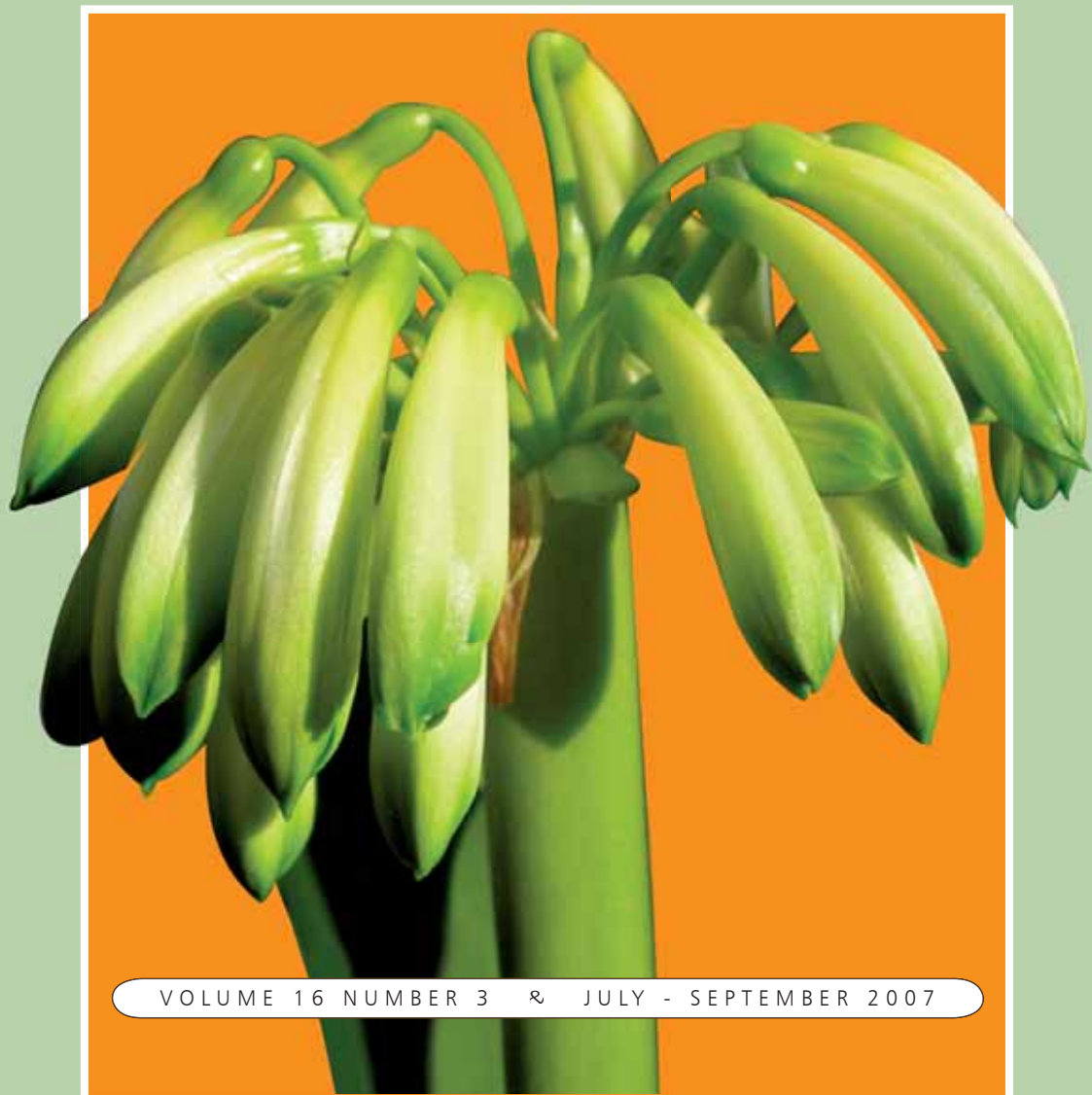


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# CLIVIA NEWS

▼ QUARTERLY NEWSLETTER OF THE CLIVIA SOCIETY ▼



VOLUME 16 NUMBER 3 ~ JULY - SEPTEMBER 2007

# CLIVIA NEWS



## THE OBJECTIVES OF THE CLIVIA SOCIETY

1. To coordinate 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 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 abovementioned objectives.

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✧ Garden Route	Piet Theron
✧ Joburg	Glynn Middlewick and Koos Geldenhuys
✧ KwaZulu-Natal	Sean Chubb and Liz Boyd
✧ New Zealand	Tony Barnes
✧ Northern	Lena van der Merwe, Peter Lambert and Bossie de Kock
✧ Northern Free State	Louis Chadinha

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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

**W**e in Southern Hemisphere are in the Silly Season of Clivia, with *Clivia miniata* blooming in all their glory. It's the time of first blooms of crossings and hybridisations now distant in time, with the disappointment of producing yet another orange or thrill of getting more than you bargained for.

The shows are in full swing and begin to crowd the calendar. Each year sees new venues added. The KZN held their first Interspecific Show and the Vryheid Group held a first show this year. I'm attempting to visit as many as I can and fit them into a tight schedule. The Yahoo Clivia Interest Group and Clivia Forum help keep one in the loop of what's going on, but even keeping track of virtual space is time consuming – and addictive!



PHOTO: TONY BARNES



PHOTO: GIDEON SCHEEPERS

Then we in South Africa are privileged to have Ian Coates as a guest of the Clivia Society. He is doing a round country tour of various habitat areas where he will be using his keen eye and photography skills to capture what is in God's own garden. Hopefully this will result in a coffee table book of Clivia in habitat. His itinerary is jam-packed and he will be more than saturated with South Africa's natural beauty – I recently ventured up to the edge of Oorlogskloof and Namaqualand is ablaze with colour. I hope the spectacle holds for his visit there.

With the greater use of the web there is a need for more studied articles and observations and reporting on the activities, profiles etc of the members of the Society and those they represent.

Please help me in being proactive as to possible content for the Newsletter and alert me to matters that need follow-up.

Please remember I cannot publish what I do not have.

It also seems that the readership wants novel material in the Newsletter. Interesting articles appear in the electronic Newsletters of the various Clubs, and even breeders, such as John Craigie of Pine Mountain Nursery distributes a useful News sheet, of particular interest to those breeding Clivia ([www.pinemountainnursery.com.au](http://www.pinemountainnursery.com.au)). Should some of these various sources be republished in hard copy in this Newsletter? Please let me know your thoughts.

Will all correspondents for Clubs, Interest and Enthusiast Groups please forward the annual report of activities in time for the next Clivia News (2007-4), deadline for submissions 1 November 2007.&

*Roger Fisher – Editor*

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## CLIVIA SOCIETY MATTERS

## 4th International Clivia Society Conference and Show - Chairpersons Report for Clivia Society AGM

The 4th International Clivia Society Conference held at the CSIR International Conference Centre during September 2006 on all counts proved to be a huge success. The Northern Clivia Club (NCC) is proud to have hosted this prestigious event in conjunction with the Clivia Society. A huge amount of hard work and effort goes into the planning and organization of an event like the 4th International Clivia Society Conference. I was fortunate enough to have had an excellent crew on board. The crew worked together as a team and with huge amounts of dedication and unselfishness going into the task of making a success of this prestigious event. In the following few paragraphs I would like to present a summary of the event and also discuss some of the problems we experienced and share some thoughts on future International Clivia Society Conferences.

I like to begin by thanking each and every one of the committee members who so unselfishly gave of their time in helping us plan, host and



PHOTO: TONY BARNES

present an event like the 4th International Clivia Society Conference. I am sure that the conference proved to be a highlight for all those Clivia Enthusiasts fortunate enough to be able to attend and that the conference lived up to all the enthusiasts wildest expectations.

Finding a reasonably priced venue with good facilities that could accommodate approximately 200 conference delegates proved to be a daunting task. Originally the conference was to have been staged at the Council for Geosciences in Silverton.

When it became clear that a delegation from China were definitely going to attend the conference, we were forced to change the venue. We had to find a suitable venue where there were translation facilities available, and this with approximately 3 months left before the start of the conference. We were fortunate enough to be able to book the excellent facilities at the CSIR's International Conference Centre. The venue had superb audiovisual facilities and those attending were able to sit in comfort while listening



PHOTO: TONY BARNES



PHOTO: TONY BARNES

to our invited guest speakers, and all this while the interpreter used the translation facilities to try and make the talks understandable for our visitors from China. The Conference Centre's catering facilities were exceptional and all those who attended were able to enjoy nourishing and well-presented lunches and teas. They, too, were responsible for the catering at the informal opening dinner where all those who attended had a good time and where many old friendships were renewed and new friendships made. Due to the fact that the conference was held early in the week, and not over a weekend, we were able to negotiate a very reasonable price for the use of the venue. The price was well within the amount budgeted for by the organizing committee and the Clivia Society.

This brings me to the matter of presenting the conference and hosting the show at different venues and not at the same time.

The reason for taking this decision, I am sure, is not unique to the NCC, and that is that the members of the organizing committees of both the conference and the show were all the same and many of these members would also be exhibiting at the show as well as selling seeds and plants. Had the events been held at the same time many of our members would not have been able to attend the full conference but would have had to split their

duties between the conference and the show. This we felt was not right. It would have meant that those who would have done all the hard work would not have been able to reap the benefits of attending both the conference and the show. This, I am sure, resulted in some Clivia Enthusiasts not being able to attend the conference as it was held during the week as not many enthusiasts would have been able to take leave for a week in order to attend both events. Another organizing committee might have taken a different decision, and not stick with ours. The organizing committee of the 5th International Clivia Society Conference and Show will certainly have to weigh-up all the pros and cons before taking their decision.

Approximately 170 delegates, both local and international, attended the Conference, but it was the visit of an official delegation of Clivia Growers, led by Xueguan Song, from Chang Chun in China that most excited us. This was the first visit by an official delegation of Clivia Growers from China and although communication sometimes proved difficult we were especially privileged to entertain them in the Jacaranda city. Much was learned from them, and I am sure they too gained much knowledge and experience from their visit. I certainly hope that we can all remain in contact and that our Chinese friends will soon become part of the Clivia Society and that all groups will

PHOTO: TONY BARNES



continue to benefit from our mutual friendship. A big thank you must go to James Abel who initiated the visit of the Chinese delegation and to Roger Fisher who looked after them during their stay in Pretoria.

Each of the attending delegates received a commemorative bag when registering and these proved to be a great hit with some of the delegates purchasing the excess bags for presents for folks back home. The bags were Lena van der Merwe's idea.

She personally persuaded members of the NCC to sponsor her project and then proceeded to purchase all the necessary materials and make the bags. A sincere word of thanks is due to Lena for her novel idea and all her hard work and effort.

Roger Dixon put an excellent program together and I would sincerely like to thank him for all his hard work and effort. His task was made much more difficult when some of our intended speakers were not able to accept Roger's invitations and participate in the conference. Speakers presented excellent talks from South Africa and abroad, including Xueguan Song from China. The talks covered subjects including genetics; various Clivia species; polyploidy in clivias; photography; line breeding; Clivia breeding in certain countries and various private collections; how a person like Mr. Nakamura has influenced Clivia breeding; and clivias and art. All of the presentations were very well received by all the delegates. A sincere word of thanks is fitting to all the persons who presented talks at the conference. All those who attended appreciated their hard work and effort.

One of our goals was to have a set of stamps issued depicting all of the six then recognised Clivia species. In this we succeeded and sets of these stamps and "first day covers" were on sale at the conference. Sincere thank are due to Johan van Wyk and his team from the Philatelic Services of the South African Postal Office who were always most helpful.

Congratulations to the artist, Gillian Condy, on a job well done. Delegates and the public who were provided with the unique opportunity of having them cancelled with the events official philatelic stamp and also signed by the artist eagerly purchased the sets of stamps and "first day covers". The response from the congress delegates and public was so phenomenal that Johan van Wyk indicated to us that the Philatelic Services might consider issuing a second set of stamps to coincide with the 5th International Clivia Society Conference and Show in 2010. The organizing committee for that conference should definitely take him up on the offer.

It is certainly well worth all the effort to get some kind promotional item like the stamps to help promote the conference and show. In 2010 South Africa will be hosting the soccer World Cup and the organizing committee of the conference and show might see fit to use the World Cup to help promote their event.

Commemorative shirts and caps were also available. This was not something new and had been done at previous International Conferences and Shows. Ours sold like hot cake and we are of the opinion that the tradition should be continued. The shirts and caps are always sought after mementos and are valuable source of much needed revenue. Having upfront orders is essential as it helps significantly with the planning and also facilitates in deciding on the various sizes of extra shirts to be ordered and in the numbers.

The pre- and post conference tours proved to be a huge hit. The tour program covered most of South Africa's scenic and botanic areas and I am sure were unforgettable to all those who participated. The tours took the participants around all the Clivia habitats in South Africa as well as visits to as many regional shows as possible in the various areas and also local tourist attractions eg.:

- Gauteng day trips (such as Soweto, de Wildt and Rietvlei Nature Reserves, Apartheid Museum, Cradle of Humankind, Gold Reef City, Cullinan Diamond Mine).
- Visits to growers in Pretoria and the Walter Sisulu Botanical Gardens on the West Rand.
- Caulescens tour including a trip to see "Bearded Man."
- Kruger National Park.
- KwaZulu-Natal South Coast Tour to *miniata*, *gardenii* & *robusta* habitats.
- KwaZulu-Natal Midlands Tour to *miniata* & *gardenii* habitats.
- Tours to the collections of Roly Strachan and Sean Chubb.
- Visit *Clivia nobilis* habitat near Port Alfred and Grahamstown.
- Visits to *Clivia mirabilis* in habitat.

James Abel, together with the representatives from other Clubs, really put together a magnificent tour programme. They all deserve a warm word of congratulations.

These tours proved to be a more than useful source of revenue and again we feel that the tradition should be continued.

The tours, however, must be well planned and be finalized at an early stage since having accurate figures of participants well in advance is essential to the planning and organization of these. We feel that this is definitely one of the areas where the specific organizing committee can be substantially helped and aided by the other clubs, especially those close to the habitat areas. Our advertising campaign saw us make use of the electronic media by means of the Clivia Society Website, the Clivia Enthusiasts Chat Group, and various others. These tools proved to be invaluable and can definitely be used more effectively in the future.

My thanks to Chris Vlok for his sterling effort with the content of the conference section of the Clivia Society website and to all our other members who helped distribute information and notices *via* the electronic medium.

We also made use of an advertising campaign manager or assistant, namely Alice Spencer-Higgs, who is a well-known

writer for various newspapers and garden magazines. Here we did incur various costs, but we feel that it was most worthwhile, as never before have clivias had so much exposure in the written, radio and television mediums. Alice, too, deserves a sincere word of thanks.

An auction of rare and "sought after" clivias was held at the Forensic Sciences Recreational Lapa in Silverton on the Saturday evening. The auction was not unique and had been done at the 3rd International Clivia Conference and Show held in Pietermaritzburg in 2002 and maybe at other conferences and shows. We certainly learned from the experience and feel that the tradition should be continued, as this was also a significant source of revenue. Our auction certainly proved to be one of the highlights of the conference and show. The event was a resounding success with a record price of R32 000-00 being paid for a very special plant owned by Charl Coetzee.

There were, however, many other rare and sought after plants that were on offer and these were enthusiastically bid for and purchased by various bidders, both local and international. A special word of thanks must go to Sakkie Nel, Danie Botha and Koos Geldenhuys for the organizing of the auction and to them and their many helpers for ensuring that the event was the huge success that it turned out to be.

The costs of presenting an event such as this were huge and we would not have been able to continue without the generous support of the following sponsors:

Development Bank of Southern Africa  
Knittex  
Varing Kwekery  
Efekto



PHOTO: TONY BARNES



We thank them for their most generous support and hope that they too benefited from their contribution to the conference and show.

The procurement of sponsors is essential and the organizers of future events should make a point of identifying potential sponsors as early as possible and then contacting them and enquiring about sponsorship. Early contact with the potential sponsors is necessary because they too have budgets and have to work within the constraints of financial years.

The hosting of the international visitors at the homes of the various club members was a huge success and much appreciated by the visitors. This is an excellent marketing and promotional tools and the idea should, we feel be continued in the future. Much can be learned from your guests about their countries and of the clivia activities in these countries. I am also sure that your guests would reciprocate the offer should you ever be fortunate enough to visit their countries. Hosting of local enthusiasts should also be encouraged where possible. My thanks to all members who did host our international visitors.

I would like to conclude by supporting the suggestions earlier made by James Abel concerning future conferences and shows.

1. Control of the quadrennial Clivia conference should be the sole prerogative of the Clivia Society, and all clubs must support and help to make a success of the event.
2. Every four years the Clivia Society will invite one of its constituent Clivia Clubs to hold the conference, as far as possible ensuring a full rotation of venues. Organization of the conference will be delegated to that club. That club can then co-opt other clubs in helping with various aspects of the conference.
3. Whenever appropriate, the names of both the CS and the club will be used, with the CS receiving precedence.



PHOTO: TONY BARNES

4. As far as possible, clivia activities such as shows and visits within the host region and among other clubs and interest groups will be organized into a coherent overall programme, accepting that overlaps are inevitable.
5. All organizing activities, financial included, should be transparent to all of those who are interested.
6. Every activity will be planned separately for financial break-even, without cross-subsidization, taking sponsorships into account.
7. Costs to delegates should be kept as low as possible, consistent with acceptable quality, to encourage as many enthusiasts as possible to attend. Planning for each activity should be on a moderately conservative basis, giving the probability of a small surplus in each case.
8. The Clivia Society and clubs will provide interest-free loans to the organizing committee to cover initial cash flow requirements.
9. After the end of the conference, full financial results must be reported, using any surpluses to cover any shortfalls.
10. Final surplus/shortfall in the accounts, after repayment of the loans, will be jointly (50:50) for the accounts of the Clivia Society and the host club.&

*Peter Lambert*

## CLIVIA RESEARCH

*Clivia* research at the University of the Free State

The University of the Free State is currently involved in a number of genetic studies on *Clivia*. The overall aim of the project is to determine the genetic variation in different natural populations of *Clivia*. This work is done by combining several DNA techniques, such as AFLPs, micro-satellites and DNA sequencing. The degree of genetic variation in a population indicates the 'health' of the population. The data obtained thus will then be used to determine the evolutionary pathway of these populations and/or species.

When you start a study you usually do not know a lot about the organism you are studying. Then you experience a phase where knowledge seems to double in a very short time. Then you get to a stage where you start doubting most of the existing knowledge before you end the process with knowledge of organism and knowledge about existing problems that should still be studied. The doubtful stage usually happens when you include more material and results differ from the initial results obtained from a few samples. We have reached the doubtful stage with the taxonomy of *Clivia*.

We usually think of notched leaves as an integral part of *C. nobilis*. Why do we find this character appearing in habitat in *C. mirabilis*, *C. miniata*, *C. robusta* and in *maxima*. Why do we find stem-forming not only in *C. caulescens* but also in *C. miniata*, *C. gardenii* and *C. robusta*? Is swamp *gardenii* and *C. robusta* synonyms? What is the taxonomic status and origin of *maxima*? Is the current delimitation of species

correct? These questions should be answered as part of this study.

The initial part of this study will determine whether the different DNA techniques can contribute to the identification of a specific population. If plants from a specific geographical area can be identified, this will form the basis for forensic studies to stop the illegal collection of *Clivia* plants in nature by "muti" people and unscrupulous collectors. The effectiveness of these methods will also be tested for cultivar identification and parental identification. In this process many problems regarding naming cultivars and the validity of cultivar names could be clarified. If successful this phase will end with the establishment of a databank for DNA-identification of a specimen.

Another direction of investigation is on the genes responsible for the formation of anthocyanin. The first phase of this study is to determine whether similar genes are responsible for the formation of each step in the anthocyanin pathway. The ultimate aim is to use the information obtained to predict flower colour even at seedling stage.

Concurrent with these projects we study inheritance in *Clivia*. Various crosses are made, all seeds planted and the offspring carefully classified according to their features to determine the mode of inheritance. Other long term projects involve mutation breeding, determining the effectiveness of different cultivation methods, different insecticides and different fungicides.

PHOTO: ROGER DIXON



Prof Johan Spies (centre) with his research students, from left to right Suzanne Stegmann, Riana Janse van Rensburg, Bernice Jackson, Lukas Janse van Vuuren, Hesmari van der Westhuizen, Paula Spies and Marius Snyman.

The following academic studies are currently in progress at the university:

Paula Spies: A forensic study in the genus *Clivia* (Ph.D. study).

Frank Maleka: A molecular genetic basis for the development of yellow pigment in *Clivia* flowers (Ph.D. study).

Suzanne Stegmann: Genetic variation in *Clivia caulescens* (M.Sc. study).

Marius Snyman: Identification and characterization of some genes responsible for flower colour production in the genus *Clivia* (M.Sc. study).

Bernice Jackson: Genetic variation in a *Clivia gardenii* population (B.Sc.Hons. research pro-

ject). A study to include more populations, as well as *C. robusta* and *maxima*, will start in 2008 as a M.Sc.

Riana Janse van Rensburg: Genetic variation in a *Clivia nobilis* population (B.Sc.Hons. research project). A study to include more populations, as well as *C. mirabilis*, will start in 2008 as a M.Sc.

Lukas Janse van Vuuren: A forensic study of some *Clivia miniata* var. *citrina* cultivars (B.Sc. Hons. research project).

Hesmari van der Westhuizen: A forensic study of some *Clivia miniata* var. *miniata* cultivars (B.Sc.Hons. research project).&

*Johan Spies (Prof), Bloemfontein.*

## STORIES BEHIND THE COVERS

### Front Cover – Green *C. robusta* (Photo - Francois van Rooyen)

This seedling was bought in 2004. This picture was taken around the beginning of May 2007 when it flowered for the first time. An orange flower was expected, but imagine the surprise when what is depicted flowered. The flower started as green and kept its green colouring. This is a plant bought from Andy Forbes-Harding from down the South Coast, KZN grown from seeds collected from habitat plants. The mother-plant is still standing there - that is if not removed by the muti collectors or over-zealous clivia enthusiasts. Obviously we of Gem Nurseries are very happy!

### Back Cover

It can be said that the making available commercially of the yellow form of *C. miniata* helped popularise the genus amongst plant enthusiasts. Yellow habitat forms of the various species continue to be found – here are three recent bloomers.

Photos 1 & 2: Fred van Niekerk has bloomed for the first time a yellow form collected from the Maxima complex of *C. robusta*, (although Fred prefers the idea that these are of a distinct species, different from *C. robusta*.) (Photo – Roger Fisher).

Photo 3: A habitat plant of Mike Onions. This has not yet bloomed in cultivation for him but both Fred van Niekerk and Sean Chubb have been successful in blooming offsets. (Photo – Roger Fisher).

Photo 4: George Mann has recently bloomed the yellow form of *C. caulescens* grown from seed obtained from Bertie Guillaume who has the habitat yellow form of *C. caulescens* (Photo – George Mann).&



### Clivia2006 Conference DVD's now available

The Clivia Society has decided to make the Clivia2006 conference proceedings available on a double DVD. The presentations have been recorded, edited, and shortened to almost eight hours viewing time. The DVD set can now be ordered from the secretariat of the Clivia Society at a



price equivalent to ZAR 220.00 (including postage and packaging). Should you be interested, please contact Bossie de Kock at one of the following addresses: Clivia Society, P.O. Box 74868, Lynnwood Ridge, 0040 Pretoria, South Africa. Fax: +27 12 804 8892; E-mail: bossiedekock@absmail.co.za

## NEWS &amp; CORRESPONDENCE

Dear Sir

We had the opportunity to hike in the Wolkberg Wilderness Area recently (9-12 August 2007) and observed a number of Clivia communities in that area, mainly in the indigenous Wonderwood of the Serala Forest at altitudes ranging between 1320m and 1640m. The highest community observed in the forest was at 1640m, approximately 1.9km SSE of Mount Serala, which is the highest point in the Wolkberg Wilderness Area.

At a point about 1.15km SE of Mount Serala we came across a small isolated community of Clivia plants, about 9m<sup>2</sup>, and at an altitude of 1760m. Since none of the plants were in flower or had fruit, it was difficult for us to identify the species. Is there perhaps a reader that can help us with this issue?

Yours sincerely

*Piet Vosloc*

Lecturer, Programme in Landscape Architecture,  
University of Pretoria 20 August 2007

[This is most certainly a population of *Clivia caulescens*. Is this the highest located naturally occurring *Clivia* habitat? Ed]

## Infatuation

infatuate *v.tr* 1 inspire with intense transitory fondness or admiration.

2 affect with extreme folly

folly *n.* 1 foolishness; lack of good sense

When I enter my Clivatorium, it is as if I am greeted with unheard yelling for attention and mutterings of neglect. The sounds die down quickly, although the odd murmur persists for a minute more.

And then silence.

I have entered my domain. Abruptly my mind goes into clivia drive and, as if climbing into a cocoon, I am cut off from the world outside, blissfully unaware of the bill that still needs to be paid, the chore to be done, the dinner to prepare. It is here where I spend many hours of my "free" time, caring for, nurturing and growing my plants and saving my sanity.

Not even the cat and the dogs are allowed here.

I might very briefly entertain non-clivia people here, and then only when they show real interest. As soon as their cursory visit is done, they are shoed out almost with impatient insistence, reminiscent of the grim nurse in Intensive Care. Those with the clivia disease I will welcome and even leave with their own thoughts in my sanctuary, but will make sure to return in haste. Only the one very good friend and fellow enthusiast will I trust to respect my private space and the promises and results of years of effort within it. Others, well, others just do not care about entering, a relief.

I have always been the plantsman, always escaping, replanting my mother's Free State farm garden from the time I could hold a spoon. Many years later I would recall the clump of strappy plants with beautiful orange flowers under the massive Canary Palm, my first look into the future, even though oblivious of it at the time. These plants somehow were then not special enough to my kid-brain. Besides, why only focus on one plant when there are so many that are different?

Ensuing years threw me into a tumbling spin of growing up, finishing school, finding a career and dealing with love in all its permutations. I have had to find an escape, and without fail found solace in plants. It made sense to turn it into a career, but it was a while before this would materialise. During my early twenties I received a – I now know – very good clivia plant from a friend who at the time probably had no idea about the results of his action, nor were there any intentions, to my knowledge, of giving me a perfect tool to create my future temple of solace. In fact, as it turned out, nor for himself.

I nurtured the plant, it flourished. I had to reassess my friend's intentions when again many years later I was given two plants of noteworthy extraction from a respected clivia breeder in Pretoria. The fact that the plants had such a remarkably different genotype from my previous gift, sparked an interest, I now noticing how many clivia plants had been planted on the sidewalks on the way to the office and in the gardens I visited.

Suddenly Spring-time was not only about the

fresh peach blossoms or Jasmine and a promise of pool parties.

It was clivia time.

I was infatuated...

The relationship with my plants has changed considerably since I discovered this one-genus infatuation. It first manifested with a concerted effort to create a stunner from crossing one mediocre plant to the next slightly less graceless specimen. My limited knowledge of genetics did not hamper my efforts. Seeds were harvested, cleaned and planted. Later an incubator was built, seedlings transplanted and nursed. I approached my newly-found hobby like a three year old child a toy meant for a pubescent.

My enthusiasm was slightly bruised as I entered the world of Clivia breeders, met gurus, visited shows and read, read, read.

The bewilderment however soon faded as the fascination was stoked. Nurseries were ransacked for plants of shape, colour and form. Funds meant for materialistic acquisitions, were squandered on good plants, seed and

seedlings. There was no focus. I did not believe those in the know that one should rather develop one or two lines of plants than go for it all. Until I had to clean, sow, nurse and transplant two thousand seedlings of my own proud crossings!

After five years my mother had become a local distributor of Clivia seedlings, sent to her by her besotted son and plants for which she no longer has the space. I do get slightly irritated, as my good intention had been to take back from her any plant flowering for the first time that shows promise. The deliberate "culling" of the weaker seedlings still upsets me. The "What if that one turns out to be ...?" syndrome is difficult to shed. The knowledge that Vico Yellow was the result of a discarded seed does not help either. However, I have come to accept that limited space does not allow my Mendelian aspirations to run wild. In my sanctuary I will select, select and pollinate.

And should the discipline fail sometimes, I know it's because of my infatuation.&

*Albert Venter*

## ADVERTISEMENTS

Tariffs for advertising in the Clivia Society Newsletter:

Smalls (1 to 6 lines):	R25.00	Full Page:	R250.00
Smalls (7 to 10 lines):	R30.00	A5 separate page insert:	R600.00
Quarter page:	R70.00	A4 separate page insert:	R800.00
Half page:	R125.00		

(You will be sent an account from the treasurer for the appropriate amount.)

## PRIVATE ADVERTISEMENTS

- Clivia species, interspecifics and specialities. Participate in our coordinated imports and exports of seeds and plants – Asia, Australia and New Zealand, North America and Europe. Connie Abel, Pretoria, +27-12-361 6406 or jcabel@absamail.co.za
- Yellow Nogqaza strains from R15 to R120. Orange from R1 to R6 for mature plants. Delivery anywhere. SOUTH AFRICAN CLIVIA PLANTATION, Box 855, Hilton 3245. Call 082 955 5433.
- *Clivia miniata*. Seed R100 per kilogram. Year old plants R2 each. Roly Strachan, Box 5, Highflats 3306 or Tel. (039) 835 0085 evenings only.
- *Swamp gardenii* and *miniata* seed and seedlings available from various Natal and Transkei locations. Phone Andrew (039) 313 5024 a/h or cell 082 784 5401.
- Thurlow Flora: We have on offer a large variety of carefully bred seedlings and mature plants for sale. We specialise in pastel colours, oddities, species and original wild collected and named clones of clivia. Mail order and visitors welcome. For our latest plant list please contact Sean and Terri Chubb. Tel: 031 781 1978 e-mail: terric@iafrica.com. We also have available a few hundred different named daylily clones.

## HABITAT CLIVIA

### *Clivia robusta* (Family: *Amaryllidaceae*)

*B.G.Murray, Ran, De Lange, Hammett, Truter & Swanevelde*

**C**livia *robusta* is probably one of the tallest members of the genus, as it can grow to a height of 1.6 m in ideal conditions. It is a strong grower and thrives in swamp conditions. The flowers are pendulous and range from various shades of orange to yellow with green tips. The yellow flowering form has now been described as a new variety of *C. robusta* and is known as *var. citrina*.

#### Description

To the naked eye it is difficult to distinguish *Clivia robusta* from *C. gardenii*. *C. robusta* was described as a new species as a result of genetic analyses by Ran in New Zealand. *C. robusta* tends to be more robust with broader leaves than *C. gardenii*.

*C. robusta* has strap shaped, broad leaves which can reach 180mm in length. The habit is upright. Plants flower in late autumn to mid-winter, producing pendulous flowers ranging from pale to dark orange with green tips.

The peduncles or flower spikes are strong and hold the inflorescence above the foliage. The berries are round, green ripening to orange. Under ideal conditions, *Clivia robusta* is long-lived, produces buttress roots in very wet areas and can grow to a height of 1.6 m.

#### Conservation status

In nature this species is regarded as threatened because the natural populations are so scattered and isolated.

#### Distribution and habitat

*Clivia robusta* occurs in Pondoland, growing in marshes amongst forest species such as *Syzygium cordatum*, *Erythrina caffra* and *Phoenix reclinata*, in scattered isolated areas. This species is well suited to cultivation under ideal conditions. It is not frost tolerant and does best in high rainfall areas and light shade. Temperatures ranging from 5°C to 32°C would suit this species.

#### Derivation of name and historical aspects

The specific name 'robusta' refers to the robust nature of the species. A visit a number of years ago to Kirstenbosch Botanic Garden by Dr Keith Hammett, a plant breeder from New Zealand, resulted in Graham Duncan giving him some seed of a *Clivia gardenii* collection which had been collected in Pondoland. This material was used to do genetic analyses which has have resulted in the species *C. robusta* being described.





### Ecology

Little is known about the pollinators of *Clivia* and studies are now being undertaken to discover what pollinates it. This species has adapted to growing in marshes by developing buttress roots. Seed is dispersed by birds.

### Uses and cultural aspects

Traditional healers and *Clivia* enthusiasts remove large quantities of this species, which



PHOTOS: NICOLAAS CLARKE

threatens their survival in their natural habitat. Fortunately when plants are removed much of the root rhizome/root stalk is left behind. These roots stalks regenerate to form new young plants. The inhospitable marshy habitats do not prevent these collectors from removing plants. Traditional healers sell the stem of the plant for medicinal as well as magical purposes. This species is an ideal garden subject under suitable conditions.

#### Growing *Clivia robusta*

*Clivia robusta* requires light shade, good drainage, regular feeding and watering to do well. This species is well suited to shady situations and marshy areas in the garden. Steep banks are also ideal as this helps to provide good drainage, particularly in heavy soils. The roots of the plant also help to stabilize the bank. Suitable companion plants are *Scadoxus multiflorus* subsp. *Katharinae*, *Crinum moorei*, *Plectranthus* spp, *Stangeria eriopus*, *Asparagus densiflorus* and *Encephalartos villosus*. [The section on the growing of *C.robusta* has been omitted – ED]

#### References and further reading

- Murray, B.G., Ran, Y., De Lange, P.J., Hammett, K.R.W., Truter, J.T. & Swanevelde, Z.H. 2004. A new species of *Clivia* (*Amaryllidaceae*) endemic to the Pondoland Centre of Endemism, South Africa. *Botanical Journal of the Linnean Society* 146: 369–374.
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- Swanevelde, Z. H. 2003 Diversity and Population Structure of *Clivia miniata* Lindl (*Amaryllidaceae*). University of Pretoria. Pretoria. &

John Winter

Kirstenbosch NBG, July 2007

[Published with the permission of the author and SANBI – Ed]

PHOTOS - a selection of photos of *C. robusta* in the SANBI collection, Pretoria Botanical Gardens.



**GROWERS & BREEDERS NOTES**

## Conjoined twins with different morphologies

In the previous newsletter the phenomenon of an offset different from the mother plant was explained by Prof Hannes Robbertse. The phenomenon here illustrated of conjoined twin plants on shared rootstock, would follow a similar explanation. The plant belongs to Pikkie Strumpher.



## Clivia Research by the Free State University – Comment

The Annual General Meeting of the Clivia Society took place on the 12th May 2007 in Bloemfontein.

The Society elected Prof. Johan Spies as the new chairperson. The new Vice-chair is Peter Lambert of the Northern Clivia Club. The secretary and treasurer remain Lena van der Merwe and Bossie de Kock respectively. Chris Vlok, being the immediate past Chair, remains as a member.

Johan Spies, a professor of genetics at the University of the Free State, presented a feedback on the research on clivias his students are currently involved with at the University, sponsored by the Research Fund of the Clivia Society. Much research is being performed by his students on the genetic composition of the various Clivia species in habitat. The results will help with the clarification of whether a clivia is in fact of a different species or merely a different form of an existing species. He is of the opinion that there will be a revision of the status of *C. robusta* once there is more extensive DNA analysis, and that even with the addition of this as species, there still remains a distinctly different 'swamp' form of *C. gardenii*. He says that even the status of the 'Maxima' form will need further investigation.

Prof. Spies' previous research was on the infections present in Clivia. The challenge in

researching the diseases of clivias is to be able to distinguish between an infecting agent and a contaminating agent. The main infecting agents were as follows: *Fusarium*, *Cholitostricum*, bacterial rot and viral infection. Further details of these agents can be found in the booklet 'Cultivation of Clivia'. He noted, of interest, the extensive viral infection of the clivia plants in the Lowveld Botanical Gardens, Nelspruit, and ascribes this putatively to an infection of the Tobacco Mosaic Virus through treating the plants with tobacco dust to ward off woolly aphid infestation!

The infection, *Macrophoma agapanthii*, Prof. Spies claims, is a disease not found in any plant pathology book and calls it an internet disease! A further interesting observation is the disease we often refer to as rust. The brown raised areas are apparently the result of the plants' defences reacting to injury to the plant by sucking insects. He further explained that most marked leaves sent for analysis were old injuries sustained by the plant and only manifest approximately six months later as markings on the plants. He suggests that when disease manifests in the leaf tips that one must examine the roots of the plants, and that if material is sent in for analysis, it must be samples from the whole plant and not just the damaged leaf.&

Glynn Middlewick

### CLIVIA CLUBS & SOCIETY

#### The Clivia Handbook

If one looks at the questions asked on the Clivia Enthusiasts group you often encountered topics already discussed. If we compare the data available on different websites they often seem to contradict one another. To counteract misleading information and to store information centrally, the 2007 Annual General Meeting of the Clivia Society decided to publish completed research proceedings in the form of a series of e-books.

This is the proposed structure of the e-book contents:

1. Series A - The history of Clivia
  - 1.1. The different Clivia species
  - 1.2. History of some wide-spread cultivars
  - 1.3. Personalities involved with Clivia
  - 1.4. Development of Clivia cultivation
    - 1.4.1. South Africa
    - 1.4.2. Western Europe
    - 1.4.3. United States
    - 1.4.4. Asia
    - 1.4.5. Australasia
  - 1.5. Clivia in art
  - 1.6. Clivia bibliography

2. Series B - The cultivation of Clivia
  - 2.1. Cultivation procedures
  - 2.2. Nutrition of Clivia
  - 2.3. Diseases
    - 2.3.1. Fungi
    - 2.3.2. Bacteria
    - 2.3.3. Viruses
    - 2.3.4. Other
  - 2.4. Insects and Clivia
  - 2.5. Clivia breeding
  - 2.6. Preparation of show plants
  - 2.7. Shade house requirements
3. Series C - Basic research on Clivia
  - 3.1. Basic genetic research on Clivia
  - 3.2. Genetic variation in different Clivia populations/species
  - 3.3. Phylogenetic relationships in Clivia
  - 3.4. DNA-fingerprinting of registered Clivia cultivars
  - 3.5. Colour determination in Clivia
  - 3.6. Clivia variegation
  - 3.7. Control of flowering time in Clivia

Would you want to have this book in your cabinet? It may also be possible to add chapters on specific topics of interest to the book and remove chapters of little or no interest! This will be possible by publishing "The Clivia Handbook" as a series of e-books and you can decide which chapters/books you want to obtain and you can even suggest which additional chapters/books are needed!

The idea is to subject all e-books or chapters of e-books to a review process where at least two knowledgeable people will scrutinize a document before it is published. It is suggested that we follow the following mode of operation:

- All members are asked to suggest chapters for the Handbook.
- The research committee will
  - Put an outline of the book together (like the example above) and publish it in the Newsletter.
  - Determine a priority list for research and writing of a specific chapter.

- Invite all members to participate in the writing of specific chapters.
- Act as editorial committee for the review and publication process of a specific chapter.
- The executive committee will
  - Administer the promotion, selling and distribution of the e-books.
  - Make sure that funds from this project are used for additional research on Clivia.

A major part of these chapters have been written. By combining different papers from the Yearbook or pages from the Clivia Society website, a major part of the Handbook can be completed.

Every member willing to contribute to this task is asked to contact me. The sooner we start the sooner we will have a part of this project completed. This way of handling research will help to indicate gaps in our knowledge and we will be able to monitor progress. As our knowledge increase we will be able to identify the need for additional chapters.

The idea is that members of the Clivia Society can buy an e-book for a very reasonable price. Non-members will have to pay market related prices. Once you bought a chapter you will be allowed to download updates on that chapter.

The first e-book in progress is "Basic genetics for Clivia breeders". This book will comprise approximately 100 A4 single-spaced pages. This book will be sold to members for \$5-10 and for \$20-25 to non-members. The money received from sales will be used for research with a small portion allocated for administrative costs.

To make a success of this project we need your inputs. Please give us your views on this project, please provide us with a list of topics you want to see in this publication and please let us know if you are willing to write something for this project.&

*Johan Spies*

[Please send all comments directly to [spiesj.sc@ufs.ac.za](mailto:spiesj.sc@ufs.ac.za)]

## CLIVIA FUNNIES

### Everlasting Clivias for Chelsea

Nature's Golden Ratio was the inspiration behind South Africa's exhibit at the Royal Horticultural Society's Chelsea Flower Show held in London from May 22 to May 26.

The Kirstenbosch-South Africa exhibit, co-ordinated by the South African National Biodiversity Institute (SANBI) and sponsored by First National Bank (FNB), was designed by David Davidson and Raymond Hudson in collaboration with Durban-based Obbligato, manufacturers of contemporary plant pots and garden furniture. "The Fibonacci series, familiar to architects and artists as the Golden Ratio, can be found everywhere in nature, from the empty flower head of a Protea, to the seed arrangement of a Sunflower," said Davidson. "The spiral pattern forms ocean currents; orders the pattern of stampeding deer and guides the upward path of a flying-ant towards the light. It gives a mollusc shell its structure, a peacock's tail its enticing allure and a spider's web its fatal snare."

The exhibit, entitled Abstracts from Nature, also features various components symbolising the four natural elements, for which Craig and Angela Bax of Obbligato have handcrafted four mosaic pots to represent earth, wind, fire and water.

Umcebo Trust, a non-profit organisation which assists people with special needs to develop their artistic talents and to generate an income and the Woza Moya income generation project



PHOTOS: PGIDEON SCHEEPERS

for people affected and infected by HIV, both based in KwaZulu-Natal, are also collaborating on the project to create four specimen plants made entirely from beads, to compliment the mosaic pots.

"When you think about these four elements and the fluctuations in these elements your mind quickly turns to some of the environmental issues facing us today," said Davidson. "One of the most topical is climate change and its affect on the earth's habitats and resources. We hope the garden is a visual stimulus to people to think about the fragile balance of nature which is threatened by seasonal fluctuations."

Plants used in the exhibit for Chelsea are all indigenous to South Africa, but because some are annuals, usually flowering in Spring in South Africa, these plants will be sourced from Keintzler, plant growers in Germany. South African plants have long been cultivated abroad and many species including *Osteospermum*, *Diascia*, *Nemesia*, *Helichrysum* and *Sutera* have become a common sight in Europe.

South Africans will be able to enjoy the exhibit when it is recreated courtesy of First National Bank at the Garden World Spring Fair in Gauteng (July 27 to September 2), the Sunday Tribune Garden & Leisure Show in Pietermaritzburg (October 5 to October 7) and the South African Airways Cape Town Flower Show at Lourensford Estate, Somerset West (October 24 to October 28).&





# NORTH AMERICAN CLIVIA SOCIETY

PRESENTS

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**CLIVI-ARTA**

*Helen Sanders*



**CLIVIA SOCIETY PUBLICATIONS**

Overseas members can order back volumes of the Yearbooks and volumes of Newsletters (since 1992) via the Society. South African members should approach their local branches. We must point out that it is difficult to quote a fixed price without knowing the method of payment and delivery. We suggest you contact Bossie de Kock (the treasurer) via e-mail at: [bossiedekock@absmail.co.za](mailto:bossiedekock@absmail.co.za) or by fax at +27 12 804 8892 and list the items you are interested in as well as the name of the country in which you reside. Bossie would then be in a position to suggest the most economical option. Australian, UK, New Zealand and USA members are reminded that they can order via Ken Smith, Jaco Nel, Alick McCleman and William McClelland respectively – see inside back cover for contact details. Also note that further discounts can be negotiated with Bossie for orders exceeding 10 of a specific item. The items listed in the table are available.&

Item	Approximate price (US \$)*
Clivia2006 Conference Proceedings on double DVD	Please contact treasurer for pricing
Yearbook 9	15
Yearbook 8	15
Yearbook 7	15
Yearbook 6	15
Yearbook 5	out of stock
Yearbook 4	10
Yearbook 3	10
Yearbook 2	10
Yearbook 1	out of stock
Cultivation of Clivias	15
Newsletters after 2002 per number	1,5
Volumes 1(1992) to 11 (2002) of quarterly newsletters	10 per volume
Set of volumes 1 to 10 of quarterly newsletters	available on request

\*Including postage and banking charges if paid by credit card. Contact Bossie de Kock for quotation re payments made by cheque.

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