



Message from the President

The last meeting was held barely two weeks after the horrific Black Saturday (7 February) which caused immense human and physical damage across Victoria. The MCG truly sympathizes with all those affected.

At this first meeting of 2009, Di Mathews provided an excellent demonstration of how water flows through its medium, and used two different shaped sponges and coloured water to demonstrate the formation of a water table at a similar level in both sponges. See her separate article.

Shige Sasaki, our member in Japan, sent 120 seeds just in time for distribution at the February meeting, and those present appreciated receiving this top quality seed, all of Nakamura origin. Several members who belong to local orchid societies mentioned that their groups often have members bring back their seedlings and plants to compare and discuss growing results. We may also like to consider doing this, perhaps at our June and then final meeting for 2009 during our Question & Answer segment. **Thank you Shige for this generous donation.** There was insufficient time to make labels for the seed that was distributed so here are the details:

A: Vico Yellow hybrid (large orange flower) x Nakamura 'Chiba Yellow'

B: Vico Yellow hybrid (orange flower with nice shape) x 'Pastel Candy' (a pastel-coloured Vico Yellow hybrid) pictured.

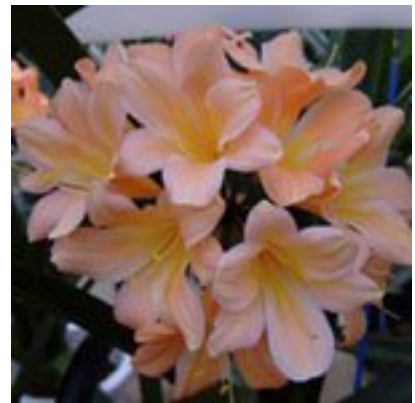
C: Vico Yellow hybrid (with a large white throat) x Nakamura 'Strawberry Hat' (which may be an interspecific).

A yellow/cream flowering *C. miniata* was donated for the raffle by Jeanne Marten, and won by Reg Bussell. **Thanks Jeanne for the splendid plant.** For our next meeting, Ray Argent has offered to bring a *C. gardenii* for the raffle and another one will also be available for the June meeting.

The new initiative of the Trading Table started in a small way at the February meeting and has been established so that members can bring stock to sell or others can purchase from it. We hope that members can access rarer plants through this facility.

At the next meeting on 17 April Laurens Rijke and I will introduce the topic of "Growing Variegates" and will briefly cover the different categorizations of variegated clivias, their propagation, breeding and cultivation. Please bring along any variegated plants you have and we can discuss these that evening.

Some people may have had odd interspecifics flowering over summer, though I found that flowers were sometimes spoilt during the heatwaves of 40 plus degrees. Last week I managed to find two smallish pots of yellow *C. miniata* for \$21 at my local Bunnings store, both with slightly variegated leaves. Even if the flower is not particularly special, I can use good pollen on these and produce yellow or even peach (if I use peach pollen) variegates when they flower in two or three years.



Helen Marriott



ERIKA VAN DER SPUY

How long have you been interested in clivia?

It was one of the many plants in our garden. Was looking forward every spring for the clivias to flower. At that stage a clivia was just another loved plant in the garden. Did not know that there were so many varieties.

How did you first become interested in clivia?

In 1999 I took my parents, Tom and Irmgard Thorburn, to the Pretoria Clivia Show. Well – we were hooked!!!!. All the different colours and leaf shapes made us realise there is more to it. My little daughter got some red clivia seed from one of the exhibitors. Grandpa took the seeds because we were in the process of relocating to Australia. Did receive seeds from those plants a few years later.

How has your interest developed since you became interested?



Arrived in Australia with no plants – any gardener's nightmare. Well my dad sent me some seeds in the first year after we arrived in Australia. This started to earth me in the new home country. Thus the clivia plants are symbolic plants to me – helping me to settle in Australia. After this, every year I received more seeds. Gert Esterhuizen from Port Elizabeth Clivia Society branch has given me very valuable seeds as well. At this stage every year delivers new surprises. Time will tell in the near future what is in my Pandora's box.

Do you have a favourite colour/type/species or named cultivar?

Red and yellow have my interest captured at the moment. A Green flower one day in my collection will be a dream come true.

Have you had any interesting experiences relating to clivia?

My first multipetal. Saw the flower and did not notice it until after a meeting with Melbourne Clivia group and then one day realised there is something to treasure.

Do you specialise in any particular type of clivia?

No – my first aim was to get a collection of plants and then take it from there.

Do you have clivia in pots, in the ground or both?

I have clivias in pots but have big number of plants in ground due to space issues and keeping them drought proof.

What are your hopes for the future clivia-wise?

I admire the plants and flowers that I have seen of my fellow Clivia Group members. I would like to learn from their experiences and improve my stock over the years to come.

Do you have any more comments?

Very excited about the Clivia group that was created. Thank you to everyone who contributed to make it possible to have a Clivia group in Melbourne.



Fertilize my mature plants with slow release fertilizer. Give regular diluted liquid feeds to my seedlings (Helen)

1 - 5 April 2009

International Flower Show

17 Apr 2009 - MCG

Meeting

Variegates (Laurens & Helen)

Databases (Lisa Fox)

19 Jun 2009 - MCG

Meeting

TBC

Gardenii (TBC)

21 Aug 2009 - MCG

Meeting

Interspecifics (Laurens & Helen)

Fertiliser – Brenda Girdlestone

11 Sep 2009 - MCG

Meeting

Multitepals (panel)

Photography (George Simmler)

Sep 2009

Royal Melbourne Show

2 - 4 Oct 2009

ABC Gardening Australia Expo

10 - 11 Oct 2009

Baw Baw Garden Expo

16 Oct 2009 - MCG

Meeting

Pests & Diseases (panel)

Commentary on display plants (members)



Contact Details

NEXT MEETING

Friday 17th April 2009 - 7.30 pm
Uniting Church,
Cnr Burwood Hwy & Blackburn
Rd, Burwood

Demonstration: Variegates
(Helen Marriott & Laurens
Rijke)
Databases (Lisa Fox)

Bring along your variegated
clivia

*Please let us know if you have any other
news or items of interest to share.
Deadline for next issue - 7 May 2009*

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*Notes for Rae Begg's presentation on Potting
Mixes have not been included in this
newsletter due to lack of space but are
available electronically or as a print-out at the
next meeting. Please contact
secretary@melbournecliviagroup.org.au if you
would like to receive these notes.*

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Drainage - Di Mathews

This is a very important issue for clivia growers, and I would like to acknowledge the work of Paul Cumbleton, who comes from Middleton, UK, and works at the Royal Horticultural Society Wisley Garden. Much of the following talk is taken from introductory lectures that he gives to new garden students.

In the wild, many clivias grow in an environment where the water drains very quickly - this is called "sharp" drainage, and results in numerous air spaces around the roots. Wild clivia do not normally send their roots down into the soil, but rather send them more laterally through the leaf litter on the forest floor.

When we put them into an artificial environment, such as a pot, we need to try and provide similar growing conditions where the potting mix we use holds sufficient water for the plants' needs, but drains away quickly to leave a lot of air spaces.

The percentage of volume of a medium that contains air after it has been saturated and allowed to drain is called Air Filled Porosity. The majority of plants need 10% - 20%, while clivias need about 20% or over. Good drainage equals good aeration.

Drainage depends on two factors -

- Gravity, which pulls the water down
- Hydraulic Head, the force pushing it down - fluids flow from a higher to a lower gradient.

AIR SPACES

Roots take up not only water, but also oxygen. Roots are normally covered by a thin film of water, and the oxygen has to diffuse across this film before it can enter the root. Oxygen diffuses relatively slowly, so the more water around the root,

the longer the time it takes for the oxygen to diffuse across. If the roots are starved of oxygen due to too much water, they are unable to metabolise and perform their function, one of which is to take up water.

The symptoms of over-watering and under-watering are the same – if there is too much water, the roots cannot take up oxygen, and the plant wilts. If the plant is under-watered, there is not enough water to supply the plant, and it wilts. In the case of clivias, if there is too much water, the roots will also be subject to rot.

FACTORS AFFECTING DRAINAGE

Pore size – the pores are the spaces between and within the solid parts of a medium – they contain air and water. The pores can vary greatly in size. The relative numbers of large and small pores and how they are arranged will determine the rate of water movement through the mix, and will also determine how much water and oxygen are retained.

Small pores are called micropores, and they hold onto water more strongly due to capillary action. Large pores are called macropores, and they drain most of their water, leaving oxygen in its place.

It is possible to alter these pore sizes by adding coarse materials, for example, coarse grit. The addition of fine particles, however, such as sand, will just fall into the larger spaces, filling them up and clogging the mix, further reducing drainage.



The quantity of grit or large particles added to the mix must be enough to exceed what is called the “threshold proportion” – this is where there is just enough of the coarse particles or grit for the particles to touch each other. To exceed this proportion, more large particles or grit must be added so that new macropores are created that will drain readily. To achieve this, you need about 30% - 50% of grit / coarse particles in the mix.

Pot depth – if you put water into a pot, the excess comes out the bottom of the pot due to a combination of gravity and the hydraulic head. As the water drains, a point of equilibrium is reached, where the gravity and hydraulic head are unable to push any more out. This means that at the bottom of the pot, there is a layer where all the pores are filled with water – this is called a ‘perched water table’ and is true of all pots, regardless of the mix used.

In order to counteract this problem, you can either put the pot into sand, or use a capillary mat – this will, in effect, increase the depth of the pot as the water is pulled into the sand/ mat that is touching the bottom of the pot, and cause the excess water to drain away.

For many years, people used to commonly put a layer of very coarse material i.e., stones, small rocks, pieces of broken terracotta pots called crocks, etc in the bottom of pots to “improve” the drainage. The reason for this was never fully explained, but was accepted as conventional wisdom, and was even advocated in gardening books and television programs. It is still recommended on the gardening sites on the internet.

It was assumed that the bigger materials would assist drainage due to the bigger air spaces – this is true of the materials if used alone, but the dynamic changes when you begin to add layers of materials.

Drainage is actually **slowed** by this, and water accumulates at the boundary between the two layers. If there is a medium with small pores above medium with large pores, the water has difficulty crossing the boundary. There is insufficient pull for the larger pores to pull the water from the smaller pores, and the water is held by capillary action. The water drains to the interface between the two layers, where it slows and may even stop, until a sufficiently large hydraulic head has built up again to push it through the boundary – i.e., watering. For this to happen, the mix above has to again be completely saturated, and this therefore creates **poorer** drainage.

When this occurs, the perched water table that was explained earlier, has now been forced to form higher in the pot, and we now have a **raised** perched water table, where there is even less volume of pot to contain well-aerated mix.

DEMONSTRATION OF A PERCHED WATER TABLE

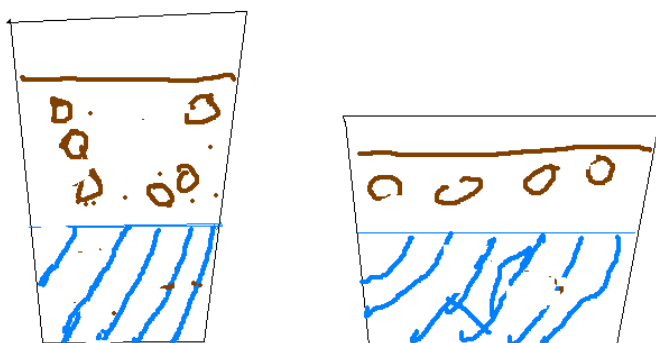
In order to clearly demonstrate the concept of a perched water table, two rectangular sponges were used. The sponges were both saturated with coloured water - one sponge was stood vertically to approximate a long narrow pot, and one sponge was stood on its long end, to approximate a squat pot.

When the sponges were fully saturated with water, they were allowed to drain freely. The water drained, leaving a band of water in each sponge -i.e., some water remained in each sponge, with no impediment to the drainage. The level of water that remained in each sponge was at about the same level in each, despite one sponge standing on its end, and the other on its side. This means that the squat sponge actually held more water than the tall narrow sponge. To show this more clearly, if you turn the squat sponge on its side, so that it stands vertically, it will drain more water, so that the band of water is the same depth as that of the long sponge.

This demonstrates that the horizontal sponge held more water than the vertical sponge.

The water behaves the same way in pots - there is a band of water at the bottom of the pot - the perched water table that will affect the plants grown in them, as the wet layer can become stagnant.

The shape of the pot will have an effect on the drainage - not the volume of the pot. Long pots drain better than short pots. It's the shape of the pot that determines the level of the perched water table.



Long pot showing perched water table.

Squat pot showing perched water table.

The pots above show how the water drains to the perched water table, which is at approximately the same level, regardless of the shape of the pot.

In order to facilitate drainage in pots, therefore, the longer the pot, the better it will drain.

To summarise this talk - in order to facilitate better drainage for your clivias, it is advisable to use deeper rather than wider pots, use a mix containing 30% - 50% of coarse material, for example, a well composted orchid mix could be suitable, and do not, under any circumstances, use a layer of crocks at the bottom of the pot.

References:

Burke, D - Demonstration of sponges adapted from Don Burke Lecture.

Cumbleton, I - Talk given to trainee gardeners at the RHS Wisley Gardens, UK.

Shields, J - Clivia website.

MINUTES OF GENERAL MEETING – 20th February 2009

Venue

Uniting Church, Cnr Burwood Hwy & Blackburn Roads, Burwood

Committee

Helen Marriott, Lisa Fox, Rae Begg, Diane Mathews, George Simmler, Brenda Girdlestone

Apologies

Ros Simmons, John, Yvonne Hargreaves, Laurens and Sharon Rijke

Business Arising

- Meeting commenced at 7.36pm with Helen Marriott welcoming attendees.
- Previous minutes were accepted by George Simmler, seconded by Pam Dryden.
- The programme for the year ahead was discussed regarding meetings, presentations and the ABC Expo in October.
- The resolution to change the Model Rules to better suit the MCG membership application process was discussed. Rae Begg moved to pass the resolution. Seconded by Di Mathews. A vote was unanimous. The resolution was passed.

Secretary's Report

Correspondence

- New member Keith Rothe sent photographs of his flowers. These were displayed for viewing.
- A letter has been received by David Bearlin of Burwood Clivia Nursery. David is seeking volunteers to attend the Open Garden Fair at Frasers in Red Hill on the 28th Feb and 1st March to assist with handing out surveys on clivia. Our members will now receive a 10% discount on any plants bought from Burwood. Anyone interested in attending Frasers to contact Lisa Fox.
- The MCG website has had 288 visits since launch in December. Visitors are from 14 different countries and 160 of the visitors have viewed the photograph gallery.
- There is a possibility of a small bus to ferry visitors to clivia growers properties in September during the Toowoomba Carnival of Flowers. Anyone interested, contact Lisa Fox.
- A meeting is being conducted in Gosford NSW with a view to forming another clivia group.
- Attendees were reminded that non-members will no longer be receiving newsletters.

Treasurer's Report

Opening Balance	\$799.30
Income – Memberships	\$310.00
Expenses – Hall Hire	\$ 50.00
Balance	\$1039.30 including petty cash \$95

Main presentation – Drainage by Di Mathews

Minor presentation – Potting Mixes by Rae Begg

- George Simmler introduced the Trading Table and informed that a form will be available on the website.
- The raffle prize is a mature cream donated by Jeanne Marten. We wish to thank Jeanne Marten for this prize. The raffle was won by Reg Bussell.
- Shige Sasaki from Japan has made a kind donation of clivia seeds. We wish to thank Shige for this donation. Seeds were distributed to members present.
- Pam Dryden donated stamps for postage. We wish to thank Pam for this donation.
- Small committee meeting to approve payments to Lisa Fox for postage, domain registration and website hosting. Payment to Brenda Girdlestone approved for postage and payment approved to Rae Begg for postage.
- Meeting closed 9.50.

END