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# CLIVIANES

& QUARTERLY NEWSLETTER OF THE CLIVIA SOCIETY &



VOLUME 20 NUMBER 3 & JULY - SEPTEMBER 2011



# The Clivia Society www.cliviasociety.org

The Clivia Society caters for *Clivia* enthusiasts throughout the world. It is the umbrella body for a number of constituent Clivia Clubs and interest Groups which meet regularly in South Africa and elsewhere around the world. In addition, the Society has individual members in many countries, some of which also have their own Clivia Clubs. An annual Yearbook and quarterly Newsletters are published by the Society. For information on becoming a member and / or for details of Clivia Clubs and Interest Groups contact the Clivia Society secretary or where appropriate, the International Contacts, at the addresses listed in the inside back cover.

# The objectives of the Clivia Society

- 1. To coordinate the interests, activities and objectives of constituent Clivia Clubs and associate members;
- To participate in activities for the protection and conservation of the genus Clivia in its natural habitat, thereby advance the protection of the natural habitats and naturally occurring populations of the genus Clivia in accordance with the laws and practices of conservation;
- 3. To promote the cultivation, conservation and improvement of the genus *Clivia* by:
  - 3.1 The exchange and mutual dissemination of information amongst Constituent Clivia Clubs and associate members;
  - 3.2 Where possible, the mutual exchange of plants, seed and pollen amongst Constituent Clivia Clubs and associate members; and
  - 3.3 The mutual distribution of specialised knowledge and expertise amongst Constituent Clivia Clubs and associate members:
- 4. To promote the progress of and increase in knowledge of the genus *Clivia* and to advance it by enabling research to be done and by the accumulation of data and dissemination thereof amongst constituent Clivia Clubs and associate members;
- 5. To promote interest in and knowledge of the genus *Clivia* amongst the general public; and
- 6. To do all such things as may be necessary and appropriate for the promotion of the above-mentioned objectives.

More information on the Clivia Society available on **www.cliviasociety.org** 

# **Table of Contents**

&	CLIVIA NEWS Inn	er Front Cover
&	EDITORIAL	
	Roger Fisher	2
&	CLIVIA TERMS AND TERMINOLOGY	
	Three common terms used in Clivia circles questioned - David Banks	3
&	READER' OPINIONS AND VIEWS	3
	When is 'Clivia' not a Clivia? 7 - Rosa 'Clivia' - Greig Russell	4
	Yellow Flowering Clivia - a Debate on size - Piet Theron	5
&	REGISTERED CLIVIA CULTIVARS	
	Clivia Cultivar Register and Checklist - Marilyn Paskert	5
&	NAMED HABITAT CLIVIA CLONES	
	Stories behind the covers - Cunningham Pink - Garth Cunningham	6
	Cunningham Pink - A question on registering names? - Geoffrey Pomeroy	7
	Luke's Special - Lionel Bester	8
&	NAMED CLIVIA CLONES	
	C. miniata 'Griet' - the Clivia - Sakkie Nel	8
	Clivia miniata 'Joubert van Wyk' - Marilyn Paskert	10
&	CLIVIA VISITS	
	A Visit to the Netherlands - Heidi Nerurkar	11
&	GROWERS' AND BREEDERS' NOTES	
	Some notes on the flowcytometric analysis of Gordon McNeil's intergenerics	16
	Why micro-propagated 'Vico' Clivia plant clones may not be genetically ider	ntical? 18
&	CLUBS AND INTEREST GROUPS	
	Free State Clivia Route	19
&	CLIVIA SOCIETY HISTORY	
	The heritage of the Clivia Society: 2001 to 2005 - Lena van der Merwe	19
&	ADVERTISEMENT - WALLY & JOEY DOVEY	26
&	CLIVI-ARTA - Helen Sanders	27
æ.	THE CLIVIA SOCIETY Inc	ner Back Cover

# **ADVERTISEMENTS**

WILL ANYONE WISHING TO ADVERTISE OR WHO KNOWS OF POTENTIAL SPONSORS OR ADVERTISERS PLEASE COMMUNICATE WITH SAKKIE NEL IN THIS REGARD - SEE INNER COVER FOR CONTACT DETAILS.

The Clivia Society Newsletter started as a black on white news-sheet dated July 1992, numbered Volume 1 number 1, called 'Clivia Club'. It formed a means of communication for people interested in the plant genus *Clivia*. It was edited/written by Nick Primich with a frequency of 3, 5, 8 & 5 during the first 4 years, using the publication month in the volume.

The frequency was fixed on four annually with Vol. 5 No 1 of March 1996.

The date changed to the southern hemisphere seasons with Vol. 8 No 1 of Autumn 1999. The first three used yellow paper as cover. The name changed to 'CLIVIA CLUB NEWSLETTER' with Vol. 9 No 1 Autumn 2000 with full colour photos on the cover pages. Another name change to 'CLIVIA SOCIETY NEWSLETTER' came with Vol. 10 No 4 Summer 2000, and in 2005 reverted to a quarterly number. *CLIVIA NEWS* is the continuation of this series.

#### **EDITORIAL**

t's that time of the year in the southern hemisphere when things start happening all at once and far too quickly. I'm sure this is the longest, coldest drawn out winter I've had to survive but perhaps it's just accumulated wear and tear [mostly self-inflicted] that heightens consciousness of one's failing body. And I don't know if it's the erosion of memory over time [ok, by alcohol as well!] that is responsible, but each year the Clivia blooms look more spectacular than the last. This year's seem to have arrived late for many so the best blooms may have missed the shows - but there are some pretty spectacular plants about, and one is hard-pressed to decide which is the 'must have' [not that I can afford those]. We also have the added advantage of the Clivia Forum [www. cliviaforum.co.za] and the Clivia Interest Group [http://tech.groups.yahoo.com/group/cliviaenthusiast/] to keep us abreast of developments and in a permanent shade of green. And now added is the online register of named Clivia cultivars and checklist of names [ http://www. northamericancliviasociety.org/clivia-register. php] if ever you're feeling you've time or an appetite for being further lured down the path of financial ruin.

Which then brings us to the issue of terminology - we have scientists and hobbyist, perfectionists and promiscuous breeders amongst the diverse range of member of the Clivia community. Each has their own take on reality. Here we publish David Bank's observations of the correctness – or not – in the use of some of the terms bandied about by clivia aficionados. I don't think in a group of such diversity we'll reach consensus but in print it is better to err on the side of being conservative and correct. If one is breeding for the marketplace then terminology that can be misconstrued or deceptive is deceitful.

Greig Russell takes issue with a the clonal name of 'Clivia' for a rose cultivar in his continuing

series of "When is a 'Clivia' not a *Clivia*?", finding it to be not in accordance with nomenclatural rules.

And then – named Clivia cultivars. Before registering a name ask yourself "Why do I need to do this?" It is a useful way of keeping track of genetic material through breeding lines. And since the generations between plants is in half decades most of us are merely quardians and not keepers of their heredity. If you are not into breeding, showing or selling then it would seem that there is no need to register a name. Registering a name is easy enough to do these days since the registration form has been placed online [ http://www.northamericancliviasociety. org/cultivar-form.php ] There is a proviso that the picture of the plant should be published in a numbered publication to validate the name. Clivia News is here to help you! Since the Clivia growers tend to be of the greying brigade there are still members who shy away from electronic technology. My advice - find a youngster to help you - that is if you can hold their attention long enough not to be distracted by the next jangling gizmo!

And in conclusion we have Lena van der Merwe's penultimate episode of the Heritage of the Clivia Society.

So, until our next exciting issue –

Enjoy! &

Roger Fisher

Editor - Clivia News

#### **ERRATA**

The photo of the plant named Fred Gibello Juliana Webb was of a plant Aletta (Elsje) van der Merwe got as a gift from Johan Schoombee about five years ago. Unfortunately it was lost some time ago.

The photographer was Pieter van der Merwe's and sent by his wife Aletta (Elsje). &

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## CLIVIA TERMS AND TERMINOLOGY

[I have lifted with permission the following pieces from the Yahoo Clivia Enthusiasts Group posted by David Banks. Elicited responses from the membership which are not reproduced. Ed]

# Three common terms used in Clivia circles questioned

David Banks - Australia

I think it is imperative that we try to use the correct names and terminology.

C. \_ var. citrina?

I have often wondered how valid is the term "variety *citrina*" in the Clivia species *C. miniata*, *C. gardenii* and *C. robusta*.

In orchids, the rules are very clear regarding the naming of colour forms. In fact, many albinistic forms of orchid species have been named and described as forma *alba / album/albus* (depending on the ending of the generic name).

The terms subspecies (ssp.) and variety (var.) are generally reserved for distinct closely related and interbreeding populations at the next rank below specific rank. Many taxonomists even argue that certain subspecies should be upgraded to specific (species) status.

Which firstly brings me to Clivia miniata var. citrina. This cream/ yellow form of the species was initially a "one-off" plant, certainly not a group or population of similar individuals. In hindsight, it was probably more appropriate that it was given a cultivar name - rather than a varietal name. True varieties and true subspecies reproduce truthfully from seed, colour forms (incl. forma) do not. Hence, we can cross a G1 yellow (var. citrina) with a G2 yellow (var. citrina), and suddenly we have 100% progeny of the rare orange form of var. citrina! In a similar thread, you could cross two orange-flowered plants (that had yellow parentage in their backgrounds) and you could suddenly turn a C. miniata var. miniata into a C. miniata var. citrina. Yes, it doesn't make sense.

The term 'citrina' also indicated that the yellowish flowers lacked any red pigments

in the flowers or plants and were essentially anthocyanin-free. When selfed, if they were true albinos if you like, they would replicate themselves from seed all the time – 100%. That would then give some justification to the naming of the form. But do we wish to recognise botanically every colour variation that is expressed within *Clivia miniata?* I think not.

Sadly, it appears that some of the plants described recently as C. gardenii var. citrina and C. robusta var. citrina are not anthocyaninfree forms in any case, and perhaps (if it was really necessary) these names should only have been applied to such forms, that will reproduce truthfully from selfed seed. If they were both orchids, they would have been quickly synonymised under the original species names, as they are nothing more than unusual colour forms that are generally very unstable. I was very surprised that the taxonomic reviewers (if there were any) let them get through with those names, considering both the blushing in the flowers and the reddish berries. From a taxonomic perspective, the original descriptions do not give enough evidence, and reasoning, for describing them at varietal level. To argue the use the term 'citrina', because it was done with C. miniata 100 years ago, holds no scientific weight whatsoever. At best, only the true anthocyanin-free forms of these two closely related species should have been either a cultivar name or described as forma. As all they are only colour forms, there are no other taxonomic differences. Then there is speculation that some of these are really C. caulescens!

#### "Floret"

Sadly, there is a continuing and growing

trend on this forum regarding the use of the term "floret".

Generally, writers have substituted this name instead of the more botanically correct use of the term flower or bloom. This is technically incorrect.

One of the dictionary definitions of floret is "A small or reduced flower, especially one that is part of a larger inflorescence, such as those of the grasses and plants of the composite family – such as daisies". You will NEVER see an example that comes close to referring to a Clivia bloom.

Clivia blooms are hardly "small or reduced flowers". In fact, I believe there is no reason at all to include the word floret within discussions on clivias and their flowers.

Could we please make an effort to eliminate this term, and use the correct terms of flower or bloom instead

## "Oz nobilis"

Lately, I have seen a return of the invalid and confusing name of "Oz nobilis".

This is NOT a species or an example of the C. nobilis species, but an example of the common primary hybrid between *C. miniata* and *C. nobilis* that was described as Clivia Crytanthiflora. Sometimes this epithet is spelt with a lower case "c" and in italics with a multiplication sign immediately before. This however is again an incorrect use, as such a protocol is reserved for natural hybrids.

Could we please banish the term "Oz nobilis" once and for all?

## READERS' OPINIONS AND VIEWS

# When is 'Clivia' not a *Clivia*? 7 – *Rosa* 'Clivia'

Greig Russell - Cape Clivia Club

Rosa 'Clivia' is a Hybrid Tea rose bred by Reimer Kordes (1922-1997 – from the third generation of the famous German family of rose growers and breeders from Holstein) and registered in 1979. Its registration name is KORtag. This rose is described as an orange blend with a strong fragrance, having 30 petals. The foliage is a matte green and the plant blooms in flushes throughout the season. It was derived from the crossing of Mercedes (floribunda, Kordes, 1974) × [Sonia (hybrid tea, Meilland 1974) × Uwe Seeler (floribunda, Kordes, 1970)].

The use of 'Clivia' as a clonal name here, as well as for the clonal name of the potato discussed in no. 5 of this series, annoys me. The rules of nomenclature for cultivated plants are described in the *International Code of Nomenclature for Cultivated Plants*, the current version in use being that of 1995. Below are some of the significant articles from this publication:

• 17.9. To be established, a new cultivar epi-

thet published on or after 1 January 1959 must be a word or words in a modern language.

- 17.11. To be establised, cultivar epithets may not consist solely of common descriptive words in a modern language.
- 17.13. To be established on or after 1
  January 1959, the botanical, common or
  vernacular name of any genus or nothogenus of plant may not form a new cultivar
  epithet.

Article 17.13 says it all. The clonal name of the rose is inadmissible, the potato too. If one does have a plant you wish to name for a friend called 'Clivia', then you simply add the surname – at which point it becomes Whatevergenus 'Clivia Poggenpoel', and that clears up all the doubt and makes it admissible. And one must act likewise when clivias are named for people with floral names (eq. Clivia 'Violet Jones').

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# Yellow Flowering Clivia - a Debate on size

Piet Theron - Garden Route Clivia Club

n recent years one of the topics that have often evoked a lot of discussion has been the size of plants and flowers and to what purpose one would acquire certain plants. There are certainly massive oranges and yellows with large plants, a big head of flowers and flowers that measure 10 – 14cm across. As



Piet Theron's yellows plants - David and Goliath.

these attributes and the appreciation of them vary from person to person I wonder what the majority of members really think, what they aim for in breeding tendencies and how they eventually see their collection to develop. In South Africa we are blessed in having a wide genetic variety available. In later years the influence of improved material being available from overseas has added a new dimension to our breeding efforts. Notably the trend towards more compact and broader leaf plants for a bigger measure of year round appreciation and not only during flowering season.

As I see it the very large plants that we have been accustomed to have one big disadvantage = space is a problem. With an ever increasing world population and high density housing becoming the norm, more than ever it stands to reason that the garden of a townhouse will be able to accommodate more compact plants than those standing very tall and proud. This is so necessary if more people are to be put into a situation where they are able to appreciate the plants that we collect, grow breed and cherish.

More Compact pigmented stem plants have been available for some time, but it is only recently that green stemmed compact plants have been seen to a larger degree. However, they are still very scarce at this stage.

# REGISTERED CLIVIA CULTIVARS

# Clivia Cultivar Register and Checklist

Marilyn Paskert - North American Clivia Society

ast May the Clivia Register and Checklist made its online debut. During the NACS Conference at Longwood last March there was much discussion about how many of us would like to see the Register with photos and easily accessible to the public. The International Registrar for Clivia,

Ken Smith was present and enthusiastic for

the project so a star was born: http://www.northamericancliviasociety.org/clivia-register.php The Clivia Register and Checklist belongs to the Clivia Society. The only reason the NACS is hosting it is because we have almost unlimited space on BlueHost.com and it doesn't cost a penny more to use a big chunk for the Register/ Checklist. From the beginning Roger Fisher,

Clivia Society Yearbook Editor was involved as a consultant. Since the Register/ Checklist first went online Ken Smith has added many photos. If you have taken any photos of the plants listed and are willing to share, please send them to Ken.

So, how to register a plant? There is now an online form. When you submit the form you will receive a copy, Ken will receive a copy and you will be forwarded instructions where to send photos of your submission. It is very important to describe the plant you wish to register in great detail. What makes it unique from other named Clivias? Why did you choose the name you selected? Filling out the form does not guarantee registration as there may be a problem with the name. You can contact Ken at cliviasmith@idx.com.au with any questions prior to submitting the registration form online.

Being published in a Clivia Society publication can help establish your plant name. Please submit photos of your plant to Roger Fisher at roger.fisher@artefacts.co.za along with detailed information about your plant. Photos and stories selected by the Clivia Society will be printed in the Clivia Society Yearbooks and quarterly newsletters.

The Register / Checklist is much more than a Clivia registry. There is a wealth of knowledge with listings of historical Clivias, common Clivia names, etc. If you feel descriptions are lacking please provide Ken with the detailed background of a plant so that this information can be added. This is the living history of Clivia and we can all participate. In forty years many of us will be gone but the Register/Checklist will live on. Please help make it the best it can be.

# NAMED HABITAT CLIVIA CLONES

# Stories behind the covers - Cunningham Pink

Garth Cunningham - New Zealand

he plant was found in 2001 in Eshowe not far from the Dlinza Forest on the farm which I was managing. It was growing in dense bush in very marshy ground with the top 20 % of its roots exposed.

I put the plant on Clivia Forum in about 2005 when Francois van Rooyen bought the first one. I had other plants from the same population although none of these bloomed the same colour.









Francois van Rooyen has taken all my plants | California. I would love to get one of my plants except one which I sold to Geoffery Pomeroy in out to New Zealand some day. &

# Cunningham Pink – A question on registering names?

Geoffrey Pomeroy - California [Copied from the Yahoo Clivia Enthusiasts site]

have clones/offsets of a number of plants that were listed on Ebay or shown on this site or the other Forum with specific names, most of which are discussed on one or both Forums with those names, but none of them have been officially registered.

# Who can register such plants?

For example, the Cunningham Pink? Does Garth Cunningham need to do the paperwork to get it officially registered, or does that task fall on whomever he sold the original plant to when he emigrated to New Zealand, or can it be done by anyone who owns a clone?

[Anyone can register a name but if one is to use the name of a grower or collector it is probably polite to clear that with the person whose name is to be used. The other problem is that if one is registering clonal material sourced from elsewhere clones of the same plant may be circulated and bred under different names. Involving the person after who the plant is to be named may help establish a consistent name for all clones. Ed]. &

# Luke's Special

#### Lionel Bester - KZNCC

ather and son, Luke Johnson, the father being a manager on a farm in Hilton. They spend as much of their time as possible in wild places.

Luke found this beauty 10 years ago whilst hiking with his dad in the wild in Stanger many

years ago. They have mainly habitat plants in their collection.

The individual flowers are 130 + mm across on a huge, magnificent umbel. It must be all of 400mm wide!

The petals look like dancing flames. &









# NAMED CLIVIA CLONES

# C. miniata 'Griet' - the Clivia

Sakkie Nel - NCC

he berry plant (Mother plant) is a garden collected plant, which a neighbour Mrs. Coba Blignault, gave to me from one of her flowerbeds in 1995. The length of the leaves are 450mm and the width are 95 mm. The umbel is big with bright orange flowers. This

plant is completely sterile to its own pollen. I cross-pollinated Coba in 2000 with my best yellow, which is a Margot McNeil garden collected plant from her flowerbed high up in the Wolkberge of Lekgalameetse Nature Reserve. near Tzaneen.

The length of the leaves are 600 mm and the width only 27 mm. The umbel contains only 7 to 9 flowers and is unimpressive, but to me the quality and colour of each flower was something that attracted my attention.

Griet flowered the first time in 2006. The photo's I took then shows that her flowers were exactly the same as those of 2009. Unfortunately I cannot report about the flower (if any) for 2007 and 2008.



"Margot McNeil"

I entered Griet in 2009 at the Joburg Show and she won a second price in the section for "any other colour". At this same show "Corgas – André" (Yellow) won gold in the cut flower Section.

After the show I "selfed" Griet and it looks as if I may have a tiny number of seeds. The harvest was ten pips in all, which I gave as a present to 3 South Africans and 7 overseas clivia friends.

In 2010 she won double gold at the Northern Clivia Club Show in the section "Any other colour".



"Coba Blignaut"



"Griet"

# Clivia miniata 'Joubert van Wyk'

Marilyn Paskert - NACS

his plant was purchased from Mr Tsuruoka by Marilyn Paskert during a trip to Japan in 2007. It has large green throated bronze flowers approx. 8 – 9cm diameter. The striata variegated leaves are 8 – 9.5cm wide. Flowers are held in a full umbel high above the leaves. This unique Clivia has very pleasing proportions. Joubert Van Wyk is a collector/breeder who loves bronze green throats and this is one of the nicest forms. If Joubert had been on the same trip to Japan he would have seen it first, so naming it for him is his consolation prize. &









# **CLIVIA VISITS**

# A Visit to the Netherlands

Heidi Nerurkar - Germany

ast year I travelled with Anke and Aart van Voorst to the Clivia Conference in Cape Town and we had spent almost the entire time together. Since we got along so well we decided to meet up together again in the future. In March of this year I had planned to go to Belgium and this turned out to be also an excellent opportunity for me to see them again. At the end of the short flight from Stuttgart to Amsterdam both of them were already waiting for me at the airport. We spent a very pleasant evening together at their house in Hillegom talking and reminiscing the great time we had

Yellow polyploidy plant 04-2011

in South Africa in 2010.

Aart has a beautiful collection of Haemanthus and Scadoxus at home as well as some of his polyploidy Clivias. Luckily for me one of his yellow plants was flowering during my stay.



Hortus Botanicus, Kees Sahin Collection 04-2011



Hortus Botanicus, Kees Sahin Collection 04-2011

On the following day we went to the Hortus Botanicus, the botanical garden of the University of Amsterdam. The Hortus Botanicus Amsterdam was founded in 1683 and therefore is one of the oldest botanical gardens in the world. In fact, they even have a greenhouse only for their Clivias. Kees Sahin – breeder of the Sahin Twins – passed away in 2006 and it is his collection, which is now housed in this conservatory.

There is actually not enough space in the narrow greenhouse for this huge collection, but the Clivias don't seem to mind the cramped quarters and are growing nicely.



Hortus Botanicus 04-2011



Polyploidy Clivia I , 04-2011



Polyploidy Clivia II, 04-2011

After enjoying this feast of colours we left the Hortus Botanicus and went to a nursery, where Aart keeps his Clivias. A lot of them were in bloom and I tried to figure out by observing them which plants are polyploids and which are 'normal' Clivias. The polyploids seem to be more colourful and the tepals are thicker, but for ordinary Clivia-people like myself it is not easy to guess which plant is polyploid and which plant shows leathery tepals too and is however just a normal Clivia.

On the same day Anke, Aart and I also spent some time in the greenhouses of Royal van Zanten, which started cultivating bulbs in 1862. Today van Zanten produces cutflowers and breeds, selects and produces starting material for professional growers. Aart's profession is plant breeder for Alstroemerias at Royal van Zanten

and he has bred quite a number of varieties, exotic and delicate looking Alstroemerias in an unbelievable range of colours.

Next morning the three of us drove to Dynaplant in De Lier. Dynaplant are specialised in the cultivation of Clivias and Zantedeschia (Calla Lily). Their Clivia miniatas are available in the shops from November to the end of April, the Zantedeschias are available all year round. The standard Clivias are supplied in a 13 cm pot with a pot cover or a stick-in label.

Peter Varekamp, one of the owners of Dynaplant, was kind enough to show us around in their new two storeyed building, where the ground level is mainly used for packing and labelling of the plants.

A table full of green leafed seedlings. The variegated seedlings are removed, because they are very slow growing and therefore are not really suitable for their standard production line.

The first floor is unbelievable huge. Dynaplant even produces its own electricity for lighting etc.

Below are Anke, Aart and Peter Varekamp looking at some special broadleafed motherplants.



Anke and Aart van Voorst, 04-2011



Royal van Zanten, 04-2011



Royal van Zanten, Alstroemeria, 04-2011



Young plants, not flowering yet. Dynaplant, small seedlings, 04-2011



Dynaplant, first floor, 04-2011



Dynaplant, ground level, 04-2011





Dynaplant, young plants, 04-2011



Dynaplant, Motherplants III, 04-2011



Dynaplant, Motherplants I, 04-2011

Dynaplant only cultivates orange Clivias for the international market. Each year they harvest 100 000s of seeds from the motherplants.

To see such a great number of plants flowering in the same colour is impressive and standing in front of Dynaplant's motherplants is like standing

in front of a huge sea of orange flowers. Only one colour – but still beautiful.

With this incredible sight of orange flowers my short trip to the Netherlands had come to an end, but of course I left Holland thinking about clivias again... &



Dynaplant, Motherplants II, 04-2011

# GROWERS' AND BREEDERS' NOTES

# Some notes on the flowcytometric analysis of Gordon McNeil's intergenerics

Last year in a discussion on Herbertia papers Ian Coates posted the note below.

#### Gordon McNeil's intergenerics

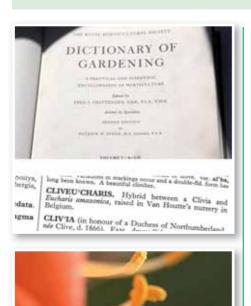
To support the dubious views of others, I did call them his 'dream' crosses but, if only in taking nearly 40 years so far to flower, there is certainly something different about them. The attached off the rubbish tip is typical. The seed plant shown in this group was planted in 1972. Very slow growing and prone to rust. (But then, that comes to us all with age I guess).

Incidentally, there is historic record of another intergeneric cross made by a nursery near my previous home in Cheshire. If I recall correctly, it was made by Clibrams nursery in Altrincham and called 'Cliveucharis'. I was never able to find out more other than the pollen supposedly coming from Eucharis Amazonica.

I am challenging my memory now, but I think it was also recorded by Van Houtte in Belgium. Any ideas?

lan,

England









I offered to check the material flowcytomeric by a specialised firm (Iribov). With the flowcytometer the DNA content of the cells can be measured. Ian kindly sent me two of his Gordon McNeil hybrids.

Every species has its own DNA value per cell. It's is given in picograms ( $10^{-12}$  gram).

Ben Zonneveld measured the (2C) DNA for the Clivia species (Herbertia 57 2002-2003 page 41-48)

Clivia miniata 39.2
Clivia caulescens 38.7
Clivia gardenii 36.4
Clivia robusta 35.7
Clivia nobilis 34.7
Clivia mirabilis 31.2

The measurement of my material uses a slightly different method, resulting in a little bit lower DNA value.

The mean value (2C) of 21 of my miniata hybrids is 37.5 pg. Results from the two plants sent by lan:

- Intergenetic no 1 37,7 pg. Intergeneric no 2 (GMx1) (see picture lan) 37.4 pg
- DNA values of possible fathers used by Gordon McNeil: Hippeastrum (species)



about 30 pg, (commercial hybrids 45 or 60pg)

Eucharis 32.6 pg

So according to the DNA values it is not probable that the plants from lan are intergeneric hybrids with *Hippeastrum* or *Eucharis* (or any other species). It is still strange however, that they have not flowered after so many years. Also the strange leaf form of no 1 (see picture) adds to the questions.

There have been more claims of intergeneric crosses between members of the amaryllidaceae in the past and in some cases there was something about these plants that was not normal to the original species, but they resembled in most characteristics the mother plant. It could be that pollination with 'foreign' pollen triggered growth and some kind of unfertilised embryo growth (maybe apomictic behaviour or embryo growth from a chromosome doubled egg cell). The resulting plant could then however inherit a number of 'bad or misbehaving' genes by the mother that in this case would not be 'fixed' by father genes. This is only speculation and I have not seen a solid case myself.

Next step could be to look at the chromosomes (number, analysis according to the methods used by Ran, Hammett and Murray in Annals of Botany 87: 457-462; 823-830. 2001) to see if there are chromosomes or parts of chromosomes not belonging to clivia are present. But I'm afraid I will not find the time and just have to wait till they flower to get more clues (maybe change of environment will trigger them).

# Why micro-propagated 'Vico' *Clivia* plant clones may not be genetically identical?

[Edited from a posting on the Yahoo Clivia Enthusiasts Group of an online report posted by the Science Daily (8 Aug 2011) of a new study by a team from Oxford University, UK, and King Abdullah University of Science and Technology, Saudi Arabia, reported in Current Biology]

hile organisms regenerated from clonally related isogenic founders might have been expected to be phenotypically invariant, the study demonstrates that regenerant *Arabidopsis* lineages display heritable phenotypic variation.

Clonal regenerant plants exhibit poorly understood heritable phenotypic variation.

The researchers believe that they have found out why there is genetic variability in the case of cloned plants: the genomes of regenerant plants carry relatively high frequencies of new DNA sequence mutations that were not present in the genome of the donor plant.

Professor Nicholas Harberd lead author of the paper of the Department of Plant Sciences, University of Oxford observes that:

Anyone who has ever taken a cutting from a parent plant and then grown a new plant from this tiny piece is actually harnessing the ability such organisms have to regenerate themselves. But sometimes regenerated plants are not identical, even if they come from the same parent. Our work reveals a cause of that visible variation.

Using the so-called 'whole genome sequencing' DNA sequencing that decodes the complete genome of an organism in one go, the researchers analysed 'clones' of the small flowering plant 'thalecress' (*Arabidopsis*) and observed variations in regenerant plants due to high frequencies of mutations in the DNA sequence of these regenerants, mutations which are not contained in the genome of the parent plant.

Professor Harberd is quoted as saying:

Where these new mutations actually come from is still a mystery. They may arise during the regeneration process itself or during the cell divisions in the donor plant that gave rise to the root cells from which the regenerant plants



are created. We are planning further research to find out which of these two processes is responsible for these mutations. What we can say is that Nature has safely been employing what you might call a 'cloning' process in plants for millions of years, and that there must be good evolutionary reasons why these mutations are introduced.

[The above is a transliteration with editorial adaptations of an online report by Science Daily staff from materials provided by the University of Oxford.] &

#### Journal Reference:

Caifu Jiang, Aziz Mithani, Xiangchao Gan, Eric J. Belfield, John P. Klingler, Jian-Kang Zhu, Jiannis Ragoussis, Richard Mott, Nicholas P. Harberd. 2011. 'Regenerant Arabidopsis Lineages Display a Distinct Genome-Wide Spectrum of Mutations Conferring Variant Phenotypes'. *Current Biology*.

http://www.cell.com/current-biology/retrieve/pii/S0960982211007718

# CLUBS AND INTEREST GROUPS





# FREE STATE CLIVIA ROUTE

The Free State Clivia Club has established the Free State Clivia Route. This route allows one to view participating member's Clivia collections and provides the opportunity to discover how others cultivate and care for their plants. All participating members have a board placed outside their homes (as shown in the picture top left) that easily identifies their property.

Should you wish to visit one or some of these gardens while in or passing through Bloemfontein, simply contact the members on the attached list to arrange a visit. Some members will have plants and other items for sale. Please note that all vists are strictly by appointment only.

Contact 082 891 3966







# **CLIVIA SOCIETY MATTERS**

# THE HERITAGE OF THE CLIVIA SOCIETY 2001 TO 2005

Lena van der Merwe - Northern Clivia Club

livia Club Newsletter 10(2) winter 2001 reported on the Annual General Meeting held on 21 May 2001 in Pretoria. On this day three meetings were held: The last AGM of the Clivia Club. the adoption of the new constitution for the Clivia



Louis Swanepoel

Society and the first meeting of the Clivia Society. A new management committee was elected from the nominated representatives of the constituent Clivia Clubs (branches).

FIRST CLIVIA SOCIETY MANAGEMENT COMMITIEE MEMBERS 2001/2002 ELECTED ON 21 MAY 2001

Chairman	John Winter
Secretary (not elected)	Joy Woodward
Vice-Chairman	Louis Swanepoel
Treasurer	lan Brown
Office Bearer	Sean Chubb

CONSTITUENT CLIVIA CLUBS (BRANCHES)			
Cape	John Winter		
Northern	Tino Ferero		
KwaZulu/Natal	Sean Chubb		
INTEREST GROUPS			
Border	Stella van Gass (Chairperson)		
Eastern Cape	Willie van Rensburg (Secretary)		
Southern Cape	lan Vermaak (Chairman)		
Northern	Dries Olivier		
KwaZulu Natal	(Chairman)		
Metro	Nick Primich		
OTHER			
Public Relations	Chris Vlok		
Newsletter Editor	Meg Hart		







John van der Linde

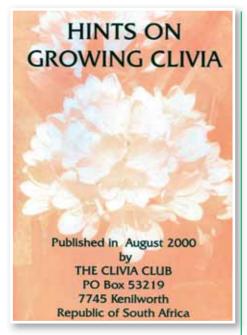
The Clivia Club Newsletter underwent another name change to Clivia Society Newsletter 10 (4) summer 2001. In November 2001 the Waterberg Boslelie-klub was formed with An Jacobs of Modimolle (Nylstroom) at the helm.



Bossie de Kock

CLIVIA SOCIETY MANAGEMENT COMMITTEE MEMBERS 2002 to 2004				
Position	2002/2003	2003/2004		
Chairman	Chris Vlok	Chris Vlok		
Vice-Chairman	John van der Linde	John van der Linde		
Secretary	Lena van der Merwe	Lena van der Merwe		
Treasurer	Bossie de Kock	Bossie de Kock		
Additional member	John Winter	Ken Smith		
CLUB REPRESENTATIVES AND (ALTERNATES)				
Cape	Mick Dower, Ian Brown, Gert Wiese	Mick Dower, Ian Brown, Gert Wiese		
Eastern Province	Charl Coetzee	Willie le Roux, Charl Coetzee		
Northern	Louis Swanepoel, Bossie de Kock,	Lena van der Merwe,		
	Lena van der Merwe	Glynn Middlewick, Bossie de Kock		
KwaZulu Natal	Sean Chubb	Sean Chubb		
REPRESENTATIVES OF OVE				
Australia	Ken Smith	Ken Smith		
Europe		Aart van Voorst		
New Zealand		Keith Hammett		
United Kingdom	Mike Jeans	Michael Jeans		
USA		Michael Morri		
CLIVIA CLUBS CHAIRMAN				
Cape	John Winter	John Winter		
Eastern Province	Willie le Roux	Willie le Roux		
KwaZulu Natal	Sean Chubb	Sean Chubb		
Northern	Tino Ferero	Tino Ferero		

CHAIRPERSONS/CONTACT PERSONS OF CLIVIA INTEREST GROUPS					
Border	Stella van Gass	Stella van Gass			
Free State Clivia		Hennie van der Mescht			
Metro Group	Glynn Middlewick	Glynn Middlewick			
Northern KZN	Dries Olivier	Dries Olivier			
Southern Cape	Ian Vermaak	lan Vermaak			
Waterberg Boslelieklub	An Jacobs	An Jacobs			
Zoutpansberg	-	Anneke Stroebel			
OTHERS					
Public Relations	Vacant	Vacant			
Newsletter Editor	Meg Hart	Meg Hart			



At the AGM of the Clivia Society held at Kirstenbosch, Cape Town on 20 April 2002 a new executive committee was elected as reported in Clivia Society Newsletter 11(2) of winter 2002.

At this same meeting on 20 April 2002 the application of the Eastern Cape to become a constituent Club of the Clivia Society was unanimously accepted. The Eastern Province Clivia Club became the fourth constituent club of the society.

Me. Ferozah Conrad presented a paper at

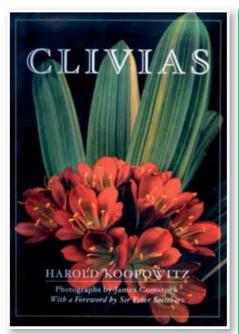
the AGM announcing the discovery of *Clivia* mirabilis. Clivia four (yearbook) published later in that year carried several articles on this discovery.

This issue Keith Hammett reported on page 25 the formation by *de facto* on 11 May 2002 of the now New Zealand Clivia Club when forming a show committee.

The third quadrennial conference took place at the Royal Show Grounds, Pietermaritzburg on 6 & 7 September 2002 (Clivia Society Newsletter 11(3)) Clivia enthusiasts from all over the world attended. This was followed by a clivia auction on the Saturday evening where a much sought after yellow *C. caulescens* fetched a high price.

An English translation of "Junzilan Xingpu" (New Spectrum of Clivia) by Guo Wen-Chang was made available to the Clivia fraternity (11(3) page 17) together with the Chinese book by the Northern Clivia Club with James Abel as coordinator. The translation was sold at cost. On the inside back cover the book "Clivias" by Harold Koopowitz with photographs by James Comstock was advertised. "Cinderella has begun to come into her own, and a small but enthusiastic group of her breeders worldwide have brought her out form an undistinguished past to a lively present and promising commercial future from the forward by Sir Peter Smithers."

At a Society meeting held on 6 September 2002, Wessel Lötter, Bill Morris and Alfredo Gibello were elected as honorary life members of the Clivia Society. A special merit certificate was also awarded to Nick Primich as the founder of the newsletter in 1992. In commemoration of the 10th anniversary of the Clivia Club/Society



Clivias by Harold Koopowitz



Harold Koopowitz

ten founder members, who were still members of the Society in 2002, were awarded merit certificates.

In Clivia Society Newsletter 11(4) Sebrina Heroux was listed as the contact person in the USA. The Free State Clivia Interest Group announced their birth on

page 26 of this issue with Piet Laubscher as management coordinator and in the 12(1) 2003 issue they were listed as an Interest Group.

The 2003 AGM was hosted by the Eastern Province Clivia Club and held at Kabega Park School Hall, Port Elizabeth on 17 May 2003. John Winter was replaced by Ken Smith on the executive committee of the Clivia Society (Clivia Society Newsletter 12(2)).

Jim Shields reported (12(2) page 26) that the North American Clivia Society are accepting membership applications.

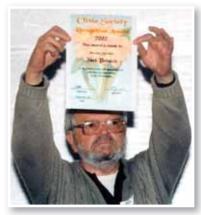
On page 5 of Clivia Society Newsletter 12(3) Mick Dower wrote and advertised the colour



James Comstock

chart developed by himself and Claude Felbert of the Cape Clivia Club. This newsletter reported on page 21 that the Clivia Society of Australia with Bryan Paten as chairman was formed.

December 2004 the Free State Clivia Club became a constituent club of the Clivia Society.



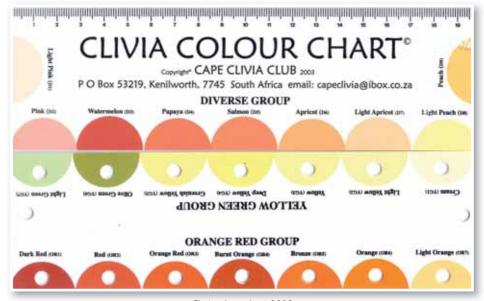
Nick Primich holding award



Honorary Life membership certificate



Founder member's certificate



First colour chart 2003

CLIVIA SOCIETY COMMITTEE MEMBERS 2004 to 2006					
Position	2004/2005 Committee	2005/2006 Committee			
Chairman	Chris Vlok	Chris Vlok			
Vice-Chairman	John van der Linde	John van der Linde			
Secretary	Lena van der Merwe	Lena van der Merwe			
Treasurer	Bossie de Kock	Bossie de Kock			
Office Bearer:	Ken Smith	Ken Smith			
REPRESENTATIVES OF CONST	ITUENT CLIVIA CLUBS				
Cape	Claude Felbert, Felicity Weedon, Gert Wiese	Claude Felbert, Felicity Weeden, Coen Calitz			
Eastern Province	Willie le Roux, Charl Coetzee	Andre Calitz and Gideon Botha			
Free State	-	Hennie van der Mescht			
Garden Route	-	Gerrie Brits			
Joburg	-	Glynn Middlewick			
KwaZulu-Natal	Sean Chubb	Sean Chubb			
Northern	Lena van der Merwe, Peter Lambert, Bossie de Kock	Lena van der Merwe, Peter Lambert, Bossie de Kock			
REPRESENTATIVES OF OVERSEAS MEMBERS					
New Zealand	Keith Hammett	Tony Barnes			
USA	Michael Morri	James Black			
Australia	Ken Smith	Ken Smith			
Europe	Aart van Voorst	Aart van Voorst			
UK	-	Dr Hamish Sloan			
OTHER OVERSEAS CONTACT					
UK	Hamish Sloan	-			
New Zealand	-	Di Smith			
CLIVIA CLUBS					
Cape Clivia Club	John Winter	John Winter			
Eastern Province Clivia Club	Willie le Roux	Willie le Roux			
Free State	-	Hennie van der Mescht			
Garden Route		Gerrie Brits			
Joburg	-	Glynn Middlewick			
KwaZulu-Natal Clivia Club	Sean Chubb	Sean Chubb			
Northern Clivia Club	Peter Lambert	Peter Lambert			

In Clivia Society Newsletter 13(1) 2004 Cobus Roos was listed as the public relations officer and Gerrie Brits wrote on page 26 that the Border Interest Group underwent a name change to Garden Route Interest Group and with the intention of becoming a constituent clivia club.

At the Clivia Society Annual General Meeting of 5 June 2004, National Botanical Gardens, Pietermaritzburg John Winter was awarded honorary life membership of the Clivia Society in recognition for the work he did on the improvement of clivia breeding at the National

#### **INTEREST GROUPS** Border Interest Group Stella van Gass Stella van Gass Hennie van der Mescht Free State Clivia Glynn Middlewick Metro Group Northern KZN **Dries Olivier** Hottie Human (Chairperson) Garden Route Interest Group Gerrie Brits Lowveld interest group Daan Dekker Daan Dekker An Jacobs Waterberg Boslelieklub An Jacobs Anneke Stroebel Zoutpansberg Anneke Stroebel (Secretary) **EDITOR OF NEWSLETTER** Roger Fisher Meg Hart PUBLIC RELATIONS OFFICER Cobus Roos Cobus Roos YEARBOOK EDITORIAL John van der Linde

Botanical Gardens and in collaboration with other clivia breeders. The executive committee was re-elected (Clivia Society Newsletter 13(2) winter 2004).

In this issue on page 25, Daan Dekker (chairperson) wrote about the establishing of the Lowveld Clivia Interest Group in November 2003.

In volume 13(3) spring 2004 Di Smith was added as contact person in New Zealand.

In an e-mail of Tuesday, March 29, 2005 from the Chairperson, Chris Vlok requested all

representatives on the Clivia Society to express their vote whether the Metro Interest Group and the Garden Route Interest Group should become constituent clubs of the Clivia Society. All members were in favour and they became the fifth and sixth constituent Clivia Clubs of the Clivia Society.

In volume 14(2) on page 36 Glynn Middlewick announced that the newly formed club would be known as Joburg Clivia Club as Metro was not specific to Johannesburg Metro.

At the Annual General Meeting of 21 May 2005



Lowveld Clivia Interest Group visit in November 2003



# WALLY & JOEY DOVEY

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doveyw@telkomsa.net www.doveyclivias.com



Sarel Naude

held at Hoërskool die Wilgers, Pretoria Connie and James Abel and Meg Hart were awarded life membership of the Clivia Society (Clivia Society Newsletter 14(2) 2005). Meg was the editor of the Clivia Society Newsletter for ten years – from Clivia Club 4(5) November 1995

to Clivia Society Newsletter 14(2) of winter 2005. James was the first chairman of the Clivia Society and he and Connie were instrumental in habitat visits, the quadrennial conference and the annual shows. Roger Fisher was elected as editor of the Clivia Society Newsletter and John van der Linde the editor of the Yearbook.

Issue 14(2) carried an advertisement of a new publication, Cultivation of Clivias/Kweek van Clivias by Lena van der Merwe, Hannes Robbertse and Bossie de Kock, of the Clivia Society. I quote "The first, full colour book on propagation of clivias, published by the Clivia Society in both English and Afrikaans, is now available....."

This book was available by August 2005. The first 4 000 books were sold within 18 months of publication resulted in a reprint (Clivia News 16(1) page 3).

Clivia Society Newsletter 14(4) 2005 lists John Roderick as the contact person of the Border Interest Group and



Roger Fischer

announces a new interest group, Overberg Clivia Interest Group, headed by Felicity Weedon.

#### References

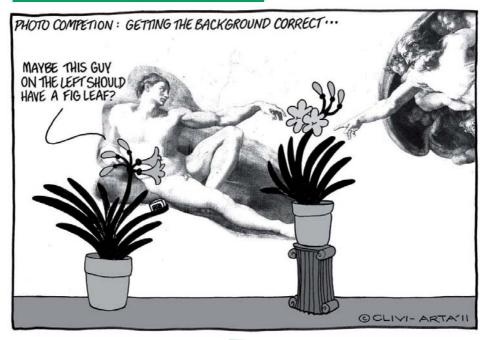
Newsletters of the Clivia Society from volume 10 to volume 18.

E-mails of the Executive committee. Conference proceedings of 2002.

# **Photographs**

A hearty thank you goes to members making photos available. (James & Connie Abel; Pat Gore, James and Adri Haxton, Peter Lambert and others). &

# CLIVI-ARTA - HELEN SANDERS



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Interest Group

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www.cliviasociety.org

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**CLIVIA CLUBS** 

Cape, Eastern Province, Free State, Garden Route, Joburg, KwaZulu-Natal, Lowveld,

New Zealand, Northern and Northern Free State

**INTEREST GROUPS** 

Border, Northern KwaZulu-Natal, Overberg, Waterberg, Highway, Ngome, Vryheid and Dundee



