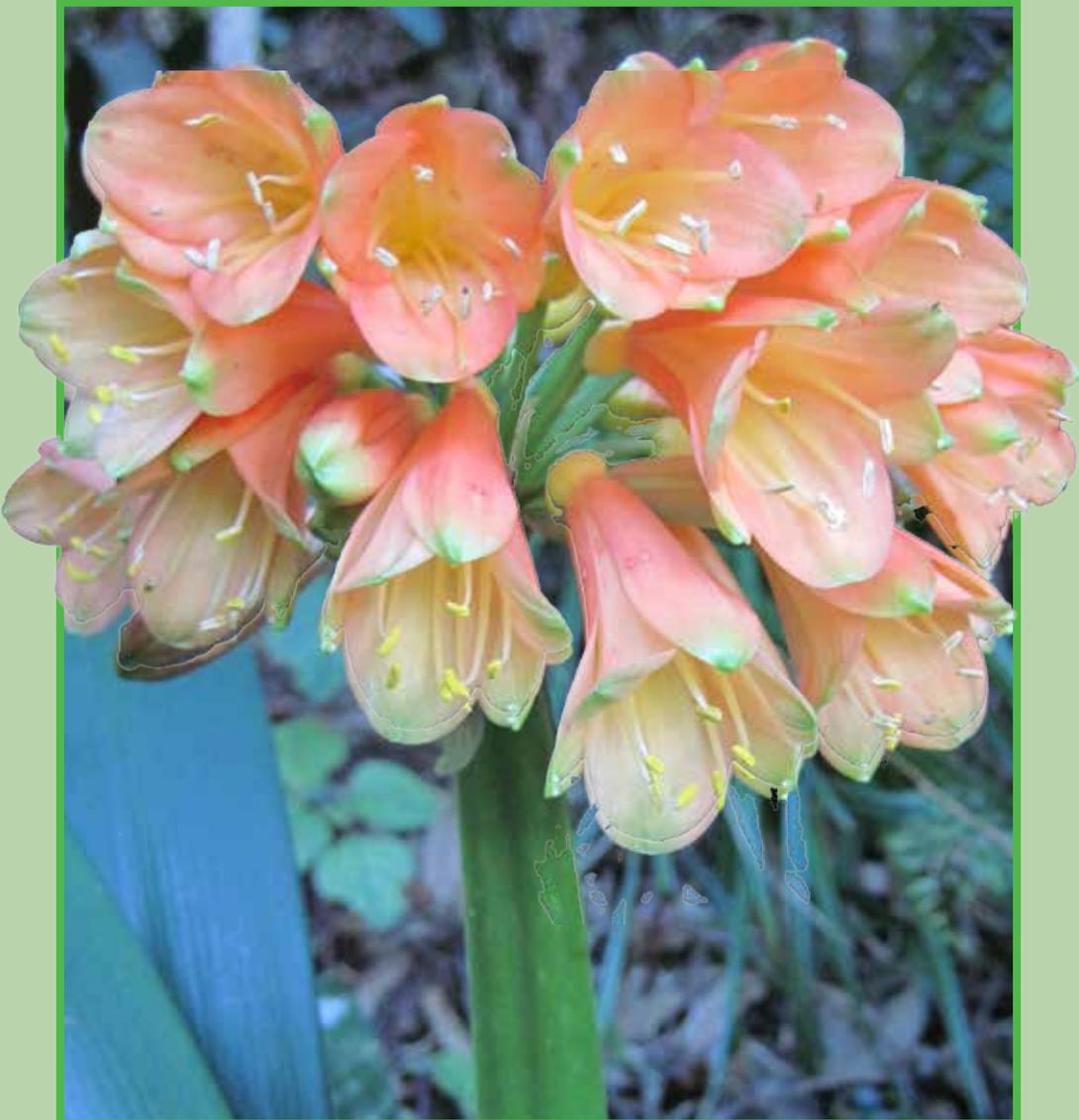


ISSN 1819-1460

# CLIVIA NEWS

Newsletter  
of the Clivia Society

2016/2017 | VOLUME 25 | NUMBER 2



# CLIVIA NEWS



NPO no. 139-860

SARS PBO Tax Exemption no. 930036393

## The Clivia Society [www.cliviasociety.org](http://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 three 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 on the inside of the back cover.

## The objectives of the Clivia Society

1. To co-ordinate the interests, activities and objectives of constituent Clivia Clubs and associate members;
2. To participate in activities for the protection and conservation of the genus *Clivia* in its natural habitat, thereby advancing 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 abovementioned objectives.

More information on the Clivia Society available on  
[www.cliviasociety.org](http://www.cliviasociety.org)

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## ADVERTISEMENTS

WILL ANYONE WISHING TO ADVERTISE OR WHO KNOWS OF POTENTIAL SPONSORS OR ADVERTISERS FOR THIS PUBLICATION PLEASE COMMUNICATE WITH SAKKIE NEL IN THIS REGARD.  
SEE PAGE 44 FOR CONTACT DETAILS.

The Clivia Society Newsletter started as a black and 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 the late Nick Primich with issues respectively 3, 5, 8 & 5 during the first 4 years dated with the month of publication.

The frequency was fixed on four annually issues 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 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 monthly dating was reinstated.

CLIVIA NEWS is the continuation of this series.



## EDITORIAL

**W**hat a spectacular flowering season, seeing beautiful flowers and plants at various shows, photographs etc. Congratulations to all the past and current breeders for the interesting plants you have bred and have selected for further propagation. I am, in addition, always amazed by the variety nature has produced, and often wonder about the non-human pollinating vectors that have resulted in the innumerable variations in the plants we find in the wild.

Joubert van Wyk  
Editor



Cover Photo: *Clivia x nimbicola*



P.S. Cut-off dates for submissions:  
Clivia News 2016/2017 No. 3 - 15 December 2016;  
Photographic Competition entries - 15 February 2017; and  
Yearbook 18 - 15 February 2017.  
The Yearbook will, in addition to the usual categories, also include information on growers and collectors in and around the Johannesburg area in anticipation of the 2018 Quadrennial Conference to be hosted by the Joburg Clivia Club.

Back Cover Photo: View from Bearded Man mountain

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## CLIVIA PERSONALITIES

## In memory of Jurie Swart

By Andre du Toit

**W**e are still struggling to accept the passing of Jurie Swart on 31 August 2015. When he was diagnosed with leukaemia in June 2014, we were all convinced that the prognosis was good. We expected good news, then learned of the worst.

Jurie became interested in *Clivia* in 1992, first as a garden plant then as a serious collector. He was a student of *Clivia* and was knowledgeable about plants. He was always eager to convey his knowledge to new members and did not hesitate to donate plants to them. In later years he attended shows in other provinces and became friends with many *Clivia* enthusiasts, especially Koos and Fransie Geldenhuys. He became a judge and was widely accepted as a fair and capable judge.



Jurie working on a sermon while camping.

*Clivia* suited his personality. Their ability to survive under difficult circumstances and still reward the

breeder with abundant flowers gave him immense pleasure. He even had conversations with his plants and during his last days, photos of his flowers took him away from his situation. He was a very spiritual individual working as a pastor in the Hospital Park congregation in Bloemfontein until he passed away.

Jurie was a very versatile person with an MBA qualification apart from his theological degrees. He was a keen tennis player and completed 14 Comrades Marathons and several other extreme races successfully. He was also a bird watcher and regular camping excursions to Botswana and Namibia took him away from his daily tasks.



One of his favourite flowers.

Jurie intended to retire at the end of October 2016. He had already built his house and shade house on a small farm near Albertinia. *Clivia* had already been planted and his intention was to move more plants from Bloemfontein. He told his wife shortly before his death that he was not really concerned about what happens to his plants because he had



Jurie sharing his thoughts with Hennie van der Mescht while judging at the Vryheid Show.

Jurie and members of the Free State Clivia Club: Dr Marius Swart, Hennie van der Mescht and Stef de Swardt.

already had so much pleasure from them.

His wife of 37 years, Annelize, intends to retire later this year from her practice as an ophthalmologist and to move to Albertinia with a limited number of plants. ▼



Jurie on a habitat tour with Paul Kloeck and other members.

## CLIVIA PEOPLE

**Ken Smith***By Sakkie Nel*

**K**en was born on November 16, 1955 in the Crown Street Women's Hospital in Sydney. His father was a draughtsman and his mother was a housewife and a very caring person. They both taught him to respect all things. They allowed him to start a plant collection at the age of 12, as well as building an aviary in the backyard. He still collects plants and maintains an aviary.

Ken is the youngest of seven children, Beverly, Lynne (deceased), Josephine, Michael, Patricia, Deidre and himself. He attended Croydon Infants, Croydon Public School, Drum Moyne Boys' High School, Ryde TAFE College and finally



Ken Smith in Japan in 2008

the University of Western Sydney-Hawkesbury. Some of his many qualifications include Bachelor of Applied Science – Horticulture, qualifications in Urban Horticulture, Sports Turf Management, Bonsai, Floristry and a Diploma of Teaching (Technical Education). Ken was until recently Head Teacher of Horticulture at Western Sydney Institute of TAFE-Richmond College. He had been a Teacher of Horticulture and Green Keeping since 1979.

Ken started with Cacti at the age of 12 and later started to collect orchids indigenous to Australia. He had a major interest in Ornamental Grasses and Bamboos and still does. Plant variegation has held his interest and, just like Joe Dana of California, he actively collects any specimen showing this trait. He also has an interest in flower variegation, flower colour mutations and double flower forms. He has an eclectic interest in plants and fills any space with specimens.

Ken was a founding member of the Clivia Club. He was a contributing writer for the Ornamental Grasses and Bamboo section of the Readers Digest Gardener's Encyclopedia of Plants & Flowers in 1991. His large collection of *Clivia* started with purchases of seeds and plants in the late 1980s from Bill Morris and Kevin Walters. Yoshikazu Nakamura was also a great source of seed and information. Ken has continued to build his collection with plant importation from South Africa, Japan, New Zealand and the USA.

Ken was the Contact Person for the Clivia Society between 1994 and early 2016 and acted as a conduit for the members spread around Australia. In 2002 he was appointed as the Registrar for Cultivars of the genus *Clivia*. In 2009 he printed the 88-page book Volume 1 known as "A Checklist and Register of *Clivia* Cultivar Names", which was used in the Nature and Nurture book of Swanefelder and Fisher.

He reports that Toowoomba has long had an association with *Clivia* and they were the first



The *Mirabilis jalapa* is a special favourite of Ken as it reminds him of his childhood home.

to start an Australian group, the Toowoomba Clivia Society, Inc. The members in Victoria were second when they started the Melbourne Clivia

Group. Sydney has had a large following but did not get organized until August 2013 when the Clivia Society of NSW, Inc., was formed.

The Clivia Society of Australia was a short-lived attempt back in 2004. Enthusiasm is high in the Perth area of Western Australia, centered on Clivia Classiques Nursery, but no society has yet been formed there. The three main groups on the East Coast and the informal group in Perth WA are thus the operating hubs. There are a scattering of members in South Australia. Some are members of the Clivia Society as well as their local group.

*Clivia* shows on the east coast of Australia are non-competitive, Ken told me, but he has judged shows held at Clivia Classiques Nursery in Western Australia organized by Paul Kay and Harry Erasmus. He had the good fortune to judge *Clivia* shows in Cape Town, Port Elizabeth, Pietermaritzburg, Pretoria, California and Philadelphia.



Fred van Niekerk and Ken

*Clivia* plants form the bulk of his collection, but he also collects other plants such as bulbous plants, with a particular emphasis on *Watsonia* and *Crocasmia* types. He grows Sweet Peas and Japanese Imperial Morning Glories. Ken is very

fond of the colour forms of *Erythrina lysistemon* that he has grown from seed collected from the late Fred van Niekerk, as well as supplied by Sean Chubb. Ken has red, white and peach colour forms, but is still anxiously waiting on the yellow to show up! He even has a variegated foliage *E. lysistemon* seedling and persisted in growing fancy foliage Geraniums. He grows a selection of Oleander cultivars, including a median variegated form.



Ken's favourite *Clivia* – 'Griet'

Ken imported several fine *Aspidistra* cultivars from Japan. He collected Kuwariba Subaki, changed leaf *Camellias* which include variegated and mutated leaf forms as well as milkweed plants for his garden butterflies.



Ken at the Interflora Conference 2015.

Antique botanical prints, primarily *Clivia*, adorn the walls in his home. "*Clivia* collectible" items such as phone cards, postcards, stamps, etc. are collected. He also collects out-of-print gardening books and has a collection of glass thistle vases and early Australian "Lustre Ware" vases from the 1920-1950 period.

Ken's most precious *Clivia* plants include 'Four Marys' probably topping the list ('Griet' would also be one, if he had an offset!), Fukurin and 'Ito Fukurin' from Nakamura, 'Frats' and 'Capellini'. He also possesses: The yellow forms of *C. robusta*, *C. nobilis* and *C. caulescens*, and 'Freelove' from David Conway. Other plants include: variegated *Erythrina* seedling; median variegated *Oleander*; *Hibiscus syriacus* 'Purpureus Variegatus'; *Tecomaria capensis* Variegated form; and *Watsonia* forms from the breeding work of Noreen and Bill Morris.

People whom Ken considers to be his mentors and from whom he learned a lot include Bill Morris, Yoshikazu Nakamura, the late Nick Primich, the late Wessel Lötter, the late John Winter and the late Mick Dower as well as other *Clivia* world enthusiasts.

Ken's "feel good moments" with *Clivia* include the following:

- The trips worldwide to meet the people involved with our special plant are the times that for him create the memories.
- Having Mr Nakamura stay with him, and then meeting him in Japan, were special to him.

- Meeting David Conway and experiencing the "*Clivia* collection" at his place put a lot of things in focus.
- Meeting Nick Primich after so many years of correspondence.
- The RSA habitat tours must rank as extremely special, not only for the learning curve about *Clivia*, but for the wonderful people whom he has the good fortune to call friends. The open friendship and hospitality is second to none.
- His trips to RSA which enabled him to connect with Fred and Cora van Niekerk have left an indelible mark.
- The tour to Japan is full of lasting memories, like the mini bus trip to Mr Koike's collection.
- The thrill of presenting to conference audiences and then participating in the auctions have been memorable.
- Standing in the garden on the winding terraces of the farm Cyprus of the McNeil property at Legalametse Nature Reserve in the Wolkberge ("*Cloud Mountains*") left Ken speechless!
- Sean Chubb and Andy Forbes-Hardinge will know of the special moments that they shared involving *Clivia*. Viewing *C. x nimbicola* in habitat. There are just too many experiences for him to recount all of them.

The explosion of breeding new and wonderful flower forms within the genus over the past decades has set the roller-coaster in motion. It can only get stronger as each person or group of people explore the possibilities available to them. The genetic wealth that is now much more freely available to enthusiasts knows no bounds. Ken sees greater development in the interspecific *Clivia* plants, from tiny tubular forms to crazy starburst spider forms, to cut flowers, bridal bouquets... and everything in between.

It remains exciting to Ken and he requests everybody around the world to register their named *Clivia* with the Registrar. ▼

## Felicity Weeden

By Sakkie Nel

**F**elicity Weeden was born on July 16, 1942 into a farming family in Uitenhage, Eastern Cape. Her father was a farmer and dairyman and her mother a teacher as well as a very keen gardener. Both parents had a keen interest in nature. But it was her mother, with her natural teaching ability, who instilled in her children a lifelong interest in the natural world. She created interesting nature projects for her children during holidays, such as collecting and drying different species of grass, flowers or insects. Felicity was an apt student when it came to plants and had her own little garden at the age of four years. From then on she never stopped growing plants of one sort or another.

Felicity, with her elder sister June, attended Riebeeck College Girls' School in Uitenhage for both junior and senior years. She started her business life as a typist at Volkswagen in Uitenhage, in later years became a shop manager, and shop owner and in due course went into business with her husband and for many years filled the gap as buyer and general factotum.

Felicity's passion for plants led her, over the years to focus on bulbs, both exotic and indigenous, shrubs and trees, succulents, daylilies, *alstroemarias* and *Clivia*. Hybridizing became an interest and she worked on daylilies, *alstroemarias* and *amaryllis*, before getting involved with and



Felicity Weeden with her Award of Honorary Life Membership.

hybridizing *Clivia*. She has a particular interest in the habitat and habitat plants. Felicity has enjoyed some excellent experiences in the "bush" with friends Wayne Haselau, Hein Grebe and Andy Forbes-Harding. Felicity has travelled to Japan, New Zealand, Australia and Belgium, to visit other *Clivia* growers and to attend a Conference in New Zealand.

She joined the Cape Clivia Club in 2000, was elected onto the Committee in 2001 and has been on the Committee ever since. In 2005 she got a small group of *Clivia* enthusiasts together



Felicity Weeden at the Cape Show in 2013.



'Audacious'

in Hermanus, holding discussions on various aspects of *Clivia* cultivation. The first Show in Hermanus was held the following year and this has become an annual event. The Overberg Clivia Interest Group thus began from small beginnings and continues to grow, providing a forum for members who live too far away to attend meetings in Cape Town.

While it is fair to say that there were many members who were helpful to Felicity as a newbie, Toy Jennings was the one who really stood out as her mentor and friend right up until her recent death. Toy knew everyone and what they were best known for, always had a stock of "Something Special – don't know what!" seed to give away, lots of stories to tell and contact numbers for everyone in the *Clivia* fraternity. In Hermanus, keen Cliviaphiles Les Brown and Christo Lötter were great friends and advisors.

Felicity had little to do with the publication of the Yearbooks and newsletters, but in recent years has regularly contributed to the Yearbook and Clivia News, believing that everyone's contribution is needed to keep the ball rolling. She has become a successful breeder and won Best on Show many times. She also judges not only for her own Club but other Clubs too, such as George and Port Elizabeth. She feels it is important to share

the experiences and knowledge she has gained with other enthusiasts.

Felicity has a fairly extensive and successful collection, and is very proud that the best of her collection is generated from her own breeding. She finds it very hard to single out favorites, but 'Foxy Lady' (orange) Best on Show in 2002 and 2008 must come first. Then 'Sarie's Christmas Parfait' (ex Henriette Stroh), 'Betta Blonde' (beautiful near white ex Chris Viljoen breeding), 'Remus' (bronze green throat) and 'Dooley' (peach green throat), both her own breeding, and most recently 'Venus', her own breeding between 'Remus' and 'Hirao'. Two other outstanding plants that she has bred are 'Outrageous' and 'Audacious', both from the same breeding and which are light bronze green throats with enormous umbels. Last but not least is a lovely pink that she bred from Ian Brown's 'Powder Puff' and 'Gladys Blackbeard' called 'Purely Pink'.

She believes that *Clivia* have a bright future and expects that sharper colours and more colour patterns will emerge as well as compact plants with better quality flowers and umbels also exhibiting different forms of variegation. *Clivia* continues to provide an exciting challenge for her. ▼

## CLIVIA SOCIETY

## From the Chair

By Glynn Middlewick

Hi *Clivia* Lovers,

September has come and gone and most of the *Clivia* blooms, in the southern hemisphere, have fallen off and, if pollinated, have left seed pods behind.

The build up to the annual show, the planning, the advertising and the organising, takes months. The shows then take place over one or two days. After the shows, we are eventually able to enjoy our own spectacular blooms. Pollinating plants, the decisions as to what would be the best pollen or berry parent, stretches the responsibilities of the members until the last bloom falls off the plant. Imagine the possibilities of extending the blooming periods for two or three months!

The shows bring out the good and the bad in many members. Generosity in exchanging pollen and offsets is a healthy club activity. Seeing such magnificent blooms on the show tables, makes one realise that the buying of new plants by both *Clivia* club members and the public, will continue! The shows also brings out the competitive nature of members, which may be a good or bad thing. The use of the club membership for commercialisation purpose only, does not always lead to positive comments and results in some unpleasantness. The sellers have a special role at the shows by providing exceptional plants available for sale.

The interesting topic, that always seems to be discussed, is the date for a specific club show.

Fortunately, most of us realise that the blooming times vary, but that the show dates are fixed. The ideal date would be when most of the *Clivia* in a particular area are in bloom. The South African calendar from the end of August until the end of September has one or two shows every weekend. Surely the members understand that mother nature decides what she wishes to do every year.

A few members complain and question the objectivity of the local judges when judging the show plants. The Society has helped facilitate the exchange of judges to allow for "outside" assessment of the show plants. All members should realise that this choice is optional and in no way obligatory for the clubs. Whether the local club uses "outside" judges only or a single judge to complement their own judges, is the choice of the club involved. The exchange of judges has stimulated a healthy exchange of ideas on judging. The discussions, the manner of plant assessment and categories of plants for judging, amongst the visiting judges, has resulted in a positive attitude amongst the judges.

The dry weather in South Africa has fortunately not affected the indigenous and drought hardy *Clivia* plants.

I'd like to end with a big thank you to all members who have taken part in making their local *Clivia* show a great success. ▼

## Clivia Photographic Competition for Yearbook 18

The *Clivia* Society announces the 2017 *Clivia* Society Photographic Competition. It is open to members of the Society, affiliated clubs and interest groups. The object is to encourage *Clivia* enthusiasts to submit photographs from around the world. Please

submit entries of photographs of attractive as well as some unusual *Clivia* flowers and plants. Prominent space will be allocated in the Yearbook to winners in all categories as well as other entries of merit. The name of the photographer will be publicised with each

relevant photograph. The best photograph in each category will be selected from all entries in these categories. The Habitat section, by definition, is only open to photographs taken in the *Clivia* endemic areas of Southern Africa.

### Categories are as follows:

1. Miniata
2. Pendulous species
3. Interspecifics
4. Habitat (Photographs of habitat plants can only be photographs of plants taken in Southern Africa in their natural surroundings.)
5. Single flower – any species
6. Other *Clivia* photos e.g. buds, berries, foliage, floral art

### The conditions and rules of entry are:

1. The completed attached entry form must accompany submissions.
2. Entries must be submitted by Sunday, 15 February 2017 to participate in the competition. No extension of the deadline will be possible as this deadline is based on the publishing deadlines for the Yearbook.
3. Entries are limited to three per category per person.
4. Photographs may be mailed to Clivia Photographic Competition,  
P O Box 1820, Houghton 2041,  
Johannesburg, Gauteng, South Africa.  
(Flash drive or CD-R)  
Or emailed to: [myclivia@iafrica.com](mailto:myclivia@iafrica.com)
5. Photos must be submitted as follows:
  - a. All photographs must be recorded in jpeg format, no larger than 2 MB per photo. No scanned or printed photos are to be submitted.
  - b. The resolution of the image must be

saved on at least 300 dpi.

- c. The pixel size should be a minimum of 1024 x 768 pixels.
  - d. Photographs must be on their own and not embedded in another program e.g. MS Word.
  - e. Names, dates or watermarks are not permitted to be included on an image. If any photographs are submitted with such annotations they will be disqualified.
6. Neither CD-Rs nor flash drives will be returned after the competition.

The decisions of the Panel of Judges on the winners of the competition by way of the respective categories are final and no correspondence will be entered into in relation to the competition or any aspect relating to such.

Remember to take aspects such as the following into account when capturing, editing and selecting your competition entries: Beauty of the flower, uniqueness of the flower, sharpness of the image, colour trueness, absence of distractions, good or unique composition, unique angles, framing and cropping, lighting (backlit, side lit, diffused, hard, flash, natural), background (contrast, tidiness and complementing colour), correct white balance etc.

The Clivia Society and its affiliates reserve the right to free reproduction and use of any of the images entered in this photographic competition to promote or advertise *Clivia* through whatever medium they deem fit. In other respects copyright will remain with the photographer. With any publication of a photograph, credit will be given to the photographer. The receipt of an entry form (either by email by way of scanned copy or by post) will constitute the granting of such aforementioned permission by the photographer, and that the entrant agrees to abide by the rules of the competition. ▼

# CLIVIA SOCIETY PHOTOGRAPHIC COMPETITION ENTRY FORM

NAME OF ENTRANT:

ADDRESS:

PHONE:

EMAIL:

PLANT OR CULTIVAR NAME:

DATE PHOTO TAKEN:

NAME OF GROWER:

ENTRY NUMBER (1 to 3):

CATEGORY ENTERED: X relevant box	Miniata		Pendulous species	
Interspecifics	Habitat		Single flower	
Other				
Flash drive	CD-R		Email	

## CLIVIA BREEDING

## The importance of colour

By Sean Chubb

Every book I have ever read on the subject of selection and breeding of flowering *Clivia* plants emphasized the importance of having the proper flower colour. Although this sentiment is shared by most Master Breeders, there are many who believe that colour means nothing, and that plant quality determines everything.

I have struggled with this way of thinking for years. I can see how colour would be considered last, in the overall scheme of things, however, to say it means nothing, only shows some people's unwillingness for change. To ensure, and safeguard the future of *Clivia*, we must have breeders with the desire and tenacity to breed and maintain uniform strains of plants that have the complete package of form, function and beauty.

It is my hope that I can prove to you how important colour is to the future of *Clivia*, and hopefully inspire you to breed and produce *Clivia* that not only have the proper plant form but also have the proper colour of flowers.

There are four types of breeders: To understand the problem that lies ahead, we must recognize the players in a game we call breeding. These players represent four very different types of breeders, all with their own purposes and goals.

They include:

1. Breeders who select, based on the strain's overall plant form, and don't care about the colour of flowers;
2. Breeders who focus on flower colour, but disregard plant form;
3. Breeders who don't know how to improve the flower colour, so they avoid it all together; and
4. Breeders who select for the future of breeding *Clivia*, which have the complete

package:

- a. colour of flowers;
- b. leaf structure;
- c. plant form and balance.

Some would say the type 4 breeder above, is unrealistic, and trying to reach that level of perfection is an unattainable goal.

Understanding the rules of colour involves time and experience, which is gained by studying your breeding results and knowing the basic principles of genetics. To improve the whole *Clivia*, and not just the flower colour, you must also be able to detect and assess the value of a plant's finer points of structure. This is especially true when appraising the plant's form and balance.

A true breeder is one who can improve and maintain the entire form, function and beauty of the strain, not just one trait. Uniformity of colour shows the skill and ability of the breeder, and the purity of the strain's bloodline.

When selecting and breeding your *Clivia*, consider the complete package, and recognize that form compliments overall beauty, and the colour of the flower represents your skill and ability as a breeder, and the purity of the genes of the strain. Without the benefit of one, you won't get the others.

Whether we know it or not, we all select *Clivia* based on the colour of their flowers. This is especially true during the purchasing stages. I believe we all have a colour preference, and that certain colours always seem to be more appealing than others. Although some colours are admired more than others, it seems to me that there is something to colour after all.

The way I see it, it's more enjoyable to look at a *Clivia* that is extraordinarily coloured, rather than a common coloured *Clivia*. ▼

## Observations on Fungal Collar Rot in Eastern Australia

By Peter Hey

From conversations with other Australian *Clivia* friends and enthusiasts it appears that during 2015/2016 a higher than normal incidence of Fungal Collar Rot, *Sclerotium rolfsii*, has been seen. Why is this the case? A possible answer is that Winter/Spring/Summer temperatures were above the norm, thus encroaching on the ideal temperature range for *Sclerotia* spp. [25-35°C] to multiply out of control, in some cases with devastating results. Maybe global warming IS really a fact after all. I, like many others had hoped that if we all kept our heads in the sand, global warming would just not happen. Another observation is that we experienced above average humidity which probably resulted in slower evaporation and resulting in water retention in pots. Another ideal condition for *Sclerotium* to multiply explosively.

**Identification:** White, yellow or brown mustard seed sized fruiting bodies with white/cream hyphae (fungal threads) spread throughout the planting medium.

Having had the experiences of collar rot during late 2015 and early 2016, when I now see a number of yellowing leaves at the base of a plant, my heart skips a beat. Further, any

drooping, desiccated lower leaves can be a sign of the beginnings of collar rot and time for a more detailed inspection and prompt action. When a plant starts to lean over, added to the above symptoms – it could be too late. “My plant has fallen over!” is the *Sclerotium* call of lament that has echoed through many a greenhouse belonging to growers and enthusiasts throughout the *Clivia* world.

Why such lament? Because “Murphy’s Law” states that any *Clivia* affected by collar rot will almost always have special significance or importance in a collection.



Look closely for small mustard seed-sized fruiting bodies.



First signs: Roots breaking away spontaneously and white fungal threads.

First, a little background information. Ground fungi are an essential part of the carbon recycling chain, a key element in the breakdown of complex cellulose material (eg. pine bark) into nutrients available for the growth of plants. Lignin, a tough cellulose material, forms an integral part of the plants structure, assisting rigidity and is highly resistant to breakdown. During decomposition, lignins are some of the last materials to be converted and require powerful tools to achieve this. Fungi have both the engine room and the tool box.

The life cycle of fungi includes a stage of rhizome growth wherein the mycelial body sends adventurous threads (hyphae) travelling extensively over long distances looking for food sources. As they spread the mycelium produce oxalic acid which combines with available calcium to form calcium oxalate. Calcium oxalate is the "jackhammer" of microscopic tools that has the ability to break down lignins. Therefore, fungi play an important role in breaking down, recycling and producing plant nutriment.

Many plant species develop symbiotic relationships with various fungi, and these relationships are known to occur in about 80% of flowering plants, including our beloved *Clivia*. In symbiotic relationships, mycorrhizal hyphae enter spaces between plant cells in root hairs allowing transfer of nutriment backwards and forwards between the host plant and the extensive mycorrhizal network that extends throughout the surrounding soil structure/potting mix. Mycelial thread can measure as long as 100 metres in a single gram of topsoil!

Worms produce millions of bacteria in their gut and are in on the bandwagon of cellulose breakdown, as are the larval stages of fungus gnats. It's all happening microscopically down there and we cannot see it. Bacteria can and do form beneficial relationship with fungi and share a role in nutriment production. Bacteria can also destroy fungi by producing enzymes that dissolve holes in the outer walls of parasitic fungi.

Both fungi and bacteria like a low pH environment, with bacteria preferring dry circumstances, whereas parasitic fungi thrive in wet conditions. Decomposing bark produces a naturally slightly acid environment (low pH), so when excessively wet conditions prevail the balance swings and bacterial numbers reduce and the fungal numbers increase.

Scoterium is such a fungus, engaged in the carbon breakdown business and they normally keep their presence in low profile, doing what they do, recycling.

When ideal temperature and moisture conditions occur, Scoteria numbers can multiply



explosively in a very short period of time AND they are hungry. I have a thought that there may be a possible relationship to insufficient calcium available to complete the lignin breakdown cycle, therefore the *Scoterium* mycelium will source other nutriment from any available sources, eg *Clivia* roots and tissue. Hence the devastation of our precious plants and their falling over.

*Scoterium* have the ability to go into hibernation during dry conditions with the aging brownish spore balls remaining viable for years, waiting for wet conditions to multiply.



Explosive potential of aged brown fruiting bodies in hibernation.

I have become more observant since some earlier run-ins with collar rot and have since observed dry potting mixes with the fungal spores in hibernation lining the walls of a pot in their hundreds if not thousands, which is a horrible sight. Do not despair, as you can save your plants from collar rot if you take

action early. *Clivia* are extraordinary plants with a tremendous capacity to survive the most devastating damage.

Neil Hamaty, a Sydney member, passed on the following method which Jeanne Marten, from Toowoomba, had taught him. Thank you both for this valuable tip and I am grateful for the knowledge as it has allowed me to save numerous plants. It works! Recently, whilst I was in hospital recovering from surgery, Jeanne rang me and in our discussions she related her chance discovery of saving *Clivia* from collar rot using Sphagnum moss.

It occurred when she was caring for some sick plants from the well-known *Clivia* enthusiast, the late Dr John Roper. Having cleaned up the plants to be later re-potted into fresh medium, she put them on hold in some Sphagnum moss in a pot under the bench and inadvertently forgot about them for several weeks. Eventually she noticed the plants and took them out of the Sphagnum moss to discover fresh new roots had started to grow.

I have provided Jeanne's method expanded with a few more research facts and tips as well as some conclusions of my own. Begin by removing the plant from the pot and discard any contaminated potting medium. It is important to kill any fungal spores and fruiting bodies if you intend to reuse the old potting media. Failure to do so will almost certainly inoculate a larger batch of potting mix with fungal spores, thus endangering a larger number of plants, as I have found out much to my chagrin.

Hot composting is a way of doing this, but the temperature must exceed 70°C to ensure good pasteurisation as fungal spores can easily survive 40°C. Add plenty of green waste to achieve good heat, and ensure you turn over your compost pile to cook evenly to eliminate the spores. Alternatively, dispose of the contaminated potting mix to landfill where the *Scloterium* can do its thing in the big picture of mycorremediation, breaking down all sorts of wastes, and recycling to produce nutriment.

Next step. Remove any diseased leaves and remove any/all diseased tissue to a clean white surface, if possible retaining some of the root collar material and meristematic tissue.

Should the rot have consumed all of the roots



Cleaned, ready for a light dusting of sulphur powder and allow to dry



Too far gone



An excellent chance with this plant.

and meristematic tissue, moving up into the base of the leaves, unfortunately the plant has almost no chance of recovery.

If there is a tiny amount of root collar left, stick with it as you have a good chance of a full recovery of this plant.

Dust the exposed surface with Flowers of Sulphur and leave to dry for a few days. Secure loose leaves.

Prepare a clean pot by filling it with damp



Sitting, waiting in Sphagnum moss for new roots to grow.

Sphagnum moss. Bury the base of the plant about 50 to 70mm down into the moss, and wait! Jeanne Marten cannot emphasise enough – DO NOT OVERWATER – keep just damp.



After a few weeks.

Check occasionally for yellowing leaves in case the rot has returned. Be patient. In as little as two weeks your treasured plant can start to grow new, clean white roots!



After three to four months your plant is ready to re-pot.



New life after a run-in with collar rot. With care, berries can be saved.

Remove the Sphagnum moss before replanting into fresh free draining potting mix.



Here the new white roots surround the excised area that was affected by collar rot.

The following are images of plants that were saved. First, a particularly valued European Peach, one with an exceptional flower, soft, rich peach with a pink edge. The berry laden scape was/is especially precious as I had crossed it with my best peach.



Worth saving?

I successfully managed to save both the plant and the seed, thanks to Jeanne's method.



Image taken 31/01/2016 Roots just starting to grow after about two weeks.



Image taken 28/5/2016 Well on the way to full recovery, with the berries saved.

NSW Society member John Craigie passed on a handy hint relating to avoiding collar rot by minimising water build-up in pots. He suggests placing a sheet of geotextile cloth under your pot/tub, especially if growing on mesh benches. The capillary action of the fabric allows the surplus water to wick away to a happy moisture retention level and minimises hydroscopic separation in your growing media. A suspended water layer creates the high-moisture opportunity for *Scloterium* to get a strong hold and commence multiplying dramatically. An additional benefit of John's method is that surplus salts resulting from inorganic fertilizing are reduced, thus minimising potential harmful build-up and plant stress.



Just enough to allow for evaporation.

The pots used in the above and following images have an inbuilt design that allows for excellent moisture retention whilst enabling capillary wicking to take place. For this to happen naturally, the pot needs to be on a hard surface – paving, concrete, timber, ground etc. If on a bench, then the geotextile fabric is almost essential if one wishes to avoid water build up and avoid the associated problems. Have any other enthusiasts tried alternative fabrics/cloths?



Exploded view of the pot mentioned.

Adding increased populations of antagonistic soil microorganisms (biocontrol) like *Trichoderma* spp. and vermicast (worm castings) can be beneficial. The massive numbers of bacteria in vermicast (over 7,000,000 per gram) can control increased numbers of *Scloteria* and protect your *Clivia*. Consider incorporating a small amount of particle calcium [e.g. Hen layer grit] into your potting mixes. Use free draining potting mixes and avoid over watering. Be vigilant.

Some credit for the various images must go to the Japanese designers of my relatively inexpensive digital camera (OLYMPUS Stylus TG4) which has allowed me to take all of the images in this discussion, from macro, multi-image to full floral colour. All images were taken on factory settings, without white balance or any filter adjustments. To capture the true colours of *Clivia* pigments I generally set the camera on the brightest sunrise/sunset setting. This seems to very accurately capture the bright pigment tones of the yellows and peaches. Of note: Submersible to 15M, shock proof 2.1m, Wi-Fi, excellent colour reproduction (except full reds – in my opinion). A great camera for a clunky *Clivia* grower. RRP ~AU\$400

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Clivia colours fading in the distance.

## Standardising *Clivia* Judging: one small step or one giant leap?

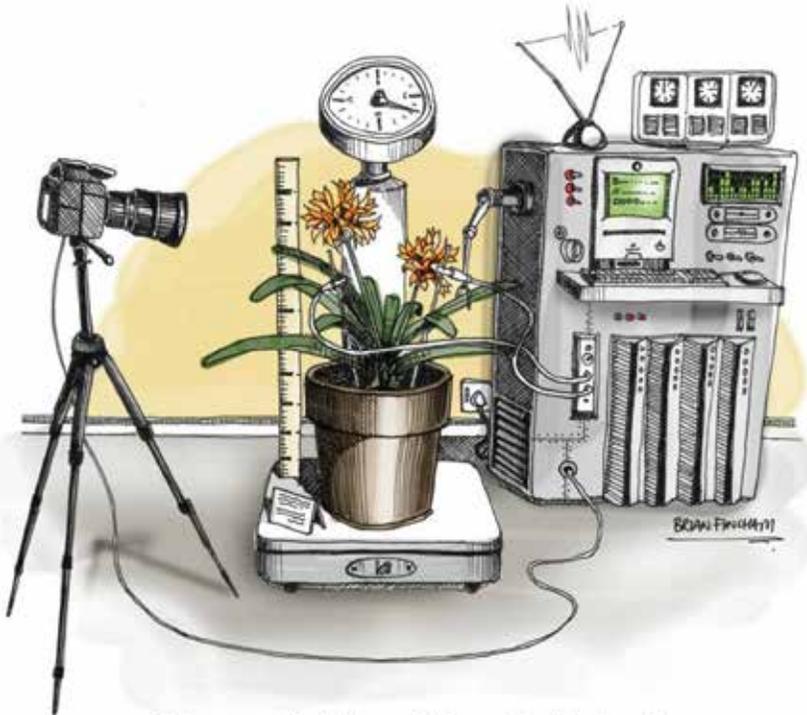
By André Swart (Cape Clivia Club)

It is not rocket science to recognise quality when you see it. Contrariwise, they say that beauty is in the eye of the beholder. In the arena of *Clivia* judging such trite expressions of wisdom are more likely to cause dissension than to resolve it. Is there a more objective standard for judging excellence in *Clivia* than our whims and gut feel? There has to be, or awards at competitive shows will amount to nothing more than displays of random prejudice.

Before we started “taming” *Clivia* to meet our horticultural tastes, excellence was a natural matter of capacity to survive and to flourish. Adaptation to the environment (light,

moisture, nutrients, temperature, pollinators and disease) caused some plants to outperform others and produce more offspring. In time the better adapted plants multiplied to become the bulk of wild populations. From a survival perspective the more prolific *Clivia* were the excellent ones.

Then we came along and introduced the notion of horticultural appeal. Leaf width, alignment and variegation, tepal colour variation, width and number, aesthetic considerations of balance and novelty, all have little to do with capacity to flourish in the wild. In fact, some desirable horticultural features would be a decided disadvantage in the survival stakes.



Clivia assessment by Digizmogadgetron: quick, slick, automatic.  
Trade enquiries to the Clivia Society

Excellence has become a function of taste in an artificial growing environment.

In the wild, vigour and reproduction (what we may call fitness for function) are the judges of *Clivia*. Under cultivation these judges play a much smaller role and we need to aim development in an orderly direction to avert the chaos of selection designed to favour the unfit. South African *Clivia* Clubs have more or less separately developed judging standards and rules reflecting a sensible core of *Clivia* values, which coincide substantially. On the fringes of this core are details reflecting regional differences of taste and opinion.

The *Clivia* Society has established a broad-based working group to seek consensus in focusing judging criteria and has reported significant progress in consolidating under-girding principles at the Annual General Meeting held at Kirstenbosch National Botanical Gardens on 14 May 2016. Given that the first formal structure to protect and promote "*Clivia*-dom" in South Africa is in its third decade of existence, this development is certainly not premature.

What follows constitutes personal impressions (and therefore not official minutes) in broad strokes of the framework of principles on which consensus was reached.

**Standard nomenclature:** Different names for parts of plants can be technically inaccurate and cause confusion. For example, a *Clivia* bloom is an umbel comprising of flowers (not florets) which have tepals (not petals).

**Plant health:** *Clivia* disease is both aesthetically offensive and a source of risk to other exhibits. No plant with active disease or infestation may be accepted for showing. At benching the fall-back position will be to err on the side of caution in cases of doubt, given the low level of expertise in plant pathology. However, physical damage (e.g. by sun, wind, rain, snails or trimming) is not to be confused with disease.

**Pots, stakes and surface of growing medium:** These are to be regulated to certain standards to ensure anonymity of exhibits. No "trademarks" identifying the exhibitor are

permitted before judging, so that plants are judged on their intrinsic merits and not on their association.

**Colour:** *Clivia* Colour Chart II© is to be the colour standard referred to in show Class Standards. It comprises of 10 punched swatches with 10 colours on each, printed with waterproof and UV resistant ink. The colour of the majority of open flowers on an umbel at the time of judging will be decisive.

**Class definitions:** The approach is to design class definitions so that every meritorious *Clivia* may be accommodated within some class specification. Some plants may qualify for more than one class and the exhibitor must then choose in which to exhibit the plant. By couching definitions not only in inclusive terms but also in exclusive ones (i.e. specifications stating not only what is in, but also what is out), the number of double qualifications may be reduced.

**10% Rule:** Exhibits of which at least 90% of the plant (leaf and tepal width, length, number and colour) complies with a class specification shall be deemed to comply for exhibition in that class, notwithstanding the non-compliant 10% or less.

**Judging:** The *Clivia* Society will accredit a pool of society judges, from which one or more may be used to officiate away from home at each local club show, together with local judges, should the club want the latter. Training of suitable learner judges is to be encouraged.

**Developmental philosophy:** Class specifications can either "freeze" the spectrum of *Clivia* shapes, colours and sizes as we know them, or provide incentive for development that uses the full palette of an amazing gene pool. As rare shapes/colours/sizes become more common and refined, new classes can be established to reflect them. Breeding is chasing a moving target and as current norms are exceeded, new and more extreme class standards will reflect a work in progress. The versatility and potential of *Clivia* is in the hands of enthusiasts to explore towards limits which are still unknown.

Enjoy the journey. ▼

## Floralies – Ghent Belgium 2016

By Heidi Nerurkar

Every few years there is a horticultural Festival held in Ghent, which is the capital of the East Flanders province in Belgium. Ghent was in the late Middle Ages one of the

largest cities in northern Europe and is very proud of its remarkably well-preserved medieval architecture.

The Floralies is very famous due to its long



From left - Dirk Lootens, Pierre De Coster, Aart van Voorst and author Heidi Nerurkar



history, dating back to 1808. This year it was held between 22nd April and 1st May. Visitors from all over Europe, including many plant enthusiasts from all over the world,

travelled to Ghent to admire the latest trends in floral art, show gardens and new plant cultivars. Additionally, interested visitors could also attend special workshops offered by the





organisers. The locations of the Florales were right in the centre of the city: The Old Florales Hall, the Citadel Park, St. Pieter's Square, the Leopold Barracks and the the Bijloke Site.

The world famous Flemish floral arrangements were an important feature at all sites of the Florales. Ghent is a Partner-City to Kanazawa in Japan. This was the reason why Japan was the





Guest of Honour at this year's Floralties and due to this fact Japanese floral art, Bonsai, Azaleas and Camellias played a major role in "East

meets West" at the Bijloke site.

I visited the Floralties together with Isabelle and Pierre De Coster (one of the organisers of the



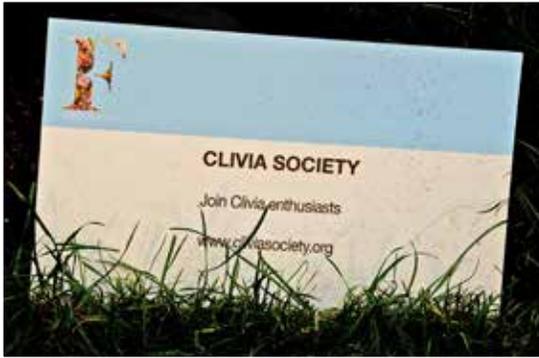
Floralies) and Anke and Aart van Voorst. Before Pierre De Coster recently retired he bred and grew *Clivia* commercially in his own nursery and Aart van Voorst is the Official Representative of the Clivia Society in Europe. For me, personally, the reason to visit this famous Flower Festival was my love for *Clivia* – which I also have been cultivating for many years now. However, I must admit, that the other wonderful plants, displays and show stands were also fascinating and interesting.

The stand of the Clivia Society of South Africa was located in one of the pavilions on St.

Pieter's Square. Pierre De Coster, together with Dirk Lootens, had invested a lot of time and energy to create a gorgeous arrangement of beautiful, high-quality *Clivia*. The plants displayed at the Clivia Society stand consisted of *Clivia* from Pierre and Dirk's private collections as well as from Id'Flor, a Belgian nursery for ornamental plants. Enchanting oranges, beautiful yellows and peaches, bicolours and pinkish-flowering plants offered a feast for the eyes of everyone who likes and admires *Clivia*. Special eye-catchers were the variegated plants, the group of peaches and a few very nice and interesting green-flowering plants.

In years gone by *Clivia* have won different prizes at the Floralies and 2016 was no exception. The Exhibit of the Clivia Society won a coveted second prize for "The most beautiful collection of other flowering house plants".

In parting, I hope some of you will have the opportunity to pay a visit to the next Floralies. Maybe even will meet there as I surely will be tempted in 2020 to visit this spectacular event again. ▼











## *Clivia x nimbicola* – A walk on the Wild Side

By Wayne Haselau

**M**uch has been written about *C. x nimbicola*. A great deal of discussion has taken place regarding this unusual *Clivia* and a few lucky individuals have been fortunate enough to visit their restricted habitat at the Bearded Man Mountain in the Sondeza mountain range on the South Africa - Swaziland border.

The first time I read about the *C. x nimbicola* plants was in John Rouke's article in the *Clivia* newsletter, which described the story of the discovery of an unusual plant in the Nelspruit Botanical Garden and the subsequent investigative trip by Willem Froneman. Willem, the garden's horticulturist, together with Kirstenbosch botanists John Rourke and John Winter, visited the Bearded Man habitat site. The picture in the *Clivia* Yearbook shows

a very pink interspecific type plant. Most *C. x nimbicola* flowers are in fact light orange or red and very few are actually true pinks. Varying colour forms of *C. caulescens* occur in the same area and there are also some large flowered and unusual *C. miniata* that occur there as well.

My first trip to The Bearded Man was a birding trip with a conservation colleague, while still employed by Nature Conservation, in the late 1990s. We slept on the mountain that night and it was eerie, as a big storm developed and the wind howled all night. We had a dog with us and it barked loudly and intermittently all night. The next day found the mountain completely blanketed by a thick swirling mist and everything was wet, with water dripping off the foliage. I have always been interested in



A close-up of the fabulous mother plant Site B.



Another close-up shot of the red.



Attie and Stephen looking towards the Sheba Mine and Barberton in the distance.



*Clivia caulescens* berries near Site B.



Close-up of red bud in Area C.

plants and I remember well seeing *C. miniata* and *C. caulescens* growing at altitude in the shaded kloofs of the southern and eastern slopes. Many plant species grow here, as it is a region of very high plant biodiversity, falling within the Barberton Centre of Endemism. It

does not take a lot to realise that this place is extremely special floristically as the grasslands here harbour many rare geophytes and the forests and thickets are full of forest species such as Orchid, ferns, *Streptocarpus*, *Impatiens* and *Begonia*.



Looking into the top of the inflorescence note the yellow ovaries.



My first habitat *C. x nimbicola*  
Site B.

My second trip to The Bearded Man almost 15 years later was with two of the mountain's most knowledgeable guides. Stephen van der Linde, the local forester and Attie Le Roux, have spent many hours on the mountain surveying the unique *Clivia*. Stephen van der Linde is a quiet, unassuming man, with a Father Christmas-like persona. He was the officer in charge of the commercial forests on the mountain for some 20 years and was a passionate conservationist and *Clivia* lover. He was effectively the best friend of the local *Clivia*. All trips to the mountain have to be arranged through Stephen van der Linde.

Attie Le Roux is a long-time friend of Stephen and a passionate Cliviophile who loves pendulous and rare

*Clivia* (also known as Mr. Nimbicola). He has done long-term monitoring of *C. x nimbicola* in the habitat and together with Stephen they have identified four separate sub-colonies of *C. x nimbicola*.

Each locality is separate and distinct as are the plants in each of these localities with regards to flower shape and colour. For instance, Area B is relatively close to Area C but plants of both these sub-populations are generally very different in colour. In Area B flowers are mostly light orange and pink and there are also some apricot and peach colours, some with white undertones. Area C's plants are only a short distance away and are strikingly different in colour, varying from orange to dark orange and almost red, with varying degrees of green. When one enters the forest near the



*C. x nimbicola* bud Site B.



*C. x nimbicola* habitat Site C note open canopy and increased degree of light.

summit of Bearded Man on the South African side it is only a short distance before one encounters *Clivia*. It is in this area that the first *C. x nimbicola* was found. Attie and Stephen took me to see these *C. x nimbicola* plants in so-called Area A, but unfortunately very few remain today, owing to their accessibility and that fact that in the past many of the mother plant clumps have been completely removed.

*C. x nimbicola* tend to form large clumps in the habitat and offsets readily. It is therefore totally unnecessary to remove mother plants from the habitat. The seeds also breed true to type, which is a very unique trait in a so-called interspecific i.e. they self, close to 100% true to the motherplant! In Area A there are still some really lovely forms of *Clivia miniata* flowers, with some forms displaying recurved tepals and other tepals being spidery. The month of July is the peak flowering time of the *C. x nimbicola*. Many *C. x nimbicola* plants flower more than once a year and may in fact

flower at any time throughout the year.

After leaving Area A we began our descent down the mountain and the going became really tough and quite precipitous. After walking for what seemed a long while through lush forest, we climbed down a narrow kloof, laden with tree ferns and many other fern species as well as a thick cover of streptocarpus, begonias and impatiens. We crossed another ridge which had a lovely stand of *C. miniata* on the top and we made our way cautiously down a narrow buck path which weaved in and out of the clumps of *C. miniata* plants. Further down we started to see *C. caulescens* and some of the adult plants were typical of the species, with long aerial stems drooping over rocks and tree stumps in spectacular disarray. I was busy photographing the clumps of *C. caulescens* when Stephen and Attie passed me and a short while later I heard the first call to come and look. As I moved through the forest, the canopy dissipated and the canopy



Red *C. x nimbicola* close up in habitat

height dropped considerably as well. It was here in this lighter area that I witnessed one of the *Clivia* habitat highlights of my life, with a superb pinky pastel interspecific-type mother plant standing before us in full bloom. I looked up at Stephen and Attie and we all smiled and nodded our heads in reverence, and the word "Wow" came to mind immediately. I was, however, frankly overwhelmed by the sheer beauty and size of the plant before us. Although Attie and Stephen moved on, I could not drag myself away from this spectacular plant and I was determined to get as many photos of it *in situ* as possible. A short while later more "ooos" and "ahhhs" and "wows" were heard as the lads discovered more of Area B's plants flowering randomly down the slope.

Attie called me down to show me where a large landslide had occurred a few years previously. Unfortunately this resulted in damage through

the heart of Area B, effectively destroying at least 50% of the colony. I was amazed to see the extent of the naturally occurring damage to the area and its plants. Despite the best efforts of my companions, many precious plants were lost due to this natural event. This is not the first time that I had encountered extreme natural changes to a *Clivia* colony in the habitat, however this was without a doubt the most destructive event I am aware of to date, especially considering the rarity of the plants involved. Despite this, we found 19 different *C. x nimbicola* clones in bud or in flower here, which was a truly wonderful experience.

I was attempting to capture as much of this amazing habitat on camera and I missed out on the initial transition to Area C which begins across a nearby valley. A short distance away as the crow flies, lies a spectacular group of plants, the so-called "Red *C. x nimbicola*".



Red *C. x nimbicola* mother plant clump.



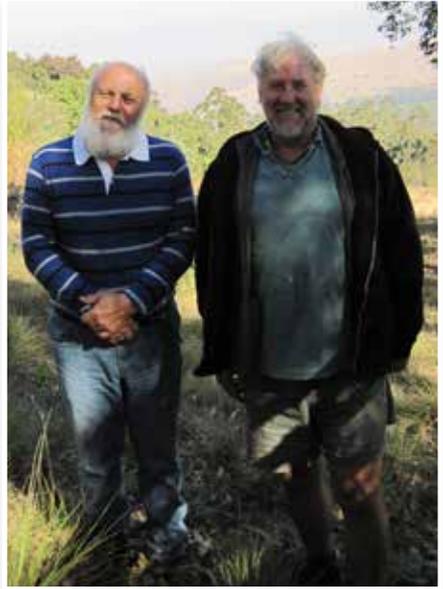
Sondeza Range with Bearded Man peak left of the picture from Barberton.



Stephen van der Linde *in situ*.

Once again I was the last to arrive at the scene and again the air was filled with all kinds of adulation. The plants here have very different flowers and seem larger, more floriferous and robust than the ones we had just seen. Dark orange and red forms occur here in greater numbers and the visual effect is staggering. We spent a couple of hours here communing with these plants and it was again a very special experience. I took as many photos as possible but my camera could not possibly do this scene justice as the plants were growing in very deep shade (and I wished I had my very talented *Clivia* photographer friend, Ian Coates, along with his crazy photographic skills).

Area D was close by, however, this population occurs in Swaziland and there is much unsavoury hostile border crossing-type stuff going on in the area, which makes it a fairly hazardous and unsafe place to visit. To venture down the mountain in this area would be unwise to say the least and I get this same uncomfortable, "out on a limb" feeling often when visiting remote areas such as in the rural Transkei. Consequently very few plants



Stephen and the author at the end of the day looking towards Swaziland.

from this area have been photographed and material from this area remains extremely rare. So we looked down from the South African border into Swaziland, shook our heads and started the long climb back up the mountain to our vehicle. The feeling of isolation and remoteness is like being in another world, as it was extremely quiet and windless at altitude on the shaded side of the mountain. We picked our way back slowly and I used the opportunity to take a few more pictures of the best flowers en route. We finally emerged from the forest into the light and the grassland of the south-east side of the mountain. The views from here are spectacular as one looks towards Barberton and the famous Sheba gold mine. Swaziland is far off to the east.

Stephen and Attie have collaborated over the years to conserve the unique *Clivia* on the Bearded Man Mountain and they have been instrumental in preventing the wholesale plundering of its unique *Clivia*. In my mind they are the unsung heroes of the Mountain's *Clivia* and deserve a lot of credit for their efforts.

The boys resting amongst the *C. nimbicola* in Site C.

I would recommend that anyone wishing to visit the area consult with either one of these gentlemen first or better still to ask them to accompany you as a guide.

I believe that it is simplistic to consider the *C. x nimbicola* as a naturally occurring interspecific. If my theory is true, then it implies that this is possibly a new species of *Clivia*. Current consideration is that perhaps it is in fact an ancient form and may have been the transition species from which the area's *C. caulescens* and *C. miniata* evolved. *C. x nimbicola* may therefore be a species, albeit a very old one, that is now relictual, restricted to a few pockets in the remaining suitable habitat! There are no other known

*Clivia* habitats in which interspecific individuals are found in any number despite the fact that some mutating colonies and hybrid swarms are known. In these colonies it is possible to see more than one species of *Clivia* growing together or in close proximity to one another, such as with the *Clivia miniata* and *C. nobilis* colonies in Southern Transkei. However one does not typically find plants of an intermediate nature growing in these colonies. The pollination of intermediate *Clivia* forms obviously presents a problem to the would-be pollinators and could be a possible reason why such plants are so rare



in the wild. The nearby Songimvelo colonies visited and photographed by Roger Dixon have large numbers of healthy *C. miniata* and *C. caulescens* growing in close proximity to one another but to date, as far as I am aware, NO interspecifics have been found there, which is typical of wild mutating colonies.

Naturally occurring interspecifics with F1 traits are extremely rare in the wild. It is believed that *C. x nimbicola* breeds 100% true to type when selfed. If this is true, then I believe it is not an interspecific, as an interspecific, when self-pollinated, would produce plants with a large degree of floral variation.



View of the summit from the south eastern side of the mountain.

Attie le Roux pointed out another extremely constant diagnostic characteristic of these wild plants and that is that in almost every instance the ovaries are yellow. The plants are found growing together in small sub-populations, with few if any *C. miniata* or *C. caulescens*, the supposed parents, in the immediate vicinity. The fact that it is restricted to a very small altitudinal range and quite possibly a specific geological niche as well, further points to its rarity and uniqueness. I have discussed this matter with a number of *Clivia* collectors, breeders and scholars, and the current consideration is that these may possibly be the mother stock from which the north-eastern *Clivia* plants evolved i.e. the transition species. Is it possible that *C. miniata*, *C. caulescens* in the Barberton centre and the ngome form of *Clivia gardenii* in the adjacent Ngome diversity hotspot to the south-east may all have evolved from this ancient *Clivia* form.

Obviously more work needs to be done in this regard and I suggest that a project focusing on these plants be considered for a research topic, sponsored by the Society and/or the SANBI.

John Winter used *C. x nimbicola* in his breeding programmes with fascinating results and he said that he believed in its vigour and uniqueness. It may be some time before we can be sure of the status of these plants, however in the meantime we need to make sure that these plants are better protected in the habitat.

Further to this, I do not believe that man-made hybrids using *C. caulescens* and *C. miniata* and reciprocal crosses in cultivation can be called *C. x nimbicola*. I have a few of the man-made crosses in my collection and they are obviously not the same as the naturally occurring *C. x nimbicola*. Furthermore, all the ovaries in the man-made crosses are not yellow, but are green! ▼

## RELATED

**Clivias good, odd & ugly: #5***By James Abel***"Umbelleafable" *Clivia***

The last issue of *Clivia News* (#25.1) includes an interesting report from Andre Swart (NCC) on his experiments on growing viable offsets from bulbils found in umbels. This is a great example of an enthusiast following up on an idea and contributing to our overall knowledge of the genus.

Over the years we have collected a range of photos of umbel leaves, of varying beauty but all interesting. Our notes are regrettably incomplete – L<>R these photos are from Henry Puren, unknown, Malan and Frans van Zyl respectively, the last showing a nice looking interspecies.

Our first sighting of an umbel leaf was on a visit to Europe in 2001. Nick Primich, founder of the *Clivia* Society, printed a membership list at the end of the early newsletters, and we were able to arrange visits to several members, including Isabelle and Pierre De Coster in Belgium. The professionalism and scale of their *Clivia* production were overwhelming and well illustrated in the photo taken in their glasshouse. The precision of the production rows in the midground shows against the distant background of flowering parent stock. "Belgian" *Clivia* are well-known for their compact growth with opposed leaves, attractive dark orange umbels and early flowering, achieved through intense selection and line breeding since the mid-1800s. The intensity includes replacement

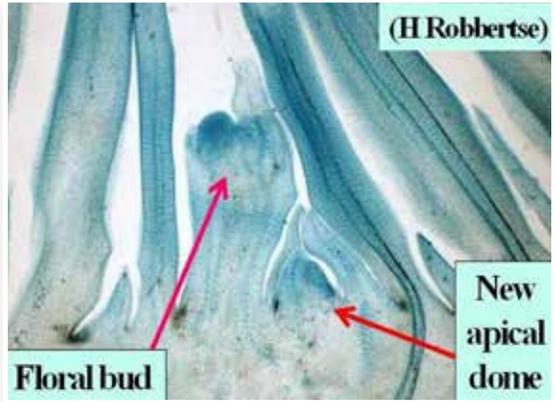
of 15% of the breeding stock annually by the earliest flowering of their commercial progeny. The "untidy" *Clivia* in the foreground are yellows which have not been "domesticated" for as long.

There we saw the leaf on the umbel that is shown in the photo. We called it an "umbelleaf" and sent it to Pen Henry, moderator of the *Clivia* e-group, who promptly dubbed it "umbelleafable".

All enthusiasts will have experimented to some degree, even if only by hand pollinating the odd stigma and changing potting mix. In contrast, regrettably, there has been relatively little basic research. We are all fortunate that in the late 1990s Prof Hannes Robbertse and MSc student Craig Honiball of the Agriculture Faculty at the University of Pretoria studied *Clivia* growth and determined that they have a juvenile phase of growing about a dozen leaves before maturity, when the terminal bud becomes a dormant floral bud. A new vegetative bud then forms in the nearest leaf axil and growth continues for another +/- four leaves before the terminal formation of another floral bud with adjacent vegetative bud, and so on. The flower buds remain dormant until their development is stimulated by rising temperature after winter. This is nicely illustrated in their micro photo of a growth point.

Why do umbel leaves occasionally appear? Until reading Andre's article, we had not given any





thought to the possibility of there being a vegetative bud in their axils. Perhaps there is one in each of them giving, as Andre suggests, enthusiast breeders an occasional opportunity of growing a clone from shy breeding favourites. All *Clivia* enthusiasts should be aware that Glynn Middlewick, Joubert van Wyk and Marilyn

Paskert are progressing well in making previous issues of the *Clivia* Yearbook and of *Clivia* News available on the *Clivia* Society website at <http://www.cliviasociety.org>. These publications contain a wealth of information on aspects of interest.

Contributions to this series are gratefully received at [jcabel@absamail.co.za](mailto:jcabel@absamail.co.za) and thank you to Henry Puren from Cape Town for the most recent photo above. ▼

## 2017 Membership fees to the Clivia Society

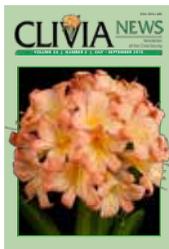
Three Clivia newsletters and a Yearbook in June are issued to  
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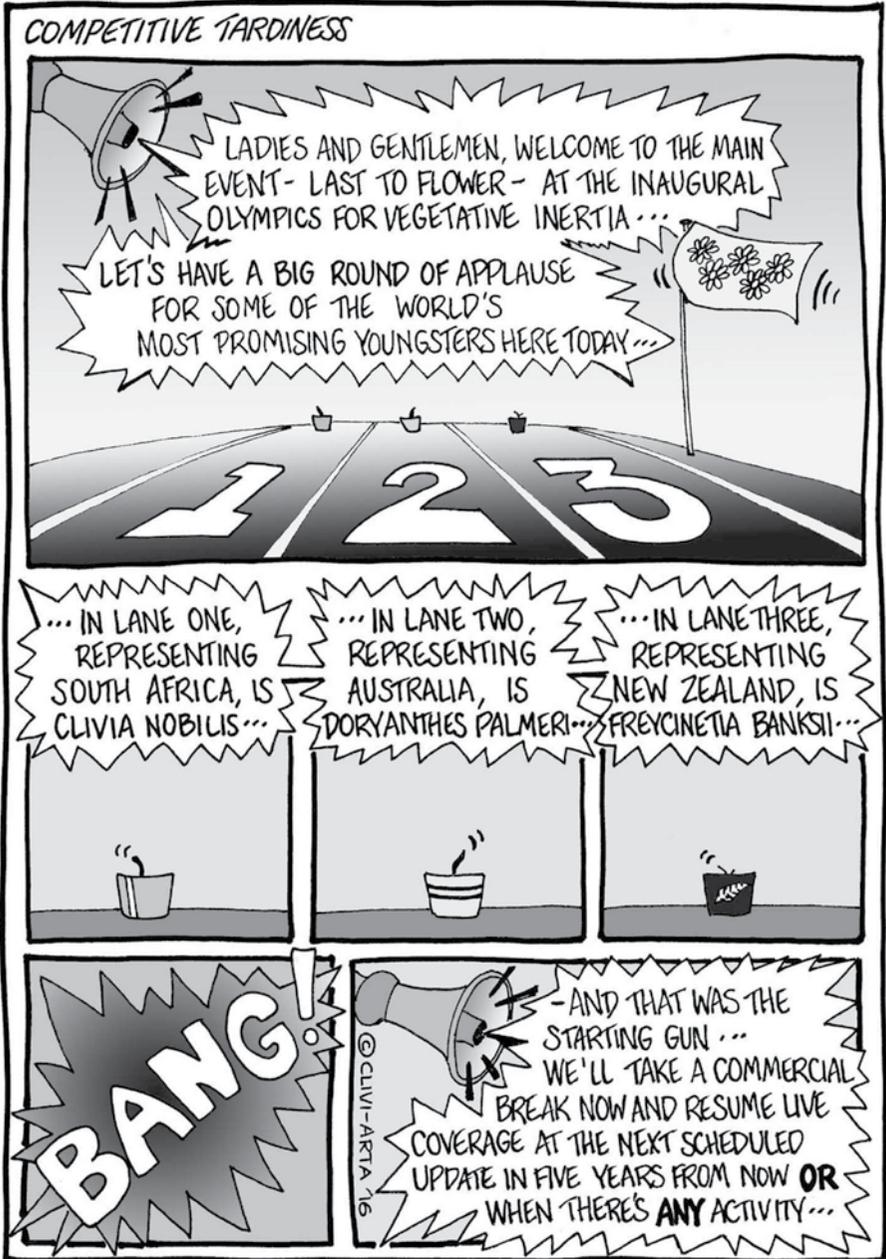
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