

October 2009 Vol. 2.5

Message from the President

Although most of the interspecifics owned by members had probably finished flowering, there were enough plants for a good display at our meeting on 21 August. This also included interspecifics which had been crossed again to *C. miniata*, and not surprisingly, the flowering of these leads into the main flowering period of *C. miniata*. Compared with last year, this year the *C. miniata* blooms in Melbourne are starting early, probably due to the unseasonable warmer weather in recent weeks.

Some notes on interspecifics are included in this newsletter. Do also go to the gallery of the MCG website (<u>http://www.melbournecliviagroup.org.au/gallery.html</u>) to see some photos taken at the meeting as well as shots of splendid interspecifics grown by Laurens Rijke. Some other photos will be added a little later on.

For me, the plants are a major highlight of all our meetings. While members had their favourites, one popular plant was a small compact *C. miniata* 'Florid White Lips' grown by Terry Edwards. At just two and half years old, the first plant out of 20 seeds Terry sourced from Belgium was already in flower.

By the time this newsletter is distributed, the September meeting which will focus on the topics of multipetals (now known as polytepals) and photography will be over. I am sure that in the coming years, the exciting new developments in the spread of *Clivia* will include an increase in the growing and availability of interspecifics and polytepals.

MCG members have benefited recently from donations of special seed made available by Eddie Pang, David Banks and Keith Rothe (all MCG members) and from John van de Linde (Cape Town). John's seed was sold to members on the Trading Table at the August meeting. I am sure that the growers of all these seeds will be pleased with the outcomes. Our sincere thanks go to all for their generous donations.

The August raffle of an offset of 'Flame', a Bill Morris cultivar of *C. miniata* x *C. gardenii*, was won by Rae Begg. Three seedlings which were kindly donated by Ken Russell were won by three other members and the remaining seedlings were sold on the Trading Table. Thanks also to Brenda Girdlestone for the donation of the liquid fertilizer.

Brenda introduced us to a new product at the August meeting that functions as a soil conditioner. She believes that the solid material as well as the liquid fertilizer promote good root growth. We thank Brenda for also arranging samples for members to take home.

Not too many members brought back their seedlings grown from Shige Sasaki's seed that was distributed at the February meeting, but we assume that other peoples' seedlings are also on track. I doubt that we will see flowers on these before 2012 at the earliest, but one never knows.

The findings of the recently distributed survey will be useful in next year's planning, we still invite people to suggest topics that they would like covered at the meetings in 2010 as the committee will shortly meet to plan the schedule.

Given the early start to the flowering season in Melbourne this year, we may not have many flowers for the display table at our 16th October meeting. Please do bring a plant for display if you can.

The main topic for the October meeting will be pests and diseases, led by Rae Begg. Unfortunately, the growing of *Clivia* is usually also accompanied by a few problems from time to time, but by sharing experiences hopefully we can reduce these in the future.

We hope to see you at the next meeting.

Helen Marriott



October 2009 Vol. 2.5

Member's Introduction

LYN RAWSON

How long have you been interested in clivias? 2-3 years.



How did you first become interested in clivia?

I purchased 3 cream clivias (1-2 year old) at ABC garden show, Caulfield in 2007, then heard Reg on 3AW advising the start of new clivia interest group.

How has your interest developed since you started?

Wow, it's fun. From my original 3 clivia, which now flower each year, I have learned how to propagate seeds so this year I have 8 plants which will flower. Some of the additional ones I purchased - Belgian Orange and Standard Orange - and others which I have grown from seed. Thanks to the generosity of other MCG members I am looking forward to my "Pot Luck" seeds, the first of which are now a year old. I recently purchased my first one year old variegated, a couple of Chinese broadleaf and a couple of reds and apricots. Together with the donated gardenii pollen from Helen, I now have the start of material to try a bit of experimentation. Of course, this means starting to record which plants have been used as the parents. If only the flowering wait was less than 3-4 years, life would be perfect!

Do you have a favourite?

I don't have a wide range of plants in flower to select a favourite, but I really enjoyed the brilliant display of miniature Chinese clivia with both patterned leaves and variegated leaves from the MCG meeting of June 2009.

Have you had any interesting experiences relating to clivia?

In the garden bed where I planted the three cream clivia I had thee cream flower spikes in 2007 but in 2008 there were two cream and one standard orange spikes. After raising the matter at MCG I did a closer inspection and found that I had two clivia planted together (which must have come in the one pot). The cream one flowered first and the second year only the orange one flowered. I am waiting to see what happens this year.

Do you specialise in any particular type of clivia?

I don't have a wide enough collection to specialise yet.

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

Both. My first ones are in the ground plus a few other that I purchased before starting with MCG. Most of the recent ones are in pots, partly due to their age and also so I can bring them for display if I manage to achieve any interesting results.

What are your hopes for the future clivia-wise? To grow as many clivia as my small garden can accommodate and to give clivia away to anyone who is interested so they can have a good reason to join the MCG and enjoy the experience.

Do you have any other comments?

The support provided by the executive of the MCG makes the learning experience well worth the trek from any part of Melbourne to the bi-monthly meeting.

THANK YOU TO ALL MEMBERS WHO RESPONDED TO THE SURVEY IN THE LAST NEWSLETTER. YOUR RESPONSES WILL HELP US TO PLAN NEXT YEAR'S ACTIVITIES.

Plant Photographs

The following photographs and description are courtesy of David Banks.

'Ella van Zyl' x 'Pretoria Pink'

This was from seed imported from South Africa a few years ago. I am growing about 24 of this cross, and three flowered in September 2009 - very little variation among them, all this attractive musk-pink colour. I have done an F2 cross to see if we stabilize this colour phase and to see if we can get a wider range of colour variation - and the shape could be vastly improved. An average sized flower well presented on the inflorescence. The plants have long strappy leaves and are quite vigorous.



'Chubb Peach Green Throat DPB F3'

Years ago I purchased serious numbers of a full range of 'Chubb Peach' sibling crosses as seed, mostly from Sean Chubb via the KZNCC Seed Bank as it was known. Many of the seedlings only bloomed with a hint of peach, and could easily be passed over as "yellows" if you didn't put such a flower side-by-side. This one has a "greyish" tone to it as well that is unusual and attractive at the same time. Obviously I was very happy with this first flowering seedling, as it produced large open flowers, and lots of them! The green throat was retained for the life of the flower.





This interspecific is 'Gay Delight' and was on display at the August meeting. 'Gay Delight' was bred by Laurens Rijke. The top photograph was taken by George Simmler and the second photograph by Helen Marriott.





CLASSIFIEDS

We will be introducing a classified section to the newsletter. Members may submit a classified up to 5 lines free of charge.

BOX AD

A box ad will cost \$5 per issue or \$20 for one year of advertising (6 issues)

Contact us to book your space.

2010 Membership Renewals are now being accepted. The preferred method is bank transfer.

Details: Melbourne Clivia Group Inc. National Bank BSB 083 657 Acc. 82974 5477

Please add your first initial and surname as the reference.

If you joined the MCG after the 1st September 2009, your membership is covered for 2010.

Alternatively, you may send a cheque to: Melbourne Clivia Group Inc. PO Box 811, Lilydale 3140

NEXT MEETING

Friday 16th October 2009 - 7.30 pm Uniting Church, Cnr Burwood Hwy & Blackburn Rd, Burwood

> Pests & Diseases (Rae Begg)

TRADING TABLE Plants and seeds available Buy or Sell

Events & Contacts

16 Oct 2009 – MCG Meeting Pests & Diseases (Rae Begg)

Christmas get-together to be confirmed.

STOP PRESS!

The ABC Expo was a great success for the MCG. Many thanks to all who assisted throughout the three days, and to Helen for setting up such a professional looking stall.

CONTACTS

Helen Marriott – 97964365 hmarriott@ozemail.com.au

Di Mathews – 98531566 akdesign@bigpond.net.au

Lisa Fox – 97394013 lisa.fox@gmail.com

Rae Begg – 0354286473 bbrigrade1@hotmail.com

George Simmler - 9761 3790

george-oz@hotmail.com

Brenda Girdlestone - 9390 7073 macstone@hotkey.net.au

Please let us know if you have any other news or items of interest to share. Deadline for next issue - 10 Nov 2009

OUR ADDRESS Melbourne Clivia Group Inc. PO Box 811, Lilydale, VIC 3140 www.melbournecliviagroup.org.au

secretary@melbournecliviagroup.org.au

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An Introduction to Interspecific Hybrids - Helen Marriott

Introduction

In contrast to intraspecific hybrids which are hybrids between different forms of one *Clivia* species, especially, but not exclusively *C. miniata*, **interspecific** hybrids are hybrids between different *Clivia* species (Duncan 2008 p.17). Among the various exciting prospects for the development of the genus *Clivia* in the coming years, surely one must be the further advancement of *Clivia* interspecific hybrids involving crossings of the existing species - C. *caulescens*, *C. gardenii*, *C. miniata*, *C. miniati*, *C. nobilis*, and *C. robusta*. To start with, I recommend a visit to some websites that contain photos of interspecific hybrids. A list is given at the end of this text, but for seeing photos of the latest hybrids one of the two email groups/forums is highly recommended as well as the gallery on the MCG website.

Clivia x cyrtanthiflora is the name given to the first recorded hybrid bred in Europe in the 19th century between *C. nobilis* and *C. miniata*. This hybrid (or later generations of it) seems to have arrived in Australia relatively early in the country's history of the introduction of *Clivia* and can be found in large massed displays in some Australian botanic gardens (eg Melbourne, Sydney and Adelaide) as well as in some older private gardens. It has often been incorrectly referred to as *Clivia nobilis* in the past in Australia (as well as in some other countries) and sometimes is now informally referred to as oz nobilis. With its original parentage involving *C. nobilis* (a pendulous species with a tubular flower) and *C. miniata* (the non-pendulous species with upright, trumpet-shaped flowers), this is typically a strong plant, may flower two or three times a year and deserves to be more widely grown. It is not commonly available in retails stores, at least in Victoria, and often seems to have been passed around through divisions.



In their natural habitat in South Africa, *Clivia* species that are growing in close proximity occasionally form natural hybrids. In 2006, *Clivia x nimbicola* was the first formally described naturally occurring hybrid, involving *C. miniata* and *C. caulescens*. (Clivia 5 pp. 78-80; Clivia 8 pp.23-27). A natural hybrid of *C. miniata* and *C. gardenii* is also pictured in Duncan (2008 p.105). While we may learn of other naturally occurring hybrids in the future, it is predominantly the artificial interspecific hybrids that are increasing in many countries as a result of breeding efforts.

C. miniata x C. caulescens

These days, with the spread of *Clivia* around the world, the various *Clivia* species as well as numerous different types of interspecific hybrids are now increasing in accessibility. We can thus enjoy observing interspecific hybrids in public places as well as in our own gardens or collections, and, if we wish, also create our own hybrids.

Some attractions of interspecific hybrids

Some of the appealing features of interspecific hybrids can be summarized as follows:

- Expansion of the flowering period of *Clivia*, with the interspecifics predominantly flowering in Melbourne from June to August, and with some of them producing another flower stem during another season. *C*. x cyrtanthiflora may produce two to three flowers a year;
- Great diversity of flower form, with new flower shapes and umbels, eg, semi-pendulous flowers;
- Different leaf combinations, eg, C. miniata (daruma-type) x C. nobilis;
- New colours and new colour patterns or combinations in flowers, eg, flared green tips, different colour(s) of the inner and outer surfaces of the flowers; and,
- A hugely under-developed category of Clivia, thus allowing much scope for new creations.

Indeed, there is considerable potential for the development of *Clivia* with more growing and breeding of interspecific hybrids.

Types of interspecific hybrids

Koopowitz (2002 p.304) proposes a classification of the different types of primary hybrids involving crosses of two different species. He recommends group names be used to cover these hybrids, e.g., *Clivia* Minilescent Group for *C. miniata* x *C. caulescens* and so on. Although these group terms have some limited following, my impression is that the majority of *Clivia* growers or breeders continue to refer to the name of the full cross. Similarly, there is also a tendency for the natural hybrid involving *C. miniata* and *C. caulescens* to be labelled as such, and some people find use of the term C. x cyrtanthiflora also problematic, in that it referred to the original cross made in the 19th century rather than to the subsequent generations bred from it. Sometimes I follow the informal practice of Nakamura of using abbreviations on his own plant labels: MC for (*C. miniata* x *C. caulescens*), MN, MG and so on.

When seeds that are purchased are not specifically labelled, as in "my breeding mix" or else "interspecific hybrid", it is sometimes difficult to identify the parentage of the resultant plant(s), so in addition to the flower, other features such as the leaf and overall appearance of the plant itself, or the flowering time, may need to be considered. Even then, some plants remain indistinguishable, especially as the number of times *C. miniata* is used in the cross increases and it becomes more *miniata*-like. When identification is still not possible, statements such as "origin unknown" are sometimes used to accompany photos in published texts.

When an interspecific hybrid is named, sometimes the information on its background is not always readily unavailable. Knowing that Rudo Lotter's 'Chanèl', for example, is an F2 *C. nobilis* x *C. miniata* is useful information for anyone <u>trying</u> to create a similar cultivar. In this regard, Ken Smith's "A checklist and register of Clivia cultivar names" becomes an indispensable reference, though of course not all named plants are recorded here.

General characteristics

After *C*. x cyrtanthiflora, the most commonly available interspecific group/category available in Australia is probably the combination of *C. miniata* and *C. gardenii*. These hybrids are likely to be fast growing, offset readily, flower in winter, and have flowers that may be semi-pendulous, slightly curved and perhaps with green tips on flared tepals. In Melbourne, these interspecifics seem to mainly flower in June and July. Bill Morris's 'Flame' is a large-flowered orange interspecific hybrid of *C. miniata* and *C. gardenii*. The late George Hellen in Queensland often used *C. gardenii* in his interspecific hybridisation. Not infrequently, the tepals of the hybrids exhibit green tips, inherited from the *C. gardenii* parent, but sometimes the green colour can be diffused throughout the tip area. The yellow interspecific 'Moondrops' (see photo in Clivia 2 p.39) is one well known example, among others, from the Wessel/Rudo Lotter family, which has specialised in interspecifics. 'Moondrops' is



'Gay Delight'

an F2 hybrid of *C. gardenii* x yellow *C. miniata*. The interspecifics in interspecifies and F2 hybrid of *C. gardenii* x yellow *C. miniata*. The interspecific named 'Gay Delight' (Clivia 8 p.10 where it is misspelt) which was grown from Nakamura seed by Laurens Rijke was on display at the August meeting. It has an attractive multicoloured flower and is thought to be an F2 *C. miniata* x *C. gardenii* cross (not a cross with *C. caulescens* as originally claimed). Shige Sasaki has recently crossed an orange C. miniata with multipetals (polytepals) x C. 'Helleborus', an interspecific of unknown origin which has a slight green centre. The offspring is bronze in colour, with a green centre, and as expected in the F1, does not have multitepals (polytepals) but these should emerge in the F2.

New crosses of *C. miniata* and *C. nobilis* tend to be labelled as such. Here, the leaf texture and leaf tips, as well as its floriferous characteristic seem to be strongly influenced by the *C. nobilis* parent. These hybrids also may inherit some green colouration. The plants often flower in winter and may produce a second flower in another season. 'Chanèl', mentioned above, is probably the most well-known hybrid of this type, which Rudo describes as a kind of bicolour, with the outer surface of the tepals being red and the inner surface yellow.

Interspecific hybrids of *C. miniata* and *C. caulescens* typically flower in July/August in Melbourne, but also may produce flowers at other times, such as summer. At one stage Nakamura bred some extraordinary hybrids, and Rijke was fortunate in purchasing a good quantity of these seed. Inheriting the large plant form of *C. caulescens*, the interspecific hybrids may grow into largish plants themselves. Nakamura's outstanding cultivar 'Day Dream' combines *C. miniata* and *C. caulesens* (see below). 'Mandala', which is featured on the cover of Duncan's (2008) publication, is also a hybrid of *C. miniata* x *C. caulescens*. 'Stanmore Moulin Rouge', another Nakamura hybrid named and owned by Nick Powell (Queensland), is produced from



'Day dream'

(C. miniata x C. caulescens) x self. Keith Hammett, in New Zealand, has also produced some excellent interspecific hybrids, including 'Golden Nugget', a cross of (*C. caulescens* x *C. miniat*a) x self (see Clivia 9 p.51).

Following the discovery of C. mirabilis in 2001, the South African National Biodiversity Institute (SANBI) has actively been utilizing this new species in a range of interspecific hybrids which first flowered in 2006 (Clivia 9 pp. 47-48; Duncan 2008 p.110-111). No doubt, some people are also using *C. robusta* in interspecific hybrids.

When we have interspecific hybrids in our collections there will be many observations that we can make. For instance, if an interspecific hybrid produces flowers at different times of the year, we may observe a change in the flower colour across the different seasons or even in different growing situations. This seems to be due to environmental factors, especially the light intensity. In my own experience, the Australian form of *C*. x cyrthanthiflora can flower regularly in any of the four seasons, and flowers more often than any of the other interspecific hybrid forms. In contrast to *C. miniata*, many interspecific flowers have a solid colour inside, rather than a contrasting throat colour in the basal area, as is the general case with *C. miniata*.

Breeding interspecifics

While Clivias can be enjoyed either as pot or garden plants, some of us will also be interested in the hybridization of interspecifics. In his introduction of interspecific hybrids, Rudo Lotter (CD or website) indicates that when colour mutations, leaf variations and other genetic variations within the six species are taken into consideration, an endless array of breeding possibilities exist. Quite commonly *C. miniata*, with its many variations, is used as the seed or mother parent and then crossed with one of the pendulous species, but it is also sometimes used at the pollen parent. Although there are some differences of opinion, it is thought that each parent contributes 50% to the genetic constitution of the offspring (eg W.



Variegated C. miniata x C.gardenii

Lotter, Clivia 2 p.34; Spies Clivia 8 p.35). While inheriting characteristics of both parents, R. Lotter claims that a cross between *C. gardenii* and *C. miniata* will be more pendulous looking than a cross of *C. miniata* x *C. gardenii*. Undertaking a reciprocal cross, where each parent is used as the seed or maternal parent and vice versa is the best way to investigate the differences of using the same parent as the seed or pollen parent. Less commonly, pendulous species are crossed between themselves.

Wessel Lotter indicates that not all interspecifics will be attractive and he himself personally prefers those that are semi-pendulous, semi-open, gracefully curving flowers (Clivia 2, p.40). Different people, nevertheless, appreciate different flower forms and some of us like many different variations.

To maximize the potential of interspecifics, the breeding of more than one generation is necessary. R. Lotter, for example, argues that in a first generation cross (F1), such as crossing *C. miniata* x *C. gardenii*, the siblings will not exhibit a lot of variation. Also, to bring out further characteristics that are recessive, the best F1 siblings are crossed between themselves (or selfed) to create the F2 generation. It is through this method that we can obtain yellow interspecifics in the second (ie F2) generation.

These days an increasing number of yellow interspecifics are available, but if we wish to breed our own, this can be achieved using a good form of yellow *C. miniata* and crossing it to one of the other species. By following W. Lotter's (Clivia 2, p.41) example of a step-by-step description of an interspecific hybrid involving *C. miniata* x *C. nobilis*, reproduced below, a yellow interspecific will emerge:

| (1) | Cross <i>C. miniata</i> (yellow) x <i>C.nobilis</i> (or any other species) = |
|-----|--|
| | 100% F1 orange split (heterozygous for) yellow hybrids. |
| (2) | F_1 orange split yellow hybrid x F1 orange split yellow hybrid = |
| | 25% F2 yellow hybrids |
| | 25% F2 orange hybrids |
| | 50% F2 orange split yellow hybrids. |

 (3) F₂ yellow hybrid x F2 yellow hybrid = 100% F2 yellow hybrids.

(Clivia 2 p.41).

In other words, a yellow interspecific hybrid can be achieved in the second generation.

Although it has been suggested that we only need to proceed to the second generation (F2) in interspecific hybridization, Keith Hammett indicates that



Nick Powell's 'Moulin Rouge'

quite often, recessive traits are not expressed until generations much later than the F2 (personal communication), so there may in fact be reason to proceed to F3 or F4 though sibling crosses or selfing.

Yoshikazu Nakamura's experience is that excellent interspecific hybrids can be achieved already by the second generation (F2). Nakamura has often selfed his F1 interspecific hybrids, thereby bringing out many attractive features in the flowers of the F2 generation. In selecting parents to hybridize, Nakamura pays attention to small features found in the species parent that might be accentuated in the subsequent interspecific hybrid, for example a round tepal in a small pendulous flower. 'Clementina', named by Rijke, is probably the very best cultivar to emerge from Nakamura's crossing of (*C. miniata* x *C. caulescens*) x self (see Clivia 7, inside cover). Note that if an F1 interspecific (or any other F1 for that matter) is subsequently used in a cross with a different plant, it becomes a new F1.

Main hybridization patterns

Primary hybrids are the results of crosses between two different species, eg *C. miniata* x *C. gardenii*, or *C. gardenii* x *C. miniata*. Thus, some of the examples given above belong to this category. Given the increasing availability of primary interspecific hybrids in recent years, these plants are now often being used in new crosses, whether it is with *C. miniata* or another combination. Where three or more species are involved, Hammett recommends that the term complex hybrid is an appropriate term (personal communication).



C.miniata x C. x cyrtanthiflora 'Felicia'

Although *C*. x cyrtanthiflora is already a primary hybrid, it is now often crossed to *C*. *miniata* again. Given its widespread distribution in many *Clivia*-growing countries, it is not surprising to find it used in many new interspecific hybrids. The photo of Lisa's attractive plant, 'Felicia', bred by John Craigie in Queensland and reproduced in the July newsletter and the current website, is yellow *C. miniata* x *C. cyrtanthiflo*ra. Kevin Walters has named another delightful cross of *C. x cyrtanthiflora* x orange *C. miniata* as 'Sakura'. My own crosses using *C.* x cyrtanthiflora are now beginning to flower and I am interested to see the amount of variation that occurs, particularly based on whether *C.* x cyrtanthiflora is used as the seed or pollen parent and according to the use of different *C. miniata* (or other) parents.

In the May MCG newsletter (Vol. 2.3), John van de Linde outlined his experiences of undertaking a reciprocal cross of [*C. miniata* x (*C. caulescens* x *C. miniata*)] x *C. miniata*. He reports obtaining a higher flower count where the interspecific was used as the maternal plant in the cross. Nakamura's special cultivar 'Day Dream' is a hybrid of (orange *C. miniata* x yellow *C. miniata*) x (*C. caulescens* x yellow *C. miniata*) (see Clivia 8, pp.13-15; Clivia 9, pp. 49-54). In quite a lot of his hybridization, Nakamura has used (orange *C. miniata* x yellow *C. miniata*) as one parent, and this also applies to his interspecific hybrids such as 'Day Dream' and others.

When backcrossed to *C. miniata*, the flowers of the interspecific hybrids are characteristically larger in size and sometimes look more *C. miniata*-like. Rijke has produced some lovely interspecifics hybrids using Nakamura's orange (*C. miniata* x *C. caulesens*) x *C. miniata* 'Aurea', achieving a number of highly attractive plants from just one cross, some of which have been named - 'Patsy', 'Pansy', 'Primrose' and 'M. Rose', displaying a range of different flower shapes and colours. He brought 'Ester Clementina', another splendid sibling from this cross, to our August meeting. Whereas the majority of primary interspecifics or variations of them seem to flower in Melbourne during June and July, the interspecifics that are crossed back to *C. miniata* flower during season itself.



Laurens Rijke's 'Pansy'

If we wish to retain the predominantly pendulous/semi-pendulous feature of an interspecific, rather than to cross it back to *C. miniata*, two hybrids of the same type could be crossed together, as in a sibling cross, for example, (*C. miniata* x *C. caulescens*) x (*C. miniata* x *C caulescens*). Alternatively, to produce an interspecific hybrid that will carry a variety of different genes and which might flower at different times of the year, one could cross hybrids based on different species, such as (*C. gardenii* x *C. miniata*) x (*C. caulescens* x *C. nobilis*). Another way is to cross an interspecific hybrid to a single species, as in (*C. miniata* x *C. caulescens*) x (*C. gardenii*.

The Queenslander mentioned above, George Hellen, sometimes backcrossed his (*C. miniata* x *C. gardenii*) to either *C. miniata* or to *C. gardenii*. The cross that I own of 'Green Imp' is of the latter type and this may explain the predominance of green in the tip and median section of the flower, since it has *C. gardenii* twice in its parentage. This year Nakamura has backcrossed some yellow interspecifics (based on *C. miniata* and *C. gardenii*) to yellow *C. miniata* and, as expected, found all green-

pigmented seedlings. Next year he plans to cross these yellow interspecifics with (orange *C. miniata* x yellow *C. miniata*) and no doubt hopes for some new and different colouration patterns in the resulting flowers.

Creating our own interspecific hybrids

It is certainly not difficult to create our own interspecific hybrids. Planning the goals of the hybridization and then selecting suitable parents is a good place to start. This may involve selecting features in the parents that we wish to produce in the offspring.

Since the different species may flower at different times of the year, storing pollen in the refrigerator (or freezer) will probably be necessary, making sure that it is labelled and dated. Pollen might also be available at MCG meetings from time



to time. Some people say that pollen will remain viable in the freezer for seven years; kept in the refrigerator, the pollen will certainly last for the season (or year) when it is used, if not longer.

Interspecific hybrids with variegation are still relatively unusual, so using a variegated *C. miniata* would be a good choice for those who like variegates. Crossing interspecifics that we already own back with *C. miniata* or with another species is also worthwhile. In other words, there are seemingly endless possibilities. It goes without saying that we should keep full records of our crosses.

C. miniata x C. nobilis

Current and new directions in breeding

It is interesting to speak with breeders about their current work in interspecific hybridization or to view photos of some of the outcomes. We can also examine some of the seed lists that are put out by *Clivia* growers from around the world to see examples of the crosses that they are currently making. At the forum held in NZ in October last year, Jim Shields suggested that the most interesting developments will come from among the serious backyard hybridizer. Although he made this remark in general, it is not hard to envisage that growing and breeding interspecific hybrids is one area where creativity – or is it luck? – may have a role. In any case, we can continue to be stimulated by seeing some of the fantastic new crosses arising from hybridization that is being done locally, nationally and internationally.

Websites to view photos of interspecific hybrids:

MCG: (<u>http://www.melbournecliviagroup.org.au/gallery.html</u>) Rudo Lotter: <u>http://www.rudosclivias.co.za/</u> (see under Clivia showcase) Shige Sasaki: http://members.jcom.home.ne.jp/clivia.3/ (see under My collection: Interspecific hybrids; Nakamura collection: Interspecific hybrid)

Other internet resources:

Yahoo Clivia Enthusiast group: <u>tech.groups.yahoo.com/group/clivia-enthusiasts/</u> The Clivia Forum: <u>www.cliviaforum.co.za</u>

My thanks to Keith Hammett for advising on an earlier draft of this text.

References

Duncan, G. (2008) (2nd ed.) *Grow Clivias*. South Africa: SANBI.

Koopowitz, H. (2002) Clivias. Portland: Timber Press.

Lotter, W.J. (Clivia 2) Advanced hybridising of Clivias. (pp. 34-41)

Marriott, H. (Clivia 8) Nakamura's contribution to Clivia breeding. (pp.6-18)

Marriott, H. (Clivia 9) Clivia caulescens and its hybrids. (pp.49-54)

Rourke, J. (Clivia 5) Natural interspecific hybrids in Clivia. (pp. 78-80)

Spies, J. (Clivia 8) Genetic aspects of *Clivia* breeding. (pp.31-38)

Truter, J.T. et al. (Clivia 8) Clivia x nimbicola - a stunning beauty from the Bearded Man. (pp. 23-27)

MINUTES OF GENERAL MEETING – 21 August 2009

Venue

Uniting Church, Cnr Burwood Hwy & Blackburn Roads, Burwood

Committee

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

Apologies

Di Mathews, Ross Beveridge

- Meeting commenced at 7.35.
- Introduction by Helen Marriott.
- Previous minutes were accepted by Lyn Rawson, seconded by Helen Williams.

New Business

- We received generous seed donations from Eddie Pang, David Banks, John van der Linde and Keith Rothe. There is another donation from South Africa expected. Any seed left from the orders will be available at the Trading Table.
- The ABC Expo is being held from the 2 4 October. Volunteers are still required.
- Our next meeting will be the 11th September due to other events in the month. Other events include the Toowoomba Carnival of Flowers from the 18 25 September, Toowoomba Clivia Society and Jeanne Marten Show during this period, an Open Day at Irene Broadbent's property 26 27 September, Expo at Baw Baw (Irene Broadbent) 10 11 Oct and a show at Perth 12 13 October.
- The Clivia Society Conference will be held at Capetown, South Africa on the 21 27 September 2010.
- The raffle prize is 'Flame', a Bill Morris miniata x gardenii kindly donated by Helen Marriott. Other prizes included a group of young seedlings from Ken Russells and fertiliser from Brenda Girdlestone.
- Results of survey will be in the next newsletter.
- Deadline for material submitted for the newsletter is the 10th of each month.

Treasurer's Report

| Opening Balance (Bank) | \$931.25 |
|--------------------------------------|---------------------------------|
| Income – Memberships/Raffle/TT | \$180.20 |
| Expenses – Hall Hire/Web/Newsletter/ | |
| RHSV/Postage | \$ 75.00 |
| Balance | \$1,194.95 including petty cash |
| | |

Treasurers Report accepted by Yvonne Hargraves and seconded by Lyn Rawson. All agreed.

Main presentation – Interspecifics by Helen Marriott and Laurens Rijke Minor presentation – Fertiliser by Brenda Girdlestone

- The raffle winners were Rae Begg, Herbert Reardon and Vu Dang
- Members presented the plants they brought along including Terry Edwards and Rae Begg
- Several members brought along seedlings from the seeds we received from Shige.
- Meeting closed 9.05.

MINUTES OF GENERAL MEETING – 11 Sep 2009

Venue

Uniting Church, Cnr Burwood Hwy & Blackburn Roads, Burwood

Committee

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

Apologies

Ross Beveridge, Jan Wood, Neil & Judith Greenwood

- Meeting commenced at 7.35.
- Introduction by Helen Marriott.

New Business

- A reminder that the Carnival of Flowers at Toowoomba commences on the 19th September. The Toowoomba Clivia Group will conduct a show, as well as Jeanne Marten's Show at Wilsonton Shopping Centre and Pine Mountain Nursery have an Open Day on the 19th – 20th at their nursery near Ipswich.
- There will be an Open Day at Irene Broadbent's garden on the 26 27 Sep.
- The MCG will have a stall at the ABC Expo on the 2 4 October. Volunteers are still required to help man the stall.
- Irene Broadbent will also have a stall at the Baw Baw Expo on the 10 11 Oct.

Treasurer's Report

| Opening Balance (Bank) | \$1,041.45 |
|--------------------------------|---------------------------------|
| Income – Memberships/Raffle/TT | \$1,262.20 |
| E Pang donation | \$ 50.00 |
| Expenses – Hall Hire/Expo | \$ 195.00 |
| Balance | \$2,237.15 including petty cash |

Treasurers Report accepted by Lyn Rawson and seconded by Yvonne Hargraves. All agreed.

Main presentation – Multipetal/Polytepal by Helen Marriott and Laurens Rijke Minor presentation – Photography by George Simmler

- The raffle winner was Dick Gillivour which was a seedling of Aurea x Japanese Yellow kindly donated by Helen Marriott
- Members presented the plants they brought along including Rae Begg and Erika van der Spuy
- Questions and answers.
- Meeting closed 9.15.

END