lot about plant genetics from Bill. Mark later obtained more plants from Bill and also bought Schenkel seed from Europe, one of the main suppliers at the time.

From the Schenkel seed, a couple of peaches - which we now refer to as European Peaches - emerged. Mark has worked with these peaches, initially starting with four to five plants representing light to richer coloured peaches. He has now bred a few generations of these plants and refers to these as his Euro type peaches. Whilst always improving this line, he is also working on light, dark, green throat and picotee peaches. In addition, he has been producing more open flowers by outcrossing with various Group 1 yellows and Group 2 yellows, in addition to oranges, and then undertaking sibling crosses.

Mark's first flowering of peaches that he had bred probably occurred in the early 2000s and last year saw him reach his third generation when around 100 plants flowered, and 50 more in a friend's garden. All of them have flowered with a peach colour. He reported that he has not flowered that many of these plants, since this is mainly a hobby. Nevertheless, he has also been able to supply 400-500 peaches to top-end retailers.

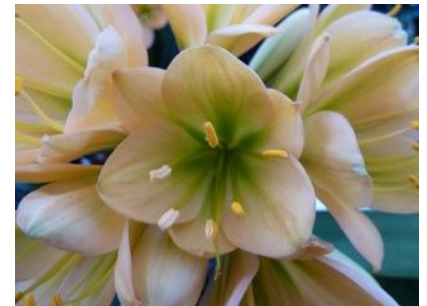


Fig. 14 European

It was somewhat of a relief to learn that Mark, even as an experienced nurseryman, has also made mistakes along the way. When his first peach seedlings came up, about 10-20% had very dark bases and he threw most of these out, just keeping two or three! However, when these latter seedlings flowered they were also peach, though not darker in colour. He now knows that by the time the seedlings are two years old, most have pigmentation at the base. Nevertheless, if it has a dark base at one year old, he does not sell them just in case these have actually been pollinated with stray pollen from other plants.

He has also crossed his peaches with two Victorian Peaches and obtained peach, although he is unclear about the backgrounds of these Victorian Peaches as different results were obtained when crossed with each other. Crosses with Cameron Peach have yielded 100% peach, as have crosses with 'Helen' and 'Tessa'. Interestingly, when Mark selfed 'Helen', he obtained 50% peach, 25%



yellow/very, very pale peach and 25% orange from the small sample he flowered. Bill Morris has been able to explain genetic reasons for this. To date, Mark has not crossed his peaches with 'Anderson's Peach', but expects that they are compatible.



Fig. 15 Striped petal

In another line, Mark is also developing a plant he discovered nine or 10 years ago with a stripe in its petal. After crossing with a sibling, he has flowered 10 plants. Mark commented that he had never seen such variation in 10 siblings before, ranging from the slightest dusting of orange through to a strong orange with distinct white striped petals.

Mark does not register many plants, but he does name his favourites - orange yellows after Bond characters, and pretty pink and pastels after the Bond girls. His two sons name his peaches after Star Wars characters.



Fig. 16 'Tango' F2

Mark has also been working with Bill Morris's well known 'Tango' and its sibling 'Mamba'. Earlier Bill had received three orange bi-coloured *C. miniata* from a good friend and orchid breeder. It is thought that 'Tango'

most likely arose from the breeding of these plants. Mark will keep us up to date with his 'Tango' work.

In relation to *Clivia* cultivation, Mark picks his berries around June, depending on the weather and other jobs at the nursery. He believes that for germination and seedling vigour, by July of the following year he cannot see any difference between seeds picked and sown from May until late August. To germinate seed he uses composted fine pine bark, perlite, and peat moss, believing that air porosity is the key for root growth. He believes that there are too many variables in any plant cultivation to have an inflexible program - shade cloth, solid roof, natural shade, pot grown, in ground plantings, local climate, and even microclimates will have an influence. When fertilising, seaweed solutions are great with liquid feeds and/or slow release fertiliser. Mark also uses molasses and Phosacid (ie Anti Rot). When questioned about appropriate pot size, he says it's best to use space if you have it. If you are cramped, the smaller pots are fine. More space during flowering is ideal for showing off the flower heads.



Figure 17 Peaches

CHANGES TO CLIVIA EXPO IN 2014

A few improvements are planned for this year's CLIVIA EXPO. These include starting the plant sales at 9:30, using the Fellowship Hall for this activity, and implementing the Trading Table model for these sales. The plant cards will also be modified and further guidance will be provided at the August meeting.

Last year's CLIVIA EXPO sub-committee recommended that the club adopt the Trading Table model for its plant sales as a more efficient and fairer model, and this recommendation was also accepted by last year's committee. When this idea was raised at the recent July general meeting, support was voiced from members who had observed a similar model in operation at other garden club shows. We hope that this new model will be successful for the MCG.

Please carefully read the Member Guidelines which are contained in this issue.

SECURING YOUR CLIVIA BERRIES BEFORE HARVEST

Mal Foster

Instead of wrestling with a piece of orange bag netting or similar and tying off with some hayband, I've found that using sheer organza childrens party lolly-bags are very simple and easy to use, to secure my valuable clivia berries before harvest. They are supplied with a pull tie ribbon, so it's easy to slip the bag over the bunch of berries, pull the ribbon to firmly secure to the stem and gently tie off if required. The organza fabric allows air flow and light to the berries.

The white bags come in a range of sizes, but I find 130mm x 180mm suits most situations. With larger crops you might even consider colour coding for groups of plants for easy



identification, as they are available in half a dozen or more colours.



Fig. 18 Organza bag for berries

Now if a berry is accidentally knocked loose or falls before I'm ready to harvest, it remains secure with the parent plant and most importantly, easy to identify. They even look quite smart, uniform and presentable across the crop.

Organza bags are available in packs of 10 at most small variety shops @ around \$2.50 per pack or may be sourced in bulk at significantly cheaper rates on-line. They are also washable for re-use, but at this price it's probably safer to use new ones each season.

A GUIDE FOR TIMING YOUR BOOKS FOR CLIVIA EXPO

Vu Dang

The signs are here! Yes, it's that time of the year already. Things are starting to happen quietly and mysteriously. We are like children waiting and anticipating Christmas Day. There are those that

are like old friends whom we gladly greet every year, those that are recalcitrant who make an appearance now and again and of course the debutants. By now all the buds would be developing inside the rhizome (if they intend to flower this season) and indeed some may have already started to elongate.

To maximise the peak flowering time and hopefully coincide with our CLIVIA EXPO this year, there are some strategies that need to be considered. The key point to note is that *cold slows down the development of buds and heat increases the development of buds* but not the scape itself. The benchmark timeframe for peak bloom is two weeks from when the buds have started to swell and the temperature is around 20°C. This can be achieved in a greenhouse environment or else bring the plants indoors and heat the house for the duration. If the buds are still small, increase the time to three weeks. On the other hand, if the bloom is advancing too fast, take the plant back outside in the cold once it has two-thirds of its flowers opened. In temperatures below 16°C, it will markedly slow down.

Additionally, avoid pollinating until after the show, as pollinated flowers will rapidly wither. If plants are flowered indoors, the colours might markedly lighten, especially interspecifics. Darker colours will tend to be more pastel. As much as possible, place reds and green-throat plants by the window to get as much sunlight as possible.

Felicity Weeden who regularly exhibits plants both at the Cape Clivia Show and at the Overberg Show in South Africa has also shared some of her experiences with us. She wrote as follows:

"First I brought the plants indoors and put them in the lightest possible positions, especially where they might receive some warming

sunrays. I turned on the under floor heating for days and nights at a stretch, and I also used an asbestos panel heater which I left burning for days at a time. I think it is a good option to put a bowl of water close to the heating source so the air doesn't become too dry. The flowers like a fair bit of humidity to open well. I actually brought the plants in when the buds were quite tightly closed because I was going away for a week, hoping that the protection of being indoors might speed them along. If I remember rightly, it was a very cold year and the plants were slow and we had a show on about the 6th of September."



Melbourne Clivia Group Inc.

Burwood East LPO
PO Box 4225,
Burwood East 3151
Ph: 0410 929 510
www.melbournecliviagroup.org.au
secretary@melbournecliviagroup.org.au

MCG CLIVIA EXPO 2014 – MEMBER GUIDELINES

The Melbourne Clivia Group's CLIVIA EXPO 2014 will be held on Saturday 13th September at the Uniting Church, cnr Blackburn Rd & Burwood Highway, Burwood. The main display will be open to the public from 10:00am-4:00pm, with sales commencing at 9:30.

- All plants, for display or sales, *must* be free of diseases and pests. The MCG reserves the right to exclude from the display or from the Trading Table sales any plant or plants which are not disease and/or pest free.
- Plants and pots *must* be clean and well presented. Saucers will not be used; therefore plants should not be watered for at least the 3 days prior to the day.
- Members, particularly those who are officiating, should wear their MCG name tags.
- Exhibitors are asked to provide the Registrar, Lisa Fox (9739 4013, or email at lisa.fox@gmail.com) with details of the number of plants they anticipate bringing for the display by Wednesday 10th or Thursday 11th September, and the time of the delivery of their plants (Friday evening - preferably, or Saturday morning). This information helps the stewards plan the allocation of space for the display. At the time that plants are brought in to be benched for the display, exhibitors will be assigned a (consecutive) number for each plant, and provided with two stickers (bearing the same number), one of which is to be placed on the plant card and the other on the pot. This enables the plants to be tracked for eventual return to the owner. In addition, the numbers will be used in voting for the People's Choice and Members' Choice awards.
- Set-up of venue: Friday 4:00-7:00pm for display hall and 7:00pm onwards for the sales room. Delivery of plants for the display: Friday 5:30-7:00pm (if possible), otherwise Saturday 8:30-9:30am.
- Only members on duty are to enter the main display area of the hall before 10:00am on the Saturday. Members bringing plants for the display will be asked to leave their plants at the tables which will be set up inside the hall entrance to receive these plants. All people who are not officiating in the hall are requested not to enter the main area of the hall until the display is opened to the public at 10:00am.
- Display plants are to be accompanied by the MCG's plant card affixed to a card holder which is to be placed in the pot to the front of the plant. Plant cards and paper will be available at the August meeting. A template will also be downloadable from our website and can be typed out in advance. This year we plan to type our plant cards, if possible, rather than handwrite them. Isabel Collins will assist members with this task on the Friday evening and Saturday morning.

The details to be included on the plant card are: cultivar name (if there is one) and/or cross (if known), exhibitor, breeder (if known), and, any information of interest (optional).

- No plants will be allowed to be brought into or removed from the hall between 10:00am and 4:00pm on the day of the Expo.
- Plants on display are not to be handled nor pollen or berries removed by anyone.
- The People's Choice is open to members of the public who have the opportunity to select their favourite *Clivia*; all entries will be placed in a draw for a \$50 Bunnings gift card. Owners of the three plants receiving the most votes will receive a People's Choice Award (certificate), with the first prize winner also being awarded the MCG trophy. In addition, a new Members' Choice Award has been created for members to select their favourite *Clivia*. Voting forms will be available from the MCG Table ONLY, and you must ensure that your name is crossed off the member list when collecting your voting slip. Members should post their vote in the box at the MCG Table and will be placed into the draw for a \$50 Bunnings gift card. The owners of the three plants receiving the most votes will receive a Members' Choice Award (certificate).



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- Members will be needed to assist with various tasks throughout the day so a roster will be set up to cover a variety of functions. We hope that members will be able to spend two hours on rostered duties. If family members or friends or members are also available to help on the day, they should fill out an Application for Volunteer Membership, preferably in advance of the event. Lynn Rawson will coordinate these volunteer applications.
- After the hall is closed at 4:00pm to everyone apart from exhibitors, the latter are to assemble their own plants in a section and be responsible for checking off their own plants. Following a closing announcement by the Chief Steward, Vu Dang, plants may be removed. Finally, the furniture will be dismantled and the hall swept and cleaned up.
- When transporting plants, secure the pots well and stake the flowering stem as this can be easily damaged. Generally the stake should be removed when on display. Where a flower is accidentally broken off during transit, it can be displayed on the pot or in a suitable container next to it, if so desired. It is permissible to stake a stem of berries, and, if you wish, cover this with netting for protection.
- While utmost care will be taken with all the plants on display, the MCG cannot be held responsible for unforeseen events and any damage or losses.
- To maximize visitor parking, we request that members, as far as possible, consider alternative parking areas such as side streets or under the trees along the Blackburn road side of the church block. Apart from quick drop-offs and pick-ups of plants, NO parking will be allowed during the day along the road between or near the two main church buildings.
- All monies received should be passed to the Treasurer on the day and evidence of expenses to be claimed as expenditure (with prior approval received from the Committee) should be submitted either on the day or within one week.

Trading Table

Location

- The Trading Table will be conducted in the meeting room of the Uniting Church. There will be no independent sellers' tables this year and all sales will take place through the Trading Table.
- The room will be prepared on Friday evening so that the carpet is completely covered for protection and tables to display plants for sale will be set up in one-half of the area.
- A separate area will be set up to hold stock for later sale.
- All purchasers will be allowed to select their plants from the sales tables and return to the sales desk near the entrance door where payment will be made.
- An area will be arranged adjacent to the sales desk to provide a plant crèche, as no plants will be allowed in the main display hall. Trading Table volunteers should encourage purchasers to place purchased plants in their own vehicles.

Sellers

- All current MCG members are offered the opportunity to sell their *Clivia* plants through the club's Trading Table.
- Each seller can provide up to 100 pots of any size for sale. Seeds can also be sold.
- As there will be a combined Trading Table, no sellers will be required to spend all day with their own plants.



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- Each seller will be expected to provide assistance at the Trading Table for at least one hour. Additional assistance in the display hall for at least one hour is also required. This may be at reception, MCG Table, catering or another rostered task. Each seller is also expected to provide at least six plants for display.
- Sellers will need to phone Lynn Rawson, the Trading Table manager, on 9497 4746 or email at lrawson@howardcomputing.com on Wednesday 10 September or Thursday 11 September to advise the approximate number of pots and/or seeds that they will bring for sale at the Trading Table. Information regarding pot sizes would also be of assistance.
- Items to be sold at the Trading Table are to be delivered on Saturday 13 September between 8.00-9.15am, together with a completed Trading Table form.

Sales Stock Preparation

- As the stock will be sold from a combined Trading Table, it will be necessary for each plant to identify the seller and the sales price. The Trading Table manager will distribute perforated cards used at some other garden club sales at the August meeting. The seller should print his/her name and sales price twice on each tag which is then taped to one of the upper leaves of each plant or to the packet in the case of seeds. Half the tag is removed when payment is made at the checkout. Additional information regarding the colour and breeding will also assist with the sale. A photo of the plant or parent plants may also be of benefit. This information can be attached to a stake in the plant pot.
- Plants for sale will be mixed on the sales tables, so it is essential that there is clear identification of the seller.
- The Trading Table form, which needs to be prepared in advance, should list the number of items for sale, showing the total number at each price. Individual plant details are not required. See the example below. This form will be available at the August meeting and can also be downloaded from the website. Note that it is slightly different from the regular Trading Table form.
- On delivery of the plants to the sales room, one of the Trading Table staff will check stock received against the Trading Table sheet.
- Examination will be made for any obvious sign of disease or insect infestation. Any problem plants will be rejected and the Trading Table sheet noted to this effect.
- It is expected that plants will be presented in clean pots.

End of Trading

- At the end of the sales period or at 4.00pm, a check will be made of remaining stock. Each plant will be counted and recorded by price on the Trading Table form provided by the seller. The total value of the remaining plants will be deducted from the total value of plants provided for sale.
- From the resultant figure, a commission of 15% payable to the MCG will be deducted and the balance paid to the seller.
- Sellers are expected to remove the remaining plants as soon as possible after 4.00pm in order that the hall can be cleaned.



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MCG Inc.
Lynn Rawson
94974746
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TRADING TABLE - APPLICATION TO SELL ITEMS AT CLIVIA EXPO

Name: _____ Telephone: _____

E-mail:

[illegible]

I give consent to the Melbourne Clivia Group Inc. to sell my plant/seed/pollen and agree to pay 15% commission on the sale.

Signature: _____ Date: / /2014

15% Commission	\$120
Balance to Seller	\$680

Please return this completed form to Lynn Rawson.

This is a great opportunity to introduce your *Clivia* to a wide audience who may be interested in starting or adding to their collection.

Summary of timeline

- | | |
|------------------------|--|
| 15 August | Paper for the plant cards (for those who will type these at home), Trading Table forms & perforated sales cards will be available at the meeting. Plant card template and Trading Table form can be downloaded from the website. |
| 10 & 11 September | Inform Lisa Fox (9739 4013; lisa.fox@gmail.com) of the approximate number of plants you will bring for the display.
Inform Lynn Rawson (9497 4736; lrawson@howardcomputing.com) of the approximate number of plants &/or seeds you will bring for the Trading Table. |
| 12 September 4:00-7:00 | Set up of display hall. |
| 5:30-7:00 | Delivery of plants for display (if possible) & cut flowers/single flowers. |
| 7:00-8:00 | Set up of sales hall. |
| 13 September | CLIVIA EXPO |
| 8:00-9:15 | Delivery of sales plants & seeds |
| 8:30-9:30 | Delivery of remaining display plants & flowers |
| 9:30 | Commencement of sales |
| 10:00 | Open of display |