

ISSN 1819-1460

CLIVIA NEWS

~ QUARTERLY NEWSLETTER OF THE CLIVIA SOCIETY ~



VOLUME 18 NUMBERS 3 & 4 ~ JULY - DECEMBER 2009

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.

CLIVIA EXECUTIVE COMMITTEE MEMBERS

⌘ CHAIR	Johan Spies Cell 083 652 6130	PO Box 17195, Bainsvlei 9338, South Africa E-mail: spiesjj.sci@ufs.ac.za
⌘ VICE-CHAIR	Christo Topham Tel +27 12 542 3693	PO Box 54478, Nina Park, 0156, South Africa Cell: 082 497 5879
⌘ SECRETARY	Lena van der Merwe Tel & Fax +27 12 804 8892	PO Box 74868, Lynnwood Ridge, 0040, South Africa E-mail: cliviasoc@mweb.co.za
⌘ TREASURER & ADDITIONAL MEMBER	Sakkie Nel Tel + 27 12 361 6415 Fax 086 639 4077	PO Box 35235, Menlo Park 0102 E-mail: corgas@vodamail.co.za
⌘ ADDITIONAL MEMBER	Ken Smith Tel +61 2 47543287	593 Hawkesbury Rd., Winmalee, NSW 2777, Australia E-mail: cliviasmith@hotmail.com

REPRESENTATIVES OF CONSTITUENT CLIVIA CLUBS

⌘ Cape	Claude Felbert, John van der Linde and Dave Garriock
⌘ Eastern Province	Albie Braun and Willie le Roux
⌘ Free State	Piet Loubcher
⌘ Garden Route	Piet Theron
⌘ Joburg	G Middlewick and M Turner
⌘ KwaZulu-Natal	Brian Tarr and Francois van Rooyen
⌘ Lowveld	Paul Kloeck
⌘ New Zealand	Tony Barnes
⌘ Northern	Peter Lambert, Tino Ferero and Lena van der Merwe
⌘ Northern Free State	Louis Chadinha

Table of Contents

&	CLIVIA EXECUTIVE COMMITTEE- AND CONSTITUENT CLUBS	Inner Front Cover
&	EDITORIAL	
	<i>Roger Fisher</i>	2
&	IN MEMORIAM	
	Dries Olivier - <i>Keith Hammett</i>	3
	Piet Hougaardt - <i>Connie and James Abel</i>	3
	Jason's Garden of Remembrance	4
&	READER'S OPINIONS	
	Sorry Duckie, 'Polytepal' is not a word - <i>Greig Russell</i>	5
&	HISTORY & HERITAGE	
	Charles Darwin - Clivia Grower? More evidence - <i>Greig Russell</i>	7
&	CLIVIA NATURE	
	Stories behind the covers	8
&	CLIVIA PERSONALITIES	
	Recollections of Cynthia Giddy - <i>Sean Chubt</i>	9
	An Australian Notebook - <i>Hugh Bollinger</i>	9
	Toowoomba, Australia - <i>Sue Kloeck</i>	13
	Another scholar joins our ranks - Keegan Strauss - <i>Willie le Roux</i>	16
&	HABITAT CLIVIA	
	Clivia in Kenya? - <i>Johan Hurter</i>	16
&	GROWERS' AND BREEDERS NOTES	
	Hybridisation strategies for the hobbyist - <i>Alick McLeman</i>	18
	<i>Clivia robusta</i> and its Interspecifics - <i>Carrie Kruger</i>	28
	The "safe sex" method of pollinating Clivia flowers - <i>Willie le Roux</i>	30
	Clivias under Knittex Spectranet - <i>Tommy Rogers</i>	31
	Mycorrhiza Fungi - <i>Peter Dippi</i>	34
&	CLIVIA SOCIETY MATTERS	
	Clivia 2010 - 5th International Clivia Conference, Cape Town, South Africa	35
	Clivia Club Shows and Markets for 2010 (Preliminary Programme)	38
&	CLUBS AND INTEREST GROUPS	
	Eastern Province Clivia Club - <i>Willie le Roux</i>	40
	More Clivia talks at the 57 year old Bathurst and Port Alfred	
	Horticultural Society - <i>Willie le Roux</i>	41
	Highway Clivia Interest Group	42
	Kwa-Zulu Natal Clivia Club - <i>Francois van Rooyen</i>	42
	NACS Show Winners	42
&	CLIVI-ARTA - <i>Helen Sanders</i>	44
&	CLIVIA SOCIETY	
	Photographic Competition	
&	CLIVIA SOCIETY PUBLICATIONS	24
&	REPRESENTATIVES OF CLUBS & ENTHUSIASTS CONTACT DETAILS	Inner Back Cover

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

The year ends with the decision to have the Clivia News issues for the third and fourth quarters of 2009 combined. This arises from various considerations, not the least of which is time and costs. The economic squeeze has impacted around the globe and of necessity the rates and tariffs have been reviewed by the Society. Please take note of these for 2010 as placed in the Society's Advertisement page in this issue of Clivia News.

The year 2009 was one for commemorating one of the great naturalists, Charles Darwin. Greig Russell provides us with some follow-up snippets as to his Clivia connections.

This issue also announces the 2010 Clivia Congress in Cape Town and it is hoped that despite the recession many of our overseas members will be able to join us. It is also hoped that the South African membership will make the effort to be there. There is always a sense of occasion when the Clivia circle gather and offers opportunity to meet and greet old and new faces and catch up on friendships and exchange current information. The 2010 Clivia Society yearbook, Clivia 12, will be released simultaneously with the Congress. Please note in this issue the call for entries to the Clivia 12 photographic competition.

Being both Editor of Clivia News and lead Editor of the Clivia Yearbook offers challenges and opportunities. I am fortunate to have access to a surfeit of material for publication and hence am able to give this issue more of an international feel. I appreciate such contributions and appeal to those of you out there who feel so inspired to keep Clivia News posted with current information.

I also appeal to all Clubs and Interest Groups to get the Annual Reports and any photos that show plants and members to me as soon as possible for the first quarter issue of 2010.

This year has again been one of loss of members and our thoughts are with friends and family as they

enter the festive season where such loss is felt more keenly. From the executive and officers of the Clivia Society we extend a wish for rest and renewal of the body and mind over the festive season. For those that are travelling God's speed and those relaxing at home, God's blessings. For those that have duties to perform while others relax, our appreciation for keeping the fort.

Until next year. &

Clivia greetings
Roger Fisher



Chameleon crossing a Clivia Umbel.

PHOTO - MARGIE McSYMON

EDITOR OF NEWSLETTER ROGER FISHER: PO Box 1039, White River, 1240, Republic of South Africa

&Tel: +27 83 602 7736 &Fax: 086 515 0710 &E-mail: clivianews@cliviasociety.org

PUBLIC RELATIONS OFFICER SAKKIE NEL: PO Box 35235, Menlo Park, 0120

&Tel: +27 12 361-6415 &E-mail: corgas@vodamail.co.za

YEARBOOK EDITORIAL ROGER FISHER: PO Box 1039, White River, 1240, Republic of South Africa

&Tel: +27 83 602 7736&Fax: 086 515 0710 &E-mail: clivianews@cliviasociety.org

&DESIGN & LAYOUT FRÉDA VAN WYK: 082 468 8485 **&PRINTING** CPD Print, Pretoria Tel: 012-342 1978/9

IN MEMORIAM

Dries Olivier

It is with regret that we noted the death of Dries Olivier. He is remembered as one of the Gentle Giants of the Clivia circle, taken all too soon. Our thoughts and condolences go out to friends and family. &

Keith Hammett noted on the Clivia Enthusiasts the following:

A link in the chain dies

Part of the magic of plant breeding is that it is like a relay race. Individuals make a contribution and then hand on the baton to others.

The name Bodnant is important in the history of the development of *Clivia miniata*, especially yellows. Bodnant is the estate of the Lords Aberconway, in South Wales. Several generations of Aberconways have been keen plantsmen and have been prominent in the Royal Horticultural Society.

Harold Koopowitz covers in some detail how around 1930, Lord Aberconway obtained some plant material of a yellow *Clivia* that was being bred at Kew.

This led to 'Bodnant Yellow', which I believe Terry Hatch has in his collection, here in New Zealand. Both Koopowitz and Smithers establish that 'Bodnant Yellow' and 'Vico Yellow' arose ultimately from the work carried out earlier by Raffill at Kew.

Now of course Lords have gardeners, who actually do the work, and at Bodnant there has been a dynasty of head gardeners, the Puddle family.

In 1920 Frederick Puddle became Head Gardener and was in due course succeeded by his son Charles Puddle in 1947 and then by his grandson Martin in 1982.

I note that Charles Puddle died on 30 July this year aged 92. A brief obituary appears in the RHS Journal 'The Garden' for October 2009. &

Keith Hammett,

Auckland, 08 November 2009

Piet Hougard –
In Memory

Piet Hougard passed away peacefully in Harare, Zimbabwe, on 24 October 2009, at the age of 84. Piet grew up in the Western Cape. As a young man he set off to tour Africa by road and he drove solo all the way north to Algeria. On his way back south he settled in Rhodesia (Zimbabwe),



Piet Hougard

working as a tobacco farm manager. He married Julie, they were blessed with three sons and four grandchildren and they bought their own farms in the Lions Den and Sinoya (Chinoyi) areas north-west of Salisbury (Harare). Shortly after independence they sold the farms and moved to Majorca in Spain, where they spent eight years before returning to Harare. Piet had a love for nature and adventure in general, and the photo shows him on the Zambezi, his favourite place. An additional interest was Africana books, and he assembled a magnificent collection which includes many of the books written by Africa's earliest explorers.

One of Piet's enthusiasms was for clivias. In 1995, with the increasing acceptance of South Africa north of the Limpopo, we transferred to Harare for two years. Charl Malan of Grahamstown has been a member of the CS from the earliest days and he told us about his uncle Piet in Harare.



Soon after arrival we introduced ourselves and Piet, for many years one of only two members of the Clivia Society in Zimbabwe, welcomed having fellow enthusiasts in town and the opportunity to chat about all aspects of clivia collection.

Enthusiasts will know that clivias are endemic only to South Africa, Swaziland and a very small area of Mocambique. The closest relative in Amaryllidaceae is the genus *Cryptostephanus*, with one of its three species *C. vansonii* being found in the mountains on the Zimbabwe's eastern border with Mocambique. Piet had a collection of *C. vansonii* and told us how he met Georges van Son, for whom the species is named (see Greig Russell's timeous article in *Clivia Yearbook 11*, p22). Piet was driving home to Chinoyi when he noticed an elderly

man fossicking about on a nearby hillside. Gregarious and inquisitive, he stopped, climbed the hill and introduced himself. It was Georges van Son, alone on a trip through the countryside and exploring the countryside. With typical hospitality, Piet invited Georges home and they enjoyed several days of each other's company. The photo is of a *C. vansonii* from Piet's collection.

Living in Harare, Piet was clivia-isolated, as are so many enthusiasts around the world. He welcomed the regular arrival of the CS yearbooks and newsletters. At the end of 1996 we returned to Pretoria, but on our periodic visits to Harare we visited Piet and enjoyed a few hours with one of nature's gentlemen. We are all the poorer for his passing.&

Connie and James Abel

Jason's Garden of Remembrance

Established 2009

Created in memory of our son Jason Krüger 28/01/89 - 05/03/2009



Our aim is to promote the interest of clivias in our youth. Free seeds are given annually to our scholars and students of clivia clubs all over the world.

A good variety of top plants have been donated by Clivia lovers worldwide to be planted into this special garden. Seeds will be harvested annually and sent to our Clivia members who are still at school or studying.

With this project we hope to encourage the youth of today to become active members of our Clivia clubs and grow their own plants from a young age.

Our sincere thanks to the following Clivia growers:

Donors of plants for the Memory Garden:

Albert Venter - SA

Andries Bothma - SA

Andy Forbes-Harding - SA

Anet Pienaar - SA

Cathy Geraci - USA

Celia and Bertie Guillaume - SA

Chris Viljoen - SA

Dries Olivier - SA

Felicity Weeden - SA

Gary Murphy - Aus

Gerhard and Karen Faber - SA

Gordon Fraser - SA



Hugo van Rooyen - SA

Kerneels Buitendach - SA

Kobus Visser - SA

Louis Fourie - SA

Mike Nagle - USA

Piet Theron - SA

Rudo Lotter - SA

Tremaine Wesson - SA

Victor Murillo - USA &

For contributions of plants or seeds or any info contact; Carrie Krüger, Utopia Nursery, P.O. Box 1455, Sedgfield 6570, SA.

utopia@xnets.co.za; *ph: +27 443432183*

cell: +27 833431288.

READER'S OPINIONS

Sorry Duckie, 'Polytepal' is not a word

One of the meanings of 'philology' is the study of words; everything about words - what they mean or may mean; where they come from; how they evolved; perhaps even where they may be evolving to. This is one of the many interests that consume my time.

What does a philologist do when confronted with that word "polytepal". Well, he considers it for a while, and then, when the fullness of its implication comes home to him, he must run shrieking. You see, it is not really a word in the sense that it can be used, because it is defective on a number of fronts. Perhaps I should enumerate and describe these defects so that you can get a better idea of what I am

talking about.

My first argument against the word involves its multi-language origins. It is generally agreed that botanical names of plants may not be created by conjoining words of different languages. Thus, the word *φυλλον* (*phyllon*) is Greek for 'leaf', and the same word in Latin is *folium*. When one wishes to qualify one of these words as a name, say for example to describe the leaf as short, one would need to combine it with a prefix derived from the correct language - thus if using *phyllon* it would become *brachyphyllum* and if using *folium* it would become *brevifolium*. This no-mixing policy applies across most fields of botany aside from straight nomenclature.

Πεταλον (*petalon*) and *σεπαλον* (*sepalon*) are

both Greek in origin and mean petal and sepal respectively. However, when it comes to 'tepals', things are not that easy – tepala (tépales) is a word coined in about 1827 by the French-Swiss botanist, Augustin Pyramus de Candolle (1778 -1841) and is thus neither a Greek nor a Latin word; but being a new botanical term it can only be considered to be Neo-Latin, as all botanical names become, in spite of their origins. Since de Candolle twisted the Greek word *πετάλον* (petalon) to create his 'tepala', some will argue that the word is essentially Greek, however, I think the word arose in a Francophone (and exceptionally brilliant) mind and thus must be essentially French.

'Multi' and 'poly' are respectively the Latin and Greek prefixes used to indicate 'many'. When choosing one to combine with 'petal' or 'sepal', the choice is easy as these words are of Greek origin, so one must arrive at 'polypetalous' or 'polysepalous'. However when combining with 'tepal' which is a Neo-Latin word, one must surely use 'multi' and not 'poly'. 'Multitepalous' is also certainly more euphonious than the equivalent 'poly-' version.

But we do have a further complication; both 'polypetalous' and 'polysepalous' are specifically defined, if somewhat antiquated, botanical terms. They mean possessing separated petals or sepals, respectively; as against flowers which have petals/sepals fused to various extents. Recycling words and giving them new meanings is not something really done much in botany, the consulted literature of which extends too far back, and thus redefining a word would become most confusing. I think that the term 'polytepalous' would be able to exist in the shadow of these two other 'poly-' words and therefore mean to some, 'possessing separate tepals'.

Next we must consider what part of speech we are involved with. The word 'polytepal' is often rendered as if it is nounal, so one should be able to say 'a polytepal' or even 'a multitepal'. This form is really meaningless out of context, another reason not to support it. As the concept is essentially meant to be descriptive and is thus adjectival, it can only be correctly rendered in English as 'multitepalous'.

Then we need to look at the actual meaning

of 'multitepalous'. Straight forwardly it means 'many tepalled'. Well, hell, as far as I know, all clivias are 'many tepalled' – they regularly have six of the darn things. I shudder at the thought of a non-multitepalous clivia – a clivia with one tepal, or even less!!

In the medical field the prefix 'poly-', aside from meaning 'many', can imply 'too many' – hence one finds such terms as 'polyphagia' (eating excessively), 'polydipsia' (drinking excessively), 'polycythaemia' (having too many red blood cells) and even 'polythelia' (having supernumerary nipples). What is however really meant here is that this clivia has more than the usual number of tepals, so if it was a medical term (perhaps some form of madness?), perhaps 'poly-' could be considered, but it ain't.

'Hyper' would, in my opinion, be the precise prefix to add if tepala was a Greek root. Unfortunately, it ain't either. 'Ultra', 'extra', 'supra' and 'super' are similar Latin concepts, although none appear to mean precisely the same as 'hyper'. Of the four, I think 'super' works the best – it doesn't sound too bad and it reminds one of 'supernumerary', which is precisely what any tepals more than six are. What do you think about 'supertepalous'? 'Supernumerotepalous' is just a little over the top. 'Supertepalous' should thus apply when a word of this meaning is needed in a the context of formal botany

Finally, we can ponder the vernacular. When we are chatting about clivias as hobby-plants, it is not always necessary to adhere to the strict rules of botany. Koopowitz in his book *Clivias* refers to flowers with supernumerary tepals as 'multipetal clivias' (p. 321), and regarding flowers where the stamens have become petaloid, the term 'double clivia' has been offered (p. 323). These terms may be all wrong logically and botanically, as well as philologically, but they are easily understood by all. What more could one ask for?

So stop worrying about what the daylily aficionados do – they certainly don't have it right; although their use of 'polytepal' has now become so entrenched that it has become part of their vernacular. I just suggest we leave it to remain part of their vernacular and don't allow it to migrate to ours. &

Greig Russell

grussell@absamail.co.za

HISTORY & HERITAGE

Charles Darwin - Clivia Grower? More evidence

"What do you mean when you say that you are submitting an article for publication that is more-or-less complete? How can you have something published that is not completely complete", Mother's voice booms out as I explain my plans.

"Dearest," I reply, "nobody has ever written an article that is even vaguely complete – no sooner has an article come out than it is already becoming redundant".

"You young people are so cavalier with your work", she says. ("Young at 56 years?" I think, "the old bat is losing it for sure this time".)

And thus, no sooner had my article on Darwin and his clivias been committed to print in *Clivia* 11, than more evidence came to light (Darwin 1877). I swear it wasn't on the Internet when I had looked earlier.

In 1877, Darwin commenced studying bloom – that waxy, often whitish coating seen on various parts of plants and best observed on plums, red grapes and cabbage leaves. In an experiment commenced on the 12th August,

Darwin removed the little bloom present on half of the green berries of a plant of *Clivia miniata* and thereafter compared the progress of the two groups of berries thus created. Interestingly, the treated berries reddened more rapidly than those left untouched. The only possible reason that I can guess for this is that the absence of the bloom on the treated berries allowed them to absorb more infrared radiation, stay warmer and thus ripen quicker. This small experiment was part of a large series that Darwin undertook dealing with bloom. I am unable to find any published material emanating from this study – but we do now know for certain that amongst other plants in Darwin's 'hothouse', *Clivia miniata* could be found.

Hail Darwin, the Grower of *Clivia miniata*.

Bibliography: Darwin, C. R. 1877. The Darwin Manuscript Catalogue, CUL-DAR66.155. The Complete Work of Charles Darwin Online. (29 July 2009. <http://darwin-online.org.uk/content/record?itemID=CUL-DAR66.155>). &

Greig Russell,

grussell@absamail.co.za

PRIVATE ADVERTISEMENTS

- **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.
- ***Clivia miniata*** seed R200 per kg – plants from R2 each. Roly's Special Pastels seed R500 per kg – plant price on application. Roly Strachan, Box 57, Highflats, 3360 or Tel. 039-8350085 evenings only.
- **Clivian Plant Sale - Nylstroom/Modimolle:** Due to space constraints there are 500 *Clivia* plants to clear for R15 000 (Price is negotiable). The plants can be viewed by appointment. Ans Jacobs: Tel 014 717 3674 or 082 372 0765.

CLIVIA NATURE

Stories behind the covers

It seems evident that various species of sunbirds are of the pollinators to the tubular species of *Clivia* but we have been sent photographic evidence by Danie Meiring of a visit by a sunbird to *Clivia miniata* in his *Clivia House* in Robertson in the Cape (Front Cover).

Piet Theron has photographed a sunbird flitting about his interspecifics on the porch in George (Back cover).

More remarkable the photographing of a little female (or juvenile) sunbird to the habitat *C. caulescens* at God's Window (Back Cover), recorded by Gerhard Faber. &

CLIVIA PERSONALITIES

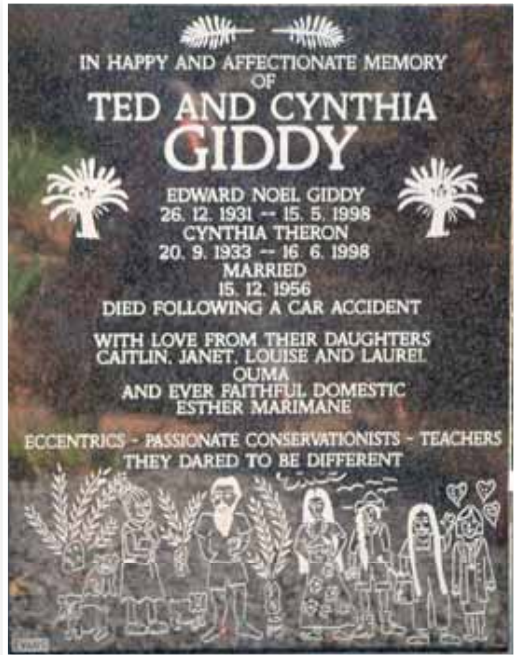
Recollections of Cynthia Giddy

Living in fairly close proximity, about 30km, from Ted and Cynthia Giddy, I would regularly visit Giddy's Nursery. During the years 1982 until 1987 I would pass the Giddy's Nursery almost on a weekly basis since it was on route between University and later Agriculture college and my home on our farm in Eston.

My relationship with Cynthia was initially a little strained as I would arrive on a Friday afternoon having come straight for lectures at about 4 pm, by this time Cynthia had obviously had a busy week and was in no mood to entertain a young student with lots of questions and very little money to spend on plants. But this all changed and soon we got on really well, both having a keen interest in Cycads, *Clivia* and a passion for conservation.

My frequent visits became social visits and many a plant and seed was exchanged between us.

On one occasion Cynthia looked particularly despondent and on asking was shown a room full of her famous Natal Yellow, which had been badly scorched and had turned completely brown. They had been sprayed in error by a nursery worker with Gramoxone, a herbicide with the active ingredient Paraquat. Cynthia and I spent an hour or two cutting back all the dead material and in the end were left with just stumps. A terrible blow but with a silver lining since about a year later Cynthia had massive clumps of offsets which she removed and exported to Japan, a



Fred and Cynthia Giddy's Gravestone in the Churchyard of St John's, Bathurst.

lucrative exercise in the end.

On another occasion Cynthia mentioned she had a contact that could supply her with 2 offsets of an Interspecific Hybrid. I had never seen one at that stage and she duly ordered the plants to be sent to us. Her contact turned out to be Gordon McNeil who sent us offsets of the first interspecific he had flowered from his own breeding. This plant is still in my collection today.

I am grateful to Cynthia for not only sharing her knowledge with me but also her plants. Yellow Clivia were still very rare in the mid `80 but Cynthia let me have plants of both Natal Yellow and Cynthia's Best and also the very rare Yellow *Velthemia bracteata*. &

Sean Chubb

Kwa-Zulu Natal Clivia Club



Ted and Cynthia Giddy.

AN AUSTRALIAN NOTEBOOK

Australia is an island, a continent-size remnant of Gondwanaland with a unique flora and fauna, unlike any other place on earth. I was making my 3rd visit, returning to see old friends, meeting several Clivia breeding collaborators, and travelling throughout remote landscapes on both sides of the continent. Clivia development in Australia has made rapid advancements through the efforts of many plant breeders during the past decade or so. Clivia enthusiasts will know other breeders in Australia but unfortunately, I



only had time to visit two nurseries.

For the past decade I have been involved with an international plant breeding exchange with John Craigie of Pine Mountain Nursery outside of Brisbane and Harry Erasmus of Clivia Classiques Nursery in Perth. In September 2008 both nurseries bloomed plants of a cross I had made back in 2000 between Dave Conway's 'Cynthia Ann' and a Nakamura pale yellow. I was excited by their successes, as the seeds I had saved for myself from the same cross



Photos of sibling 'Cynthia Ann' x Nakamura's pale yellow crosses by John Craigie (above) & Paul Kay (below).

had all succumbed to a fungal attack during germination. I was reminded of a comment that Sir Peter Smithers, the breeder of 'Vico Yellow' and 'Vico Gold' and master plantsman, had made to me in the early 1980s when I visited him in Switzerland. "If you have something rare, give it away or trade it off as you never know when you'll need it back!"

While I still have a specimen clone of Conway's 'Cynthia Ann', my singular plant of Nakamura's pale yellow died. The seeds I produced from that early cross were the only that would ever exist. The dual flowerings at Pine Mountain and Clivia Classiques nurseries showed the benefit of Sir Peter's rare plant philosophy. It is also fun to share germ plasm and speed up the development of new clivias with other plant



Agapanthus cv. 'Queen Mum' by John Craigie.



Pine Mountain Nursery Variegates
by Hugh Bollinger.

breeders.

When I originally decided to return to the "Land of Oz" I emailed each nursery to learn if a visit would be convenient. During my visits both Harry and John were very gracious with their time and breeding knowledge. We discussed Clivia development in Australia and I viewed amazing plants at both nurseries even though only a few plants were still in flower. Some of their registered clones are now in the F3 and F4 generations.

John Craigie - Pine Mountain Nursery

Pine Mountain Nursery is located at Pine Mountain in Queensland, approximately 40 km (25 miles) northeast of Brisbane. The forested terrain experiences a semitropical climate with hot and humid weather during much of the year. John Craigie and his wife Gail, who manages the nursery, have developed special



Pine Mountain Nursery in full bloom by John Craigie.



Plants at Clivia Classiques in 'squat pots' by Hugh Bollinger.



"Waltzing Matilda" by Harry Erasmus.



"New Dimension" by Tom Wells.

ventilation systems for the irrigation of expansive growing areas under specially designed plastic greenhouses. Pine Mountain produces a wide variety of clivias and patented Agapanthus cultivars for the garden market. The nursery has supported research in tissue culture technology applied to Clivia and some promising results have been achieved with a few clones but not at production scale. The nursery is focusing its Clivia breeding efforts on creating new variegated clones, lines of inter-specific clivias, and pastel flowers. Pine Mountain has previously developed 'Aussie Dawn', a beautiful bicolour Clivia that has now produced several elite breeding lines, some with parti-colour / watercolour patterning.

Harry Erasmus – Clivia Classiques

On the opposite side of the continent, Perth has a Mediterranean climate similar to Southern California and the Cape region of South Africa. It is a perfect climate for growing clivias. Clivia Classiques is based there. Harry Erasmus established the nursery after he and his family immigrated to Western Australia from South



"Western Dawn" by Paul Kay.

Africa. The nursery is managed by Paul Kay, his business partner who runs the operations. Paul is also a Perth radio celebrity who provides call-in and tips to listeners on horticulture, gardening, and, of course, growing clivias. Specimen and breeding stocks grow under fabric in their nursery. The many plants are maintained in special hard plastic squat pots that allow for offset development and superior root growth. When Harry emigrated from South Africa to Australia, he left behind a multiple generational plant collection of rare palms, cycads, clivias, and other native South African plants. However, he imported 15 of his best Clivia clones. Twelve survived the strict Australian quarantine regime to start his plant breeding efforts. His results are truly remarkable.

Clivia Classiques has focused much of its breeding efforts on developing peach clivias for the garden market. F3 and F4 generations are now flowering but many remain unnamed and are yet to be registered with the International Clivia Registry. Two of their newly registered clones include: 'Waltzing Matilda', an F3 named after the famous Australian song, and 'Western Dawn', an F4. It is a next generation offspring of 'New Dimension', a plant displayed at a conference in South Africa in 2006 to wide acclaim. These are just three examples of the successes with peach breeding at Clivia Classiques. Other new lines include peaches infused with deep pink rims, peaches with bright lime-green throats, solid tangerine peaches, and peaches with multi-coloured blush tones in the same flower. In my opinion, these advances may have set the "gold standard" for peach breeding. &

Wm. Hugh Bollinger, (USA)

TOOWOOMBA, AUSTRALIA

My husband, Paul, and I were fortunate enough to visit the Toowoomba Clivia Show in Queensland, Australia before joining up with the KiwiClivia2008 tour. I had contacted the secretary of the Toowoomba Clivia Society, a society which had started in 2005 – much the same time as the Lowveld Clivia Interest Group (now the Lowveld Clivia Club) of which we are inaugural members.

Toowoomba is a city of about 100 000 people – much larger than Nelspruit and White River (where we live in Mpumalanga Province, South Africa) put together. The show was held at the TAFE Horticultural Pavilion directly behind the Cobb and Co. Museum, near the Botanical Gardens. The secretary, Lyn Althaus and her husband, Huxley hosted us in their home and they also arranged for us to visit and meet local Clivia growers in the area. After spending our first morning “oohing and ahhhhing” the spectacular array of plants on display at the

show, we were taken around to meet the various characters of the city. The show was made up of a beautiful display of Clivia plants. There were no restrictions to colour, size and shape of pots.

Consequently many exhibits had offsets and many plants had several umbels open together which enhanced the display. Paul O’Gorman’s ‘Light of Buddha’ in flower (that originated from a grower, Eddie Pang in Melbourne) and Brian Stevens’ ‘Lambada Dancer’ (a seedling of ‘Tango’, a Bill Morris plant) and Ian Anderson’s ‘Anderson’s Peach’ (bought as a seedling from a local market!) were breathtaking. The entry to the show is free and yet visitors are able to donate to charity. An amount of (\$505 AU) was collected from entries and the Toowoomba Clivia Society added to that to donate \$1000 AU to the Queensland Cancer Council. (The members of this club decided to pick a different charity every year to help raise funds.)

Toowoomba stages a week long ‘Carnival of



Lionel Marten and the hospice benefit Clivia display in the Wilsonton Shopping Centre, Toowoomba.



Paul Kloeck admiring some of Jeanne Martens Clivia hybrids.

Flowers' each year when bus loads of visitors visit to take in the beauty of the gardens on display. We were treated to seeing the Clivia plants of Ray and Kerry Robinson and the garden of their next door neighbours, Bob and Val Ford. This particular garden was one of the many champion gardens and had won the categories of 'Best Front Appearance' and 'Best Outdoor Living'. That evening we had fresh fish caught by our host, Huxley. Eileen and Barry Zahnow, also members of their Clivia Society joined us. Eileen and Barry lived out of town and had also for many years entered and won awards in the Toowoomba Garden Competition. Their huge garden is now quite famous for the assortment and variety of Christmas lights hung on frames designed and built by Barry, in an excess of 100 000, hung each year to celebrate the season.

Almost all Clivia enthusiasts in Toowoomba use osmocote in their potting mix. The success story of Toowoomba is their Clivia which had

been collected and bred for about forty years are as good as it gets anywhere in the world.

Dorothy Miller

Dorothy Miller has been recently widowed, but still manages to keep up her garden on her own. She certainly got 10/10 for neatness and layout. She had a small collection of superb Clivia plants, especially a yellow Vico X Clivia with a perfect round umbel with at least 30 flowers.

Jeanne Marten

Jeanne Marten had some gorgeous Clivia plants on a mini display of her own all in aid of Hospice. It was heart warming to know that there are people whose passion for our dearly beloved Clivia can hold a display, raffle and Clivia sale for such a worthwhile charity. After meeting Jeanne and Lionel, we were invited to visit their property the following day. What a treat was in store for us. There was an array of



Kevin Walters and some of his Clivia hybrids.

huge, healthy Clivia plants with umbels the size of footballs. It was hard to believe that such an enormous number of plants could have been grown so successfully with very little garden help. Thousands of Clivia are spread across several acres of garden and numerous tunnels. Jeanne had spectacular displays of almost every colour, shape and size of Clivia which included some magnificent inter-specifics.

Brian and Merle Stevens

We were taken aback by Brian and Merle Stevens wonderful Clivia plants. Brian is the editor of the Toowoomba Clivia Society newsletter which is regarded as a newsletter of excellent quality and contained interesting news snippets. We heard about the Australian drought and the difficulties experienced by all the keen or rather passionate gardeners in the area. Most garden-mad people have had to install rain water tanks

as to use water freely from the municipal water supply is not allowed.

Kevin Walters

Kevin Walters is a pharmacist and long time Clivia grower. His yellow Clivia plants were a treat! Kevin is a quietly spoken, generous man, keen to share his knowledge about Clivia plants. My husband was admiring Kevin's broad leaf yellows and without prompting or any request, Kevin quietly and unobtrusively slipped two envelopes of Clivia seeds into Paul's hands before our departure.

Paul and the late Fay O'Gorman

Paul and the late Fay O'Gorman. The O'Gorman garden and Clivia plants were memorable and one can hardly forget how vigorously and well his 'one year old' seedlings were growing. &

Sue Kloeck

ANOTHER SCHOLAR JOINS OUR RANKS - Keegan Strauss

Over the past few years EP Clivia Club has been recruiting scholars / students showing a keen interest in the cultivation of the Clivia plant.

We have recently embarked on a project whereby such scholar / student can be sponsored by one of our Club members in the form of paying his yearly subscription, providing him with seeds, seedlings and a couple of plants as well as the know how of cultivating Clivias, etc. The response thus far has been excellent.

The latest scholar to join our ranks is Keegan Strauss from Port Elizabeth. At the age of 14 he is the youngest member of our Club.

With Werner Strauss his father, the grower of the sought-after "Werns Special" Clivia plant from seeds he received from Nakamura personally (now residing in New Zealand) and the well known grower Dawie Strauss of Somerset West as his grandfather, it is no wonder that Keegan is already displaying a vast amount of knowledge and experience in this field. According to Keegan his experience stems from spending most of his December school vacations over the last five years with his "oupa Dave" assisting him with all aspects of Clivia breeding, even giving him a helping hand at selling seeds and plants at the Cape Clivia Club annual show.

He germinates seeds, grows his own plants and is very proud of his Clivia collection. It is a real pleasure to be Keegan's mentor. He constantly bombards one with questions and I am positive that with the eagerness shown by this young man, he will undoubtedly develop into one of our future Clivia experts. &

*Willie Le Roux, Eastern Province Clivia Club
girlylr@telkomsa.net*



Keegan Strauss

HABITAT CLIVI

Clivia in Kenya?

In an article by the late Bing Wiese "Whence the 'Belgian hybrids'?" (Clivia Newsletter Volume 11 Number 2 Winter 2002) he writes:

When the Lowveld Botanical Gardens at Nelspruit were developing their 'rainforest'; staff members visited the rainforests of central / east Africa with the purpose of introducing suitable plant species for the project. During a visit to the Gardens, the then curator, Johan Kluge,



Kenya 110 mm leaf.



'Kenya' umbel.

showed me a young plant in the shade-house which he claimed had been collected on this expedition in a remote, undisturbed habitat. He believed the plant to be a Clivia. To me there was no doubt. Regrettably Johan is no longer with us and I never had the opportunity to enquire about the exact location of this discovery. I believe this broad-leafed plant flowered as *Clivia miniata* and I know of two members of our Society who have offsets of the plant



A Clivia plant called 'Kenya'.

in their collections. Is this not strong evidence that Clivia may occur naturally in some higher-lying areas of central Africa, even if not in prolific numbers? And, is it therefore not possible that the 'Belgian hybrids' originated from this material and not from South African stock?

This information has had me [Editor] puzzled over the years of my involvement with the genus Clivia and when I actually met the plant in the Lowveld, an off-set purchased by Sean Chubb for the Heritage Collection, I determined to track down its collector, Johan Hurter. Various leads through members of the Botanical Society finally led to my establishing contact

so I could get the story from the proverbial 'horses mouth'.

Here it is:

I collected a Clivia near Voi in Kenya many years ago. I however suspect that it is a naturalized group of plants from a mission school nearby. I sincerely doubt if it is indigenous to Kenya. I have also seen naturalized Clivia miniata-like plants around Fort Portal in Uganda and on

the coastal border of Kenya and Tanzania. These would all surely be naturalized plants as are plants on the North Island of New Zealand around Tor Bay.

I was also at first excited about the plants being in Kenya – however logic dictates that it's an introduced taxon there. &

*Johan Hurter,
Senior Botanist
Department of
Environment and
Conservation
Western Australian
Herbarium (WA)*

GROWERS' AND BREEDERS' NOTES

Hybridisation strategies for the hobbyist

Perhaps a more appropriate title for this article would have been "Foolin' around with Clivia". I have no horticultural or scientific background. A banker in my other life, I have been 'playing' with clivia for the past 18 years, ever since I first saw a lone *C. miniata* in flower under a tree in a newly acquired garden in Johannesburg. At the time I didn't even know what a clivia was, but it was love at first sight and I snaffled the clivia away from my green-fingered wife, Frances, who had excitedly discovered how easy it was to grow them from seed. Apologies therefore to the scientists in our ranks for my somewhat unscientific perspective.

My hybridising of clivia has been influenced by two fundamental concepts:

1. The first is Mendel's theory, which I have come to interpret as "What you put in, is what you get out". As I understand Mendel's model if you breed for any genetic trait, that trait could re-emerge in the 2nd and later generations. It follows that one can set goals based on genetic characteristics in a first generation cross. To illustrate, if you set a goal of producing a yellow pendulous plant you could cross a yellow *miniata* with an orange *gardenii* as depicted in the table. In the first generation (F1) this would produce

100% orange, very similar, semi-pendulous, slightly-flaired flowers. If the siblings are then crossed (F2) 25% of the progeny will be yellow (depicted by the yellow block of squares) and 25% of these yellow clivia will tend toward the *gardenii* form, 25% toward *miniata*, and 50% would be somewhere in between. You've now reached your objective of yellow, pendulous clivia. But your goal could have been for other traits like plant form, leaf width, floret count, colour distribution, etc., etc. And the progeny will, of course, have inherited genetic traits other than your prime objectives as well.

2. The second concept has to do with the pigments in the clivia flower. In 2004/5 the New Zealand Clivia Club through Dr Keith Hammett sponsored an experimental pigment analysis of a range of clivia flowers. This was first published in the club Newsletter Vol.3.1. of March 2005 and is reproduced in this issue. This helped me to appreciate the artists' palette that we have to work with.

As illustrated in the table below we have two pigments to work with, red anthocyanins and yellow carotenoids, the red pigments in the surface cells and the yellow in the fleshy cells behind. In effect we are looking through a red filter into a yellow background, hence the



Chinese Clivia Mountain.



Conway's Tea Party.

Variety is the spice of life and the incentive of Clivia hobbyists.


	Open Orange	Pendulous Orange	Open Yellow	Pendulous Yellow	WHAT YOU PUT IN - IS WHAT YOU GET OUT
Open Orange	Open Miniata Type	Open Semi Pendulous	Open Split yellow	Semi Pendulous Split yellow	
Pendulous Orange	Open Semi Pendulous	Pendulous	Semi Pendulous Split yellow	Pendulous Split yellow	
Open yellow	Open Split yellow	Semi Pendulous Split yellow	Open Yellow	Semi Pendulous Yellow	
Pendulous Yellow	Semi Pendulous Split yellow	Pendulous Split yellow	Semi Pendulous Yellow	Pendulous Gardenii Type Yellow	

Mendel's Model

have the highest intensity of anthocyanins, the dot matrix being so intense as to be opaque (and the analysis also detected blue pigments in the darkest reds, which adds another dimension); the peaches and pastels have low levels of red anthocyanins and a relatively high level of carotenoid, so you're seeing a lot of yellow through a relatively transparent red filter; and the 'near' whites have a very low carotenoid level because you are looking

mostly at empty air-cells; and if you then superimpose a low red anthocyanin filter over the latter the colour will tend to be pink. And so the clivia hybridist wields his artist's brush in the combination of these two concepts.

CLIVIA FLOWER PIGMENTATION ANALYSIS				
FLOWER COLOR	CAROTENOID	ANTHOCYANIN	WAX	WATER
Dark red	8.2	1.5	5.1	
Orange	3.2	0.35	9.1	
Pastel (dilute orange)	4.2	0.21	20	
Chubb's Peach	4.8	0.07	68	
Dark Yellow	9.6			
Near White	1.4			



Pastel Queen

Breeding for colour

Colours of similar pigment intensity will tend to breed true. Crossing your deepest reds will tend to produce more reds but with some variation in the

dominant orange colouring of clivia.

But it is not like applying paint with a paint brush. The pigments are rather of the nature of the dot-matrix used in newsprint. The variation in colour is thus due to a change in intensity of pigment 'dots' and not a colour change, and this variation in intensity can occur in either the red or yellow pigments, or both. So red, orange and peach flowers all have the same red anthocyanin and yellow carotenoids, but the intensity varies. Flowers are yellow in the absence of red anthocyanin and white in a flower is due to the complete absence of any pigment in that part of the floret, the air in the empty cells appearing white in the same way as a waterfall appears white, because of the air bubbles.

So you can draw logical conclusions to use in creating your masterpieces. The darkest reds

intensity, and in some the red may be even more intense than in the parents. This is how one would breed for more intense reds.

Similarly, crossing your deepest compatible yellows will tend to produce a few deeper yellows, and crossing your palest compatible yellows will produce a few that are paler, leading to near whites and ultimately, perhaps, the white clivia. (Note on compatibility: The genetic defect which resulted in the failure to produce red anthocyanin pigment in yellow clivia can occur in different genes or at different levels in the chemical process, hence we refer to group 1 & group 2 yellows, and there are perhaps other yellow groups as well. All group 1 yellows will have the same genetic defect and if crossed with another group 1 yellow will produce 100% yellow progeny. The two plants are then said to be compatible. If crossed with a yellow of



Breeding for Colour

Lady Frances

Vicoglow

CLIVIA FLOWER PIGMENTATION ANALYSIS

FL. CLUSTER COLOUR	CANTHUS COLOUR	ANTHER COLOUR	STAMEN
Dark red	8.2	1.6	5.1
Orange	3.2	0.35	9.1
Pastel (pale orange)	4.2	0.21	20
Chubb's Peach	4.8	0.07	68
Dark Yellow	9.6		
Near White	1.4		





Breeding for Colour

CLIVIA FLOWER PIGMENTATION ANALYSIS

FL. CLUSTER COLOUR	CANTHUS COLOUR	ANTHER COLOUR	STAMEN
Dark red	8.2	1.6	5.1
Orange	3.2	0.35	9.1
Pastel (pale orange)	4.2	0.21	20
Chubb's Peach	4.8	0.07	68
Dark Yellow	9.6		
Near White	1.4		






Chubb's Peach Strain





Breeding for Colour
CLIVIA FLOWER PIGMENTATION ANALYSIS

Clivia Colour	Anthocyanin	Carotenoid	Chlorophyll
Dark red	0.2	1.6	5.1
Orange	3.2	0.35	9.1
Pastel (pale orange)	4.2	0.21	10
Chubb's Peach	4.8	0.07	6.8
Dark Yellow	9.8		
Near White	1.4		

Cameron's Peach Strain



Alice's Pink (F2 Wittig Pink).

Sunrise Sunset.



Ngidi Pink Champagne.

Golden Pink (F2 Ngidi).

Recessive Genes.

another group the progeny revert to orange. Most yellows in New Zealand will be compatible group 1 yellows)

There are however exceptions. Some peaches have arisen as natural mutations in habitat and in cultivation. Chubb's Peach and some other peach strains are said to be 'group 1' and compatible with group 1 yellows, that is if crossed with group 1 yellows they will reproduce 100% peach or yellow progeny in the first generation. Most peach plants of this strain have already been crossed into yellow to improve the flower form and, in my opinion, tend therefore to behave as though 'split for' yellow. (See the next subheading).

Another group of peaches, which include Cameron's or Tipperary Peach, the Californian Victorian Peach, etc, will also in my experience breed true, but if crossed with group 1 yellow or the Chubb's Peach strain will revert to orange in the progeny. Similarly, pastels, which have similar pigmentation intensity to the peaches but have been produced by diluting red pigments through repeated crossing with yellows, and are therefore split for yellow should reproduce pastel and yellow if crossed.

Recessive Genes/Recovery of colour and other traits

Helen Marriot of Melbourne in an article on interspecific breeding stated:

"In much of his breeding Nakamura (a leading Japanese breeder) has commonly used orange and yellow forms of *C. miniata*, his notion being that use of different species and colours in combination could give rise to new mutations, including colour mutations".

As already pointed out in the discussion of Mendel's model, crossing a yellow with an orange will result in 100% orange progeny. However, the gene(s) responsible for the failure to produce red anthocyanin pigments in the yellow is recessive, and the orange clivia is said to be 'split for' yellow. (The correct term is 'heterozygous', but I can't even pronounce the word) The point is that plants can be split for traits/colours other than yellow and these traits/colours can then be recovered in later generations as per Mendel's model.

A particular interest of mine has been to recover

rare colour forms using this principle. So for instance I have been able to recover the 'non-group 1 or 2' Thurston Alpha and Thurston Beta yellows through sibling crossing seedlings where the Alpha or Beta were either an ovary or pollen parent.

The rare Wittig Pink is by all accounts sterile to its own pollen, but I've been able to recover the colour by sibling crossing Wittig Pink X Chubb's Peach hybrids. Similarly I have been able to reproduce in a plant I registered as 'Golden Dusk®' an extremely rare habitat plant colour, Thurston Ngidi Pink Champagne, again by sibling crossing a hybrid with the Ngidi Pink as one of the parents.

At present I am aiming to recover the lovely Conway plant, Sunrise-Sunset, by sibling crossing Sunrise-Sunset/Twins Yellow hybrids, all of which flowered orange.

But recovery possibilities are by no means limited to colour. The same can be said for colour patterns, umbel, fiolet and foliage forms, variegations, multipetals, etc.

Breeding for Colour Distribution Patterns

Another area of interest to me is the variation in colour distribution through the florets, resulting in bicolours and picotees (where the red pigments display as a trim at the edges of fiolet), splashes (where the red pigments display as irregular blotches of colour), white lips (a sort of reverse picotee with a white trim displaying at the edges of orange to red florets), ghosting (a fading of the red pigments in the petals), watercolours/party-colours (a washed effect in pastels, similar to ghosting), and green throats (where chloroplasts occur in the florets).

In most instances the inheritance of colour distribution patterns will also be genetic and, for instance, in repeated crossings of bicolor forms some progeny will tend towards the picotee form. A plant which some have found to be particularly effective in this form of hybridisation is Roly's Chiffon, a plant selected for its deep white throat out of the large plantation of Roly Strachan in KwaZulu Natal. This is illustrated in a plant I've named 'Chiffonoline' produced from a cross between Roly's Chiffon and Crinoline, another Strachan selection. Similarly, I produced



GreenE.



Alick's Fantasy.



Bronze Green Boy.



Ella van Zyl.



White Lips.



Berte's Bronze.

Breeding for Clour Distribution Patterns.

KiwiKaleidoscope® through another Strachan plant, Roly's Kaleidoscope. But I still have a way to go towards some of the lovely picotees that have been produced internationally, such as Conway's Ramona and the Japanese Kazumi Hattori picotee in photo, but I'm working on it.

Breeding for Form of Florets and Umbel

It may be desirable to cross plants with a view to improving the umbel or floret form through the selection of parent plants which have a high floret count (30 plus) or larger than normal



Roly's Chiffon.



Roly's Kaleidoscope.



Kiwi Kaleidoscope.



Chiffonoline.



Conway's Ramona.



Hattori Picotee.

Breeding for Clour Distribution Patterns.



Breeding for Form Umbel.

David Brundell Smither's Vico Breeding.

John Meyer's head in photo illustrates the size of the umbels.

florets, recurved petals, etc. Worthy of mention is Vico yellow, a plant which has been used all over the world to improve floret form. David Brundell in Auckland has done a lot of work with an original Vico clone gifted him by Sir Peter Smithers, improving not only yellows but other colours as well, producing plants with huge umbels and giant florets. Vico was later extensively used by Yoshi Nakamura in Japan and I have used some of his genetic material in breeding for recurved petal florets, a form I find most attractive because of the 'eyelash' appearance of the protruding anthers. Similarly, plants are being bred for petal forms like multi-petals, keeled petals, and even plants with no petals at all. Some find very wide petals attractive while others strive for a spider form with narrow petals. It's a matter of personal preference.

Breeding for Foliage Form and Appearance

For years the Chinese and Japanese have been concentrating on foliage, striving to produce ever smaller plants with leaves as wide as they are long, and using the Japanese Daruma as base. Some have lovely variegated leaves with vertical stripes of white and pale green contrasting with the darker green of the leaf. There are even plants with attractive horizontal variegations of different types, referred to as Akebono in Japan or LOB (Light of Buddha) in China. Very little hybridising has been done with these plants in New Zealand and even in China and Japan not much has been done to improve the flowers and colour range.

It would seem that variegation is passed on



Nakamura Vico.



*F1 Kirstenbosch Yellow.
Breeding for Form Florets.*



Summer Surprise.



Breeding for Foliage Features.

through the ovary parent, the vertical variegation being caused by a genetic defect in the meristem of the plant failing to produce chloroplasts. This defect then reflects itself as a stripe as the leaf grows out of the meristem, the width and number of stripes being dependent on the number of defective cells in the meristem. This defect/stripe can carry through to the peduncle & pedicles and on into the berries and seeds, producing another generation of variegates. It is generally accepted that ovary parents with pin-stripe variegations make the best mother plants.

Inter-specific Breeding

This is the area of clivia hybridisation which is stimulating so many around the world. All clivia species will cross with one another. Although flowering at different times, pollen can be stored indefinitely in the freezer to facilitate hybridisation between the species with spectacular results. The Australasian *cyrtanthiflora*, which is fairly common in various parts of New Zealand & Australia, was an early cross between *miniata* and *nobilis* dating back to the late 1800s.

Again Mendel's theory applies and 'what you put in is what you get out'. Crossing different colour *miniata* with one of the pendulous

species will produce attractive F1 progeny, all very similar, semi-pendulous, midway between the two species in form and in similar shades of pastel, orange or red, sometimes retaining the green tips of the pendulous species. These F1 plants are then split for the *miniata* colour which may be recovered in the F2 and later generations.

It has been found that *caulescens*, *robusta* and *gardenii* lend themselves to quick-growing, robust progeny when crossed with *miniata*, with the former two species perhaps contributing to a higher floret count in the progeny. Many are tempted to cross the F1 back to *miniata*, but in doing so are diluting the genetic contribution of the two original parents, and I suggest that better results could be obtained by sibling crossing the F1 seedlings so as to exploit their genetic base to the full.

Sourcing Breeding Material

So how do you acquire suitable breeding material?

While some quality plants can be obtained at reasonable prices here in New Zealand, some of the really special stuff costs a fortune. For instance at an auction at the 2006 clivia conference in South Africa a top price of R30000



Dower Golden Sunset



Rudo's Cinderella



Rudo's Vima



Another Dower



Welgermoed



Rudo's Chanel



Scarlet



Nakamura



Dainty Dancer

Breeding for Interspecifics.

Acquiring Genetic Material



Prize Green Throat - \$6000



Nakayama Hanyae - \$?



Bertie's Bronze - \$2000



Vermaak Red - \$?

SOLUTION:

Grow them from seed

KZN Seed Bank: [Brenda Nuss nuss@futurenet.co.za](mailto:Brenda.Nuss@futurenet.co.za)

Cape Seed Bank: [Mick Dower jdower@iafrica.com](mailto:Mick.Dower@iafrica.com)

Many Generous Pollen Donors



Apple Blossom Complex.



Q5 x Q4.



Dower Pink.



Hot Lips.



Super Spider.



Jean Delphine.

The Future.

(NZ\$6000) was paid for green-throat yellow. The asking price for a very desirable Bronze green-throat, Bertie's Bronze, is \$2000. And these prices are far from unusual. Add to that the importation and quarantine costs and you'll soon run out of money unless a millionaire. The point is that this genetic material can be acquired by way of seed. My experience is that imported plants take a fair while to recover from the trauma of importation and, in some instances, the change from one hemisphere to another, so that flowering is sometimes delayed for a number of years. This makes seed grown plants a viable alternative.

Here in New Zealand seed is made available from time to time through the New Zealand Clivia Club. The writer produces an annual international seed catalogue in February/March each year and anyone wishing to be placed on the emailing list can email me at clivia@xtra.co.nz. Otherwise there are numerous international growers of note who make seed available, but in particular both the KwaZulu-Natal Clivia Club (Brenda Nuss nuss@futurenet.co.za) and the Cape Clivia Club (Mick Dower jdower@iafrica.com) produce comprehensive annual seed catalogues. This is a great way to build up your collection. And reading

international clivia publications will help you to identify desirable genetic material. And you will also find that established growers are very generous when it comes to making pollen available from their best plants.

The Future

New genetic material is constantly becoming available. For instance a group of *miniata* plants discovered in a Transkei habitat in the 1990s and appropriately named the Appleblossom complex (Q1; Q2; Q3; etc) because of the colouring are now becoming more widely available. These have already been used to produce lovely pink colours. The new species *C mirabilis* was only discovered a few years back. Then we have the blue pigments found in clivia like Conway's Jean Delphine. All have the potential to add a new dimension to clivia hybridising. The future has to do with what YOU are able to create with the resources at YOUR disposal.

HAVE FUN FOOLIN' AROUND WITH YOUR CLIVIA! &

By Alick Mcleman, 30 June 2009

(Based on a slide presentation at a meeting of the New Zealand Clivia Club on 29th July 2009).

GROWERS' & BREEDERS' NOTES**CLIVIA ROBUSTA & ITS INTERSPECIFICS****General**

Clivia *robusta* or otherwise known as the 'Swamp Clivia' has been identified as a species in its own right through DNA analysis of plants grown from seed. These were grown by Dr. Keith Hammett after he received seeds from Graham Duncan of the then NBI (now SANBI). These were collected in Pondoland where most of the *Clivia robusta* populations are found. This plant is named after its robust growth habit, with some plants reaching up to 1.8m in height.

Description of *Clivia robusta*

These plants are generally large, although in drier areas they tend to be stockier with broader leaves. The leaves are between 30 - 90 mm wide, strap-shaped and up to 1.2m in length. They produce pendulous flowers from April

through to July in colours ranging from yellows, pale to deep orange and scarlet reds. Flower shape could be short and stocky to long and narrow with green tips. They reproduce well, setting plenty of seed and young seedlings are often found on the forest floors.

Natural habitat of *Clivia robusta*

They are found predominantly in Pondoland. A small colony also occurs in the Southport area on the KZN coast. They grow mainly in swamp forests or next to streams. Colonies also occur well away from water, growing only in leaf mould and also in rocky areas.

Small colonies also occur in the Eastern Cape close to Port St Johns. The colonies that occur in the pristine swamp forest of South KZN are remarkable and in flowering season give a spectacular display of flowers.



C. robusta in habitat.

PHOTO – CARRIE KRUGER



C. robusta 'Ruby Glory'.

PHOTO – CARRIE KRUGER



C. robusta '5 Star'.

Interspecific f1 Andy Forbes Harding.

Breeding interspecifics from *Clivia robusta*

Alan Tait, a well known breeder of a great variety of plants started interbreeding with *Clivia robusta* in Autumn 2004, using *Clivia miniata* 'Coromandel Strain' as berry parent and *Clivia robusta* as pollen parent.

These are some of his findings

Seed was sown in 2005. When seedlings were big enough to handle, they were transplanted into 2l bags and kept under 60% shade. The first plants flowered in June 2008. Some plants had up to 3 spikes. The resulting leaf width and length varied greatly, as did number and size of flowers per umbel, flaredness of flowers and to a lesser degree, the colour of flowers. A small percentage showed superior characteristics, including compact plants, short, broad leaves and umbels of many beautiful open flowers in pastel shades.

There were even a small number of variegated seedlings!

Last year his F2 seeds were sown and now the wait for even better results! &

Carrie Kruger

Utopia Nursery, Sedgfield

With thanks to Andy Forbes Harding and Allan Tait for their contributions of information and photos!



THE “SAFE SEX” METHOD OF POLLINATING CLIVIA FLOWERS

As Clivia cultivators we are obliged to create seed, seedlings and plants by the safest and most controlled form of pollination, not only for ourselves but more so should we plan to distribute the product to our fellow Clivia enthusiast. For this reason I prefer to use the following method.

Prior to flowering time I prepare sufficient stigma covers in the form of cold drink plastic straws, the ones served at Wimpy outlets as they are large in diameter. I cut the straws in lengths of approximately 80mm and squeeze bostik into the one opening, plus minus 5mm deep and allow to dry.

Comes flowering time I choose to remove the plants which I wish to self- or cross- pollinate from amongst the other plants a few days prior to the buds showing first signs of opening and place them in a secluded area. As soon

as the flower buds start opening I slide one of the straws over each stigma right up to the center of the flower thus avoiding any form of unwanted pollination. Should the straw fit loosely I simply remove one of the pollen sacs and slide the straw over both the stigma and the emasculated stamen ensuring a tight fit.

When pollinating I simply remove the straws one at a time, dab the stigma with selected pollen and slide the straw back on. Should I not want to harvest the pollen or enter the plant for show I also remove all the pollen sacs isolating the possibility of unwanted accidental self pollination.

Although a laborious and time consuming task it never-the-less gives me peace of mind.&

Willie Le Roux
girlylr@telkomsa.net



A “Safe Sex” Clivia.

Clivias under Knittex Spectranet

Clivia lovers and growers constantly enquire and wish to know what the ideal light and environmental conditions should be for their clivias to develop and flower to their best potential. Knittex has for the past seventeen years been conducting light management trials on fruit, vegetable and flower production under Spectranet (shade net) to determine which of the visible light wavelengths influence plant development, yield and quality.

Managing light can be done effectively and efficiently using different techniques but each technique influences both light intensity and light quality. Understanding light intensity and light quality and how they affect plant growth and development is a useful asset in any shade house and greenhouse production system.

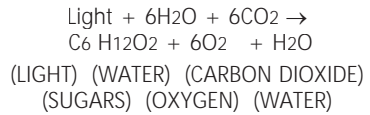
Light affects plants in two ways:

a) by providing the energy for the production of sugars; and

b) by providing the signal that directs a plant's morphological development.

Process (a) is known as photosynthesis and process (b) is called photomorphogenesis. Although separate processes, they are not unrelated and there is considerable interaction between the two. There is also considerable overlap, so what is done to manipulate the one process often affects the other.

a) Photosynthesis, the fundamental process in plant growth, is depicted by the following chemical equation: -



The main environmental parameters affecting the rate of photosynthesis are: -

- Intensity, Quality and Duration of light
- Carbon Dioxide Content of the Air
- Water Supply (quality, quantity and

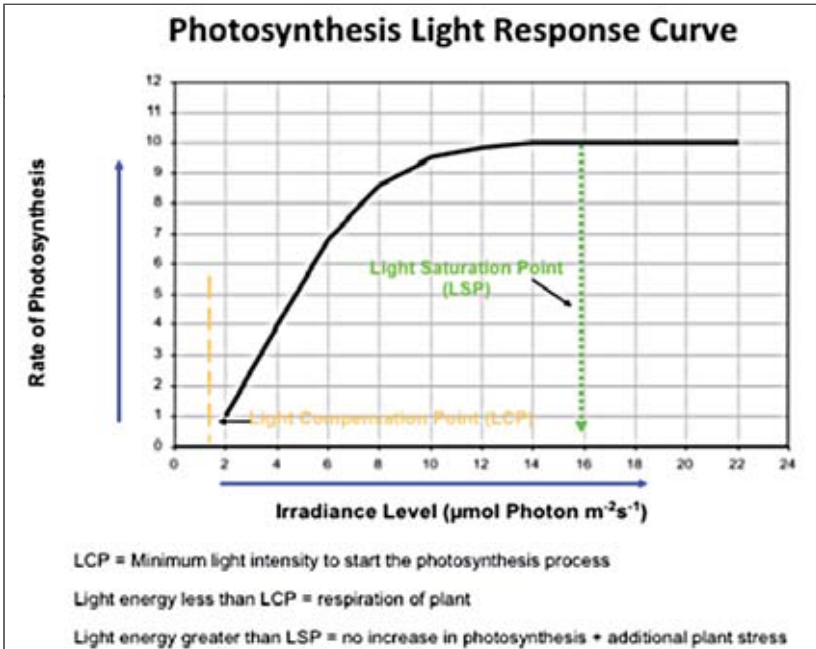


Figure 1.

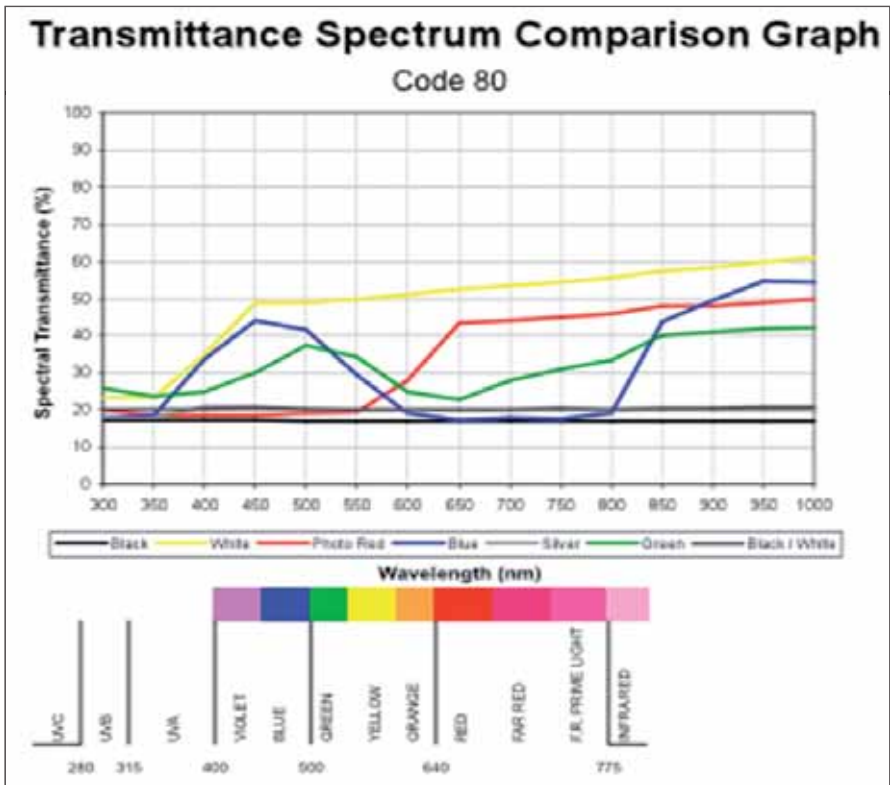


Figure 2.

frequency)

- Mineral Elements in the Soil
- Temperature

However, the most important parameter affecting photosynthesis is that of visible light with regards to quantity, quality and duration. Plants are highly reliant on light for their source of energy wherein their photoreceptors, chlorophyll and carotenoid pigments; convert the light energy into carbohydrates, thus driving plant growth and development.

It is important to understand that all plants have their own "Photosynthesis Light Response Curve" (figure 1) wherein there is a LCP (Light Compensation Point) and a LSP (Light Saturation Point) light intensity value. The LCP value is the minimum light intensity required by that specific plant to start the photosynthesis process. The LSP value is the point at which no

further increase in photosynthesis will occur in that same plant, despite increasing the light intensity levels. This means that a plant will start photosynthesizing at its LCP value and continue so all the way to its LSP value, where after the plant will be subjected to stress, causing sunburn and reduced plant growth and development. The LSP value is commonly referred to as the PPFD (Photosynthetic Photon Flux Density) energy saturation level of a plant. (Example: the PPFD value for a Phalaenopsis Orchid is between 200 and 300 $\mu\text{molm}^{-2}\text{s}^{-1}$, whereas for tomatoes the PPFD value is about 1500 $\mu\text{molm}^{-2}\text{s}^{-1}$).

The quantum of light energy transmitted by the sun in summer in most parts of South Africa ranges from 2000 to 2450 $\mu\text{molm}^{-2}\text{s}^{-1}$, which illustrates that the Phalaenopsis Orchid requires far more protection from sunlight than

tomatoes. Nevertheless, in order to provide the correct environmental climate, light intensity for both these plants will have to be reduced according to their needs. This means, our first priority should be to reduce the quantity (intensity) of light by using different shade net densities. (e.g. 80% versus 40%).

This is the first step in creating a good light environment with reduced light energy for photosynthesis. The second step is to provide the plant with the best quality of light. What is meant by light quality?

Photosynthesis is most efficiently driven by blue and red light. Blue light with a wavelength range of 425 to 500nm is particularly important for the initial stage of plant growth as well as during the blooming and fruit colouring process due to its high energy level. Red light on the other hand with a wavelength range of 650 to 700 provides for excellent plant growth and development due to its moderate energy level.

In the production of fruit, vegetables or flowers one must appreciate that in order to obtain best quality in fruit size and colour or vegetable size or flower size and stem length, the quantity of blue and red light as well as the ratio of blue to red light must be manipulated by the grower. This process is done by using Knittex Spectranet in different colours or combination thereof to absorb, reflect, transmit and diffuse selected light wavelengths as required for a specific plant. The figure 2 below illustrates how Knittex Spectranet in an 80% density construction reduces the UV and visible light

intensity whilst at the same time manipulates the ratios and quantities of blue, green, red and far-red wavelengths reaching the plant.

b) Photomorphogenesis is responsible for plant shape and often the flowering response too. This reactive process is greatly influenced by light, but in a different way to photosynthesis. When conditions are such that plants receive more far-red light than red light for extended periods of time, the "shade avoidance" response is evoked. The response includes new stem growth becoming elongated and thin, new leaves becoming thinner and larger, and decreased branching. The plant in general becomes weaker and the appearance less aesthetically pleasing to the grower. Over crowding or very low light intensity greenhouses will influence this response in plants because of the relationship of red to far-red light.

With all the research and success achieved to date by Knittex on other plants, they are now undertaking an extensive research project in conjunction with Paul Kloock, Chairman of the Lowveld Clivia Club. This project will take place on Paul's farm situated in the Curlews Area, between White River and Nelspruit, with both parties keen to establish the ideal light conditions for a range of clivias under Knittex Spectranet.

The research will be conducted over a four year period, from the first planting of seed through germination to flowering. &

Tommy Rogers

CLIVIA SEED FOR SALE

Individual crosses between selected excellent quality plants (adult, seedlings and seeds originally obtained from Charl Malan, Sean Chubb, Christo Lötter, Edgar Fevrier, Rudo Lötter, lan Vermaak etc.)

Peach x peach crosses - 1000 seeds; Yellow x peach - 500 seeds

All at a very special price of R5 each (sorry to say) to South African members only.

Postage extra.

Please contact Willie Le Roux 041 360 3480 or e-mail girlylr@telkomsa.net

Willie & Cynthia Le Roux Tel: 041-360 3480

Mycorrhiza Fungi

I started using Mycorrhiza about a year back after a conversation with David Bearing about the slow growth of *C. nobilis* and *C. mirabilis* in cultivation (we are taking 9/10 years to flower them and he thought it was much less in the bush – perhaps only 6 years or so). He had had a conversation with a South African acquaintance over the same thing and expressed an opinion that we were missing something in our cultivation and that he thought was a naturally occurring Mycorrhiza.

At that time I was going through a problem period myself because of the extreme heat (up to 48°C and for several days) and our very poor quality water with dissolved salts of 400+ ppm. This was causing severe stress and serious chlorosis (yellowing) and slow growth to most of my plants at that time. After that conversation I bought some from the company whose link is below. If you read their literature it is very persuasive so I must admit to being somewhat skeptical (a bit like diet pill literature) but was starting a program of complete repotting anyway as at that stage I was getting rather concerned about the state of my plants. Because of the salt contamination I had to repot everything with new mix so that was a good time to introduce the Mycho. I did also change my mix to a heavier formula to stop the desiccation in our dry and hot climate (I was using a mix of 1/3 each of coco chips, orchid size pine bark and premium commercial potting mix and then adding probably up to 25% oak leaves.) I have changed that to 50% potting mix and 25% each of the coco chips and pine bark. I add 5 heaped teaspoons of the mycho inoculant and the same of soluble azalea fertilizer to each wheelbarrow of mix. I have also stopped using our tap water completely and now use rainwater when it is available (I have a 3000 ltr tank) and supplement that with a reverse osmosis unit which only cost about \$150 and gives me water with only 3-10 ppm which actually tests better than my rainwater.

The results of this have been remarkable I must say with very much increased growth and vigor right across the board and very much noticeable in my *C. nobilis* and *C. mirabilis* and everything has gone from a light lime green to a very rich dark green. Now I understand that unfortunately



I did not do a properly blind test and changed a number of things to correct other issues also so it could be argued any or all of those things have given me the result but I do feel the Mycorrhiza combined with more favourable growing media has resulted in stronger and healthier plants (just as the company claimed) so I will be continuing its use as it certainly has done no harm.

I have attached 3 photos of my *C. mirabilis* taken 6 months apart and you can judge for yourselves if the growth in that time is above the norm (the larger seedling has put on at least 6 new leaves in 12 months). &

Peter Dippi
(Kapunda, South Australia,

CLIVIA SOCIETY MATTERS

CLIVIA 2010

5TH INTERNATIONAL CLIVIA CONFERENCE

Cape Town, South Africa

21 and 22 September 2010

“The Cape Experience”

“The fairest Cape in all the world”
(Sir Francis Drake - 1580)

On behalf of the Clivia Society and the Cape Clivia Club, we invite you to meet with other Clivia enthusiasts in September 2010 at the 5th International Clivia Conference. This event will be the highlight of our Clivia calendar and a showcase for developments in our knowledge of the genus Clivia. A magnificent show will accompany and complement the conference, which will be addressed by speakers from all over the Clivia world. The conference and show venues adjoin each other.

In addition to invited keynote speakers, prospective speakers are invited to submit a brief summary of their proposed presentation so that the preliminary program can be drawn up. Abstracts will be invited and the preliminary deadline for their submission will be December 2009, with notification of acceptance by 28 February 2010. The full paper will be published in the Clivia Yearbook covering the conference proceedings and should be received by 30 May 2010, in time to be included in the Yearbook.

Clivia Show

The annual Show of the Cape Clivia Club, on 24, 25 and 26 September 2010 will be regarded as a National Clivia Event. The very best of Clivia, including – it is hoped – plants bred from “Appleblossom” crosses as well as rare mirabilis hybrids will be on display. In addition to the many plants on show, a wide variety of plants will be offered for sale by top growers.



Auction

One of the highlights of Clivia 2010 will be a Clivia auction. A selection of top Clivias from all over South Africa and elsewhere will be on offer. Closer to the time, all the accepted plants will be illustrated on the website as the catalogue is finalized.

Tours

A number of tours have been planned to two of the Clivia habitats in South Africa. Delegates can also visit a number of regional shows. For many time is limited so we have tried to compress activities into the minimum period. The conference in Cape Town is timed for the normal flowering period of *C. miniata*, which starts in the north, followed by the east and then the south coast (from west to east). Flowering times determine the timing of the regional shows. The show and tour program covers some of the Cape's most beautiful scenic and botanic areas and is planned to be unforgettable. Accommodation will be available in the homes of local enthusiasts or in B&Bs and hotels. We anticipate a keen interest in the proposed program, so if you are interested in participating please contact the Clivia Society well in advance.

Programme

The programme for the week is:

Monday 20 September:

Hermanus visit (see below), early-evening Conference registration and complimentary catered "meet and greet" function.

Tuesday 21 September:

Conference and evening dinner function.

Wednesday 22 September:

Conference, light meal and Auction.

Thursday 23 September:

Kirstenbosch visits (see below) and morning and afternoon Clivia photography workshops conducted by Ian Coates, assisted by Claude Felbert.

Friday 24 (Public holiday):

Sunday 26 September – Cape Clivia Club show.

Sunday 26 – Wednesday 29 September:

Tour to *mirabilis* country (see below).

Three visits have been arranged for delegates visiting Cape Town www.tourismcapetown.co.za and the Western Cape – possibly a once-in-a-lifetime opportunity to experience one of the most beautiful regions on earth. These visits combine clivias with the opportunity to see something of the incredible richness of the Cape Floral Region. www.southafrica.info/about/animals/capefloralregion.htm.

To give us an idea of the number of delegates interested in the COACH TOURS below it is important that you register your interest, without obligation, by emailing clivia2010@cliviasociety.org as soon as possible. This will help us establish final costings.

(1) **Monday 20 September:** A coach tour to Hermanus www.whalecoast.info taking the spectacular coastal route. The first stop will be the Harold Porter National Botanic Garden www.sanbi.org/frames/haroldfram.htm which has 190 hectares of natural fynbos. A botanist will show us wild flowers in situ. There will then be a stop at Felicity Weeden's home to view her clivia collection. Felicity's plants are regular winners at Cape Clivia Club shows. At Hermanus Southern Right whales www.whalecoast.info may be seen close inshore in Walker Bay. This is one of the best places in the world from which

to do land-based whale watching. Whales can sometimes be seen from as close as five metres from the rocky cliffs. After a stop for lunch the bus will return to Cape Town in the afternoon, via the scenic Sir Lowry's Pass, in time for delegates to register and attend the "meet and greet" function. The cost per head is likely to be between R 200 and R 300, depending on numbers. Lunch and any admission fees will be for your own account.

- (2) **Thursday 23 September:** Morning and afternoon visits to the world-famous Kirstenbosch Botanical Garden www.sanbi.org/kirstenbosch/mainpage.htm on the slopes of Table Mountain, www.sa-venues.com/table_mountain.htm the first botanical garden to be included in one of Unesco's world heritage sites. Graham Duncan will lead two guided "behind the scenes" tour of the bulb collection and other plants, including some of the clivia for which he has responsibility. You will travel there 'under your own steam', so that, either before or after the tour, you can wander around the Garden, which includes a marvelous collection of cycads. There will be no charge, other than normal Garden admission fees. Graham is an internationally-known horticulturist and author of "Grow Clivias". (see also "Clivia photography workshops" above).
- (3) **Sunday 26 September to Wednesday 29 September:** A coach tour to the *Clivia mirabilis* www.plantzafrica.com/plantcd/cliviamirabilis.htm habitat on two farms in the Vanrhynsdorp area some 300 km up the Cape West Coast www.capewestcoast.org to the north of Cape Town, in a region of exceptional diversity and plant endemism. Note that this is well before the time at which most *mirabilis* will be flowering – but in previous years a few plants in flower have been found in September visits. Some sites are more accessible than others where scrambling over rocks and amongst bushes on sloping ground will be involved. Because it can get very hot later in the day the habitat visits will take place from early on the Monday and Tuesday mornings. The coach will return to Cape Town on the Wednesday. There will be interesting stops in both



directions, including the West Coast Fossil Park www.sawestcoast.com/fossil.html.

The tour includes meals, shared accommodation in Vanrhynsdorp www.places.co.za/html/vanrhynsdorp.html and traditional farm hospitality. Because access to each mirabilis sites is only possible for a few people at a time numbers for this tour will be limited to a maximum of 35. Preference will be given to delegates from outside South Africa.

The cost per head (35 people) is likely to be between R2 500 and R3000 for the four days. Single accommodation may be available at extra cost.

Once final tour and other prices are available more information, including detailed itineraries, will be placed on the websites of the Clivia Society www.cliviasociety.org and the Cape Clivia Club www.miniata.co.za.

Delegates may wish to attend only one day of the CCC Show and then spend time at the Cape Town Waterfront, taking the aerial cableway up Table Mountain, visiting Cape Point, Robben Island, the Winelands for wine tasting, and enjoying the other attractions of the Cape

The website www.tourismcapetown.co.za is the place to go for details of these and other Cape attractions.

Most Cape Town clivia growers have small properties unsuitable for visitors in numbers. It is hoped therefore that visits to a leading grower on a smallholding outside the City can be arranged.

Clivia events immediately before and after the week of the "The Cape Experience" are:

18-19 September:

Clivia Shows in Bloemfontein (Free State Clivia Club) and Pietermaritzburg (Kwa-Zulu Natal Clivia Club).

1-3 October:

Show in Hermanus (Overberg Interest Group).

2-3 October:

Clivia shows in George (Garden Route Clivia Club) and Port Elizabeth (Eastern Cape Clivia Club).

4-5 October:

Nobilis tour (arranged by ECCC). &

CLIVIA SOCIETY MATTERS**Clivia Club Shows and Markets for 2010
(Preliminary Programme)**

NAME OF CLUB	DATES 2010	TIMES	VENUE	ENTRANCE FEES	CONTACT PERSON / S
Waterberg Boslelie Groep Nylstroom	4 September 2010 EXHIBITION & Stalls	Saturday: 08:00 – 16:00	Dutch Reform Church East, Magazyn Street, Nylstroom	No Charge	Ans J: 014-717 3674 082 372 0765
Northern Free State Clivia Club Welkom	2 – 5 September 2010 Expo	Weekdays: 08:00 – 17:00 Saturday : 08:00 - 16:00 Sunday : 09:00 – 13:00	Alma Nursery, Alma Road, Welkom	No Charge	Louis C: 057-357 6067
Lowveld Clivia Club Nelspruit	10 – 11 September 2010 SHOW & Clivia Market	Saturday : 09:00 - 17:00 Sunday : 09:00 - 15:00	Lowveld National Botanical Garden Nelspruit	R15.00 per person over 12 years	Maria G: 083 457 1176 Paul K: 082 578 5289 Clive M: 082 374 1541
Northern Clivia Club Pretoria	11 – 12 September 2010 SHOW, Clivia Market & Auction	Saturday: 08:00 – 17:00 Sunday : 09:00 – 15:00	Anton van Wouw Primary School, c/o Dey & Lange Streets, New Muckleneuk	R15.00 per person over 12 years old	Christo T: 082 497 5879
Cape Clivia Club Cape Town	11 – 12 September 2010 Display	09:00 – 17:00	Sanlam Hall Kirstenbosch Botanical Garden, Newlands	Fee of Kirstenbosch	John W: 082 575 7202 Ian B: 021 689 3901
Joburg Clivia Club Johannesburg	11 – 12 September 2010 SHOW	Saturday: 08:30 – 17:00 Sunday: 08:30 – 16:00	Garden World Nursery, Beyers Naude Drive(M5), Muldersdrift	R10.00 per person over 12 years	Maylene: 011-706 2660 Braam: 011- 475 2586 Glynn M: 082 650 1463
Northern Clivia Club Pretoria	14 – 16 September 2010	C. caulescens habitat tour	Graskop, Gods window Pinnacle, Mariepskop & KNP	To be decided	James A: 012 361 6406
Free State Clivia Club Bloemfontein	18 September 2010 SHOW	Saturday: 8.00 – 14.00	Sand du Plessis Secondary School, Currie Ave. Bloemfontein	R 10.00 per person: Children R5.00	Piet L: 051-5228963

NAME OF CLUB	DATES 2010	TIMES	VENUE	ENTRANCE FEES	CONTACT PERSON / S
Cape Clivia Club Cape Town	18 – 19 September 2010 Display	09:00 – 17:00	Willowbridge Shopping Centre, Durbanville	No Charge	Eugene M: 021-914 0465 083 444 9709
KwaZulu Natal Clivia Club Pietermaritzburg	18 – 19 September 2010 Miniata SHOW & Clivia Market	Saturday: 9:00 – 16:00 Sunday: 9:00 - 15:30	Royal Show Grounds Pietermaritz burg	R 10.00 per person Children under 12 free	Val T: 031-763 5736 John H: 083 660 1275 Brian T: 033-344 3585 Miranda: 083 254 0796
Cape Clivia Club Cape Town	20 September 2010	Monday	Hermanus visit	To be decided	Sure Travel
Cape Clivia Club Cape Town	21 – 22 September 2010 - 5 th International Conference	Tuesday Wednesday	Sanlam Conference Centre Voortrekker Road Belville	To be decided	John vd L: 021 671 4535
Cape Clivia Club Cape Town	23 September 2010	Thursday	Kirstenbosch & Photo - graphic Workshops	To be decided	
Cape Clivia Club Cape Town	24 – 26 September 2010 Show, Auction & Market	09:00 – 17:00	Belville Civic Centre, Voortrekker Road, Belville	To be decided	Joy W: 021-671 7384 Gerrit v W: 021-976 8924
Cape Clivia Club Cape Town	26 -29 September 2010	Sunday – Wednesday	Mirabilis Habitat Tour Nieuwoudt- ville	To be decided	
Overberg Clivia Interest Group Hermanus	1 – 2 October 2010 SHOW	09:00 – 17:00	Round Hall, N G Church Hermanus, Central Opp. Absa Bank	R10.00 per person over 12 years	Felicity W: 084 5898 297 Felicity W: 028 316 3092
Garden Route Clivia Club George	2 – 3 October 2010 SHOW	Saturday: 09:00 – 17:00 Sunday : 09:00 – 13:00	Outeniqua Primary School, c/o Cradock & Cathedral St. George	R10.00 per adult Children free	Ida E: 072 613 6066
Eastern Province Clivia Club Port Elizabeth	2 – 3 October 2010 SHOW	Saturday: 08.30 – 17.00 Sunday: 08.30 – 16.00	D F Malherbe School Hall, 14 th Ave, Walmer, Port Elizabeth	R 5.00 per person over 12 years	Gideon B: 079 490 0550 Willie le Roux: 041 360 480
Cape Clivia Club Cape Town	2 – 5 October 2010 Display	09:00 – 17:00	Sanlam Hall, Kirstenbosch Botanical Garden, Newlands	Fee of Kirstenbosch	John W: 082 575 7202 Ian B: 021 689 3901
Border Clivia Interest Group East -London	9 – 10 October 2010 SHOW Display & Clivia Market	Saturday: 08:00 – 17:00 Sunday: 08:00 – 12:00	Pioneer Nursery, Gonubie	No Charge	Glenn M: 071 421 7812 Peter M: 083 463 6229

CLUBS & INTEREST GROUPS

Editor's Note – The Annual reports of the Clubs will appear in the Quarter 1 Issue of 2010 of *Clivia News*. Please let me have these as soon as they are ready, as well as photographs of honoured personalities, growers of special plants, show winners, and suchlike.

Eastern Province Clivia Club

2009 INTERSPECIFIC SHOW

With mother nature playing havoc with the weather these days it has become more and more difficult to predict a year in advance a suitable date for a Clivia show. In spite of the interspecifics flowering at odd times we still managed to have our show on 18 July. A beautiful array of coloured flowers extended a friendly welcome to our visitors who were asked to judge the best on show. When votes were counted at the end of the day Carrie Krügers pink mingard was awarded the best on show with Gert Esterhuizen's double headed orange *cyrtanthiflora* as second choice, see photos here-with.

According to Carrie the pink inter-specific flowered from seedlings she received as gift from a friend of hers in Pretoria who made a cross between a group 2 yellow *miniata* and a yellow *gardenii*, Gert's orange, presumably a *cyrtanthiflora* judging from the leaf structure, came from seeds which were obtained from Nakamura. &

Willie Le Roux

girlylr@telkomsa.net



Carrie Krüger's mingard.



Gert Esterhuizen's cyrtanthiflora.

MORE CLIVIA TALKS AT THE 57 YEAR OLD BATHURST AND PORT ALFRED HORTICULTURAL SOCIETY

At the invitation of the The Bathurst and Port Alfred Horticultural Society, Kotie van der Wat and I set off to give a talk on the cultivation of Clivias at their monthly meeting. We were greeted by a very friendly group who eagerly assisted in putting up our Clivia flower posters and display "from seed to flowering plant". Judging from the bombardment of questions they truly are very eager to learn more about the Clivia plant. At my request, Wilma Jurgensen, Chairlady, kindly provided me with the following very interesting info about their Society.

"The Bathurst and Port Alfred Horticultural Society was formed in 1952 with the aim of fostering interest in gardening, to beautify the surroundings and to exchange information and ideas on gardening. Flower shows were staged in Bathurst with flower arrangements plants and flowers on display, sometimes twice a year.



Willie le Roux addressing the members of the Bathurst and Port Alfred Garden Society.

Enthusiasts from Port Alfred supported these shows in ever increasing numbers until it became more practical to change the venue of the meetings to Port Alfred.

In 1981 an Orchid show was held for the first time which proved very popular and in 1993 the floral art group formed their own Society to pursue their love of flower arranging, but have maintained staunch supporters of the Horticultural Society in all their endeavours.

The Society invites guest speakers to their meetings and also arranges regular outings locally as well as annual trips to the Addo rose show, Hogsback and Bedford to look at gardens. The Club has also been pro-active in town by donating plants and trees to beautify the town especially the duck pond, and donates trees and plants to the townships on a regular basis.

Gardening in Port Alfred has never been easy due to the high salt content of the air, the brak water and the poor soil but that hasn't stop the intrepid gardeners from creating oasis of beauty all over town.

This year the Society is embarking on its biggest project to-date, a whole weekend of garden displays, a talk in the town hall by Tanya Visser, the editor of "The Gardener" magazine and host of a gardening program on TV and will include participation by the local artists who will have their work on display, the crafters who will have a market over the weekend, and possibly the quilters who will also display their craft.

Private gardens will be open to the public and it is going to be a weekend of great fun and excitement on 17 - 18 October 2009". &

Willie Le Roux

Tel: 041 360 3480

E-mail: girlylr@telkomsa.net

HIGHWAY CLIVIA INTEREST GROUP MEETING HELD AT THURLOW FLORA 19/09/2009

Approximately 33 Clivia enthusiasts descended on Thurlow Flora Farm for the Highway Clivia Interest Group's September get together and open day with Sean Chubb and his family. Mike Callaghan welcomed everyone and Sean Chubb spoke briefly about the plants on show. Next Andrew van der Hoven showed his clivias growing in polypropylene bags inserted into plastic containers with the lower 20% of roots permanently in water! A moment of light relief occurred when Sean's son called out "Hello Daddy" from his hiding place under some shade cloth.

We then moved into the display area where we were greeted by a magnificent display of clivias. Every colour, shade and hue were perfectly arranged – simply awe inspiring! Trying to decide which flower took your fancy resulted in total confusion. It was here that Sean treated us to a sumptuous tea served with sandwiches and cakes. Sean then invited us into his shade house where many of us chose plants to add to our collections. Thank you again to Sean and his family.

The next meeting will be a bring-and-braai at Mike Callaghan's in November 2009. Date to be advised. &

KWA-ZULU NATAL CLIVIA CLUB KZN Clivia Club Plans for Visiting Delegates 2010

16th September 2010 THURSDAY

Morning – Visiting delegates will meet Francois van Rooyen in Greytown at 9:00am

They will be escorted to a habitat population of clivia near Kranskop.

Afternoon - They will return to The Gem Farm (Francois & Pieter van Rooyen) for lunch and viewing of their clivia.

17th September 2010 FRIDAY

Morning – Visiting delegates will travel through to Sean and Terry Chubb's farm at 9:00am to view the Thurlow Collection of Clivia (Habitat Heritage Collection).

18th September 2010 SATURDAY

Morning – KZN Clivia Show – Meeting breeders and clivia friends.

Afternoon – Will be escorted by John Handman (Little Falls Farm) to a habitat locality near Pietermaritzburg.

19th SEPTEMBER 2010 SUNDAY

Morning – Visiting delegates will view John Handman's collection at Little Falls Farm.

Afternoon – They will go to Liz and Glen Boyd (Karkloof Clivia) for lunch and viewing of their Clivia.

20th SEPTEMBER 2010 MONDAY

Morning - Visiting delegates will visit Val & Roy Thurston in Kloof to view their collection.

Details and contact numbers of all breeders in KZN will be provided for visiting at delegates leisure upon appointment.

Transport and accommodation will be provided on finalizing dates (confirmation of above) and numbers of delegates. &

Francois van Rooyen

NACS Show Winners



Best inter-specific hybrid
Jim Comstock
"Dark Knight"



Best Flower Clivia in Show
Jim Comstock
"04-09-07-11"



Best Foliage Clivia in Show
Norman Nakanishi
"Variegated Light of Buddha"



Best Non-Longitudinal Variegation
Norman Nakanishi
"Light of Buddha"



Best Clivia miniata
Manuel Morales
"Mosaic"



Best Display Clivia
Manuel Morales
"98-1079"



Best Leaf Clivia
Norman Nakanishi
"Monk"



Best Cut Flower
Malcolm Shrimplin
"Nizhoni"



PHOTOGRAPHIC COMPETITION

The Editorial Board of the 2009 Clivia Society Yearbook 11 announces the Clivia Society Photographic Competition. It is open to all and the object is to encourage Clivia enthusiasts to submit photographs from around the world. We would particularly like photos of plants that flower outside of the normal Clivia Show dates and therefore are not seen by many people.

This is an annual event that brings entries of photographs of attractive, as well as some unusual, Clivia flowers and plants. Prominent space will be allocated in the Yearbook to all winners and other suitable photos. The name of the Photographer and Grower, where submitted, will be published along with any other relevant information. There will be prizes for winners as shown below. The Best Photograph and Runner-up will be selected from all entries and will then not be eligible to win other categories. Prizes will be a selection of some of the rarest and most sought-after seed and/or seedlings to the value shown below and will be awarded next year when we know what is available.

Categories are as follows:

- *Clivia miniata*
- All Pendulous Species
- Interspecific
- Habitat Picture
- Single Flower any species

The conditions and rules of entry are:

1. The completed attached entry form must accompany submissions.
2. All entries are welcome, but due to publishing deadlines must be received by the last day of April 2009, to be eligible.
3. Publication rights for entries will be rested in the Clivia Society.
4. Entries are limited to six per class per person.
5. Photographs may be mailed to Clivia Photographic Competition, P O Box 53219, Kenilworth, 7745, Cape Town, South Africa
Or emailed to: acolade@ibox.co.za
6. Photos must be submitted in one of the following formats:
 - i. A Print in portrait or landscape at least 10 x 14 cm but no larger than 14 x 18 cm.
 - ii. On CD-R where the image is recorded in a tiff or jpeg format. The pixel size should be a minimum of 1600 x 1200 pixels as that should give a printable picture of approximately 14 x 10cm. The resolution of the image would be preferred at 300 dpi or greater but don't let a lower resolution stop you from entering.
 - iii. Photographs must be on their own and not embedded in another program. e.g. MS Word.
 - iv. email in jpeg format at 72 dpi with min. picture size 10 x 14 cm.
N.B. The type of submission in iv above must be available on a CD as all emailed photos that reach the final selection of 12, or on request, will have to be submitted to the specifications in iii above to remain eligible.
No scanned Pictures to be submitted by email.
7. If you wish your Photographs returned after the competition then you should include a suitably addressed envelope. (S.A. Entrants must include a stamp).
8. The decision of the Editorial Board on the Winners of the Competition is final and no correspondence will be entered into. &

CLIVIA SOCIETY PHOTOGRAPHIC COMPETITION ENTRY FORM

ESSENTIAL ENTRY DETAILS

NAME OF ENTRANT:			
ADDRESS & CONTACT DETAILS:			
PHONE:		AND/OR EMAIL:	
NAME OF PHOTOGRAPHER:			
DATE PHOTO TAKEN:			
NAME OF GROWER:			
ENTRY NUMBER (1 to 6):			
CATEGORY ENTERED: (X relevant box)		PENDULOUS SPECIES	SINGLE FLOWER
INTERSPECIFIC	HABITAT	MINIATA	
TYPE OF SUBMISSION: (X relevant box)		PRINT	E-MAIL
		CD-R	

OPTIONAL ENTRY DETAILS

REGISTERED PLANT NAME:
NAME OF BREEDER:
PARENTAGE OF PLANT:
BRIEF DESCRIPTION OF PLANT:
SUGGESTED PHOTO CAPTION:
PHOTOGRAPHIC DETAILS: CAMERA TYPE:
FILM DETAILS OR DIGITAL:
EXPOSURE DETAILS:
OTHER COMMENTS:

CLIVIA SOCIETY PUBLICATIONS

	Int.	USA	Aus.	NZ	UK	RSA
1. Pay per credit card to Clivia Society RSA	1					
2. Pay to Bill McClelland in America		2				
3. Pay to Ken Smith in Australia			3			
4. Pay to Alick McLeman in New Zealand				4		
5. Pay to Jaco Nel in Britain					5	
6. Pay to RSA Club Treasurer						6
Society membership-2010	R 220.00	US \$ 28,50	AU \$35,00	NZ \$ 36,00	£ 16,50	R 120.00
Membership fees for Students	R 110.00	US \$ 13,50	AU \$ 17,50	NZ \$ 18,00	£ 8,25	R 70.00
Ten Honorary Life Members	Nil	Nil	Nil	Nil	Nil	Nil
2009 Publication Prices -Postage included						
Yearbook 1 -Electronic printing	\$ 29.00	\$ 29.00	\$ 32.00	\$ 39,25	£ 18,00	R 220.00
Yearbook 2 ,3,4,6,7,8,9,10 or 11	\$ 15.00	\$ 15,00	\$ 22,00	\$ 23,00	£10,00	R 70.00
Ten or more copies of same item by RSA & NZ Clubs				\$ 21,00		R 60.00
Yearbook 5 -Electronic printing	\$ 36.00	\$ 36,00	\$ 39,25	\$ 48,25	£ 22,25	R 270.00
Cultivation of Clivia	\$ 11,00	\$ 11,00	\$ 12,00	\$ 14,50	£ 6,50	R 80.00
Ten or more copies of C O C by RSA & NZ Clubs				\$ 12,50		R 70.00
Kweek van Clivia	\$ 11,00	\$ 11,00	\$ 12,00	\$ 14,50	£ 6,50	R 80.00
Ten or more copies of K V C by RSA & NZ Clubs				\$ 12,50		R 70.00
Newsletters after 2002. Per copy	\$ 4,00	\$ 4,00	\$ 4,00	\$ 5,00	£ 2,00	R 18.00
Ten or more copies of same NL by RSA & NZ Clubs				\$ 4,50		R 16.00



CLIVIA SOCIETY PUBLICATIONS

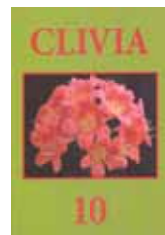
The Cultivar Checklist 2009 may be bought from Ken Smith in Australia

	Price	Postage	Total
Price for Australian members	AU \$ 7,00	AU \$ 3,00	AU \$ 10,00
Price for the rest of the world members	AU \$ 7,00	AU \$ 6,25	AU \$ 13,25

Advertisements from 1 / 01 / 2010

	Cost
Smalls (1 to 6 lines)	R 40
Smalls (7 to 10 lines)	R 70
Quarter page	R 125
Half page	R 250
Full page	R 500
A5 single page insert	R 600
A5 double page insert	R 1,000
A4 single page insert	R 1,200
A4 double page insert	R 1,500

Account name:	Clivia Society
Type account:	Cheque Acc
Bank:	Absa
Branch:	Pretoria North
Branch code:	509 145
Account number:	4055377527
Treasurer :	Sakkie Nel
Tel: + 27 12 361 6415	
Fax number :086 639 4077	
e-mail: corgas@vodamail.co.za	



REPRESENTATIVES OF CLIVIA ENTHUSIASTS

- ☞ Australia Ken Smith. 593 Hawkesbury Rd., Winmalee, NSW 2777, Australia.
Tel: +61 247543287; e-mail: cliviasmith@hotmail.com
- ☞ Netherlands Aart van Voorst. Frederik Hendriklaan 49, Hillegom, TE 2181, Netherlands.
Tel: +31 252529679; e-mail: a.vanvoorst@snlnet.net
- ☞ United Kingdom Jaco Nel. 46 Atney Rd, Putney, London, UK, SW15 2PS.
Tel +44 (0)20 87892229, email: uk_clivia@yahoo.co.uk
- ☞ USA & CANADA Jim Shields. PO Box 92 Westfield, IN 46074, USA. Tel: 317-896-3925;
Fax: 317-896-5126; Cell: 317-506-4726; e-mail: jshields@indy.net

OTHER OVERSEAS CONTACT PERSONS FOR MEMBERSHIP APPLICATION

- ☞ USA & CANADA William McClelland. 1048 Bollin Avenue, Camarillo, CA 93010-4708, USA,
Tel: 1-805-484 1484; e-mail: william_g_mcclelland@yahoo.com

CONTACT DETAILS FOR CLIVIA CLUBS AND INTEREST GROUPS

- ☞ Cape Clivia Club Joy Woodward (Secretary). PO Box 53219, Kenilworth 7745.
Tel/Fax: +27 21 671 7384; Cell: 072 487 7933;
e-mail: capeclivia@ibox.co.za
- ☞ Eastern Province Clivia Club Willie le Roux (Acting Chairperson). Tel: 041 360 3480;
e-mail: girlylr@telkomsa.net
- ☞ Free State Clivia Club Piet Laubcher (Chairperson). 41 Altona Crescent, Fichardt Park, Bloemfontein,
9301. Tel: +27 51 5228903; Cell: 073 234 5759;
e-mail: vandermescht@absamail.co.za
- ☞ Garden Route Clivia Club Ida Esterhuizen (Secretary). PO Box 1706, George 6530.
Tel: +2744-871 2214; e-mail: kobuse1@telkomsa.net
- ☞ Joburg Clivia Club Glynn Middlewick (Chairperson). 2 Willow Road, Northcliff, 2195.
Tel: +27 11 4761463; e-mail: gcmidd@mweb.co.za
- ☞ KwaZulu-Natal Clivia Club Miranda Train (Secretary). Cell: 083 254 0796; Tel: 033 387 6309;
e-mail: mbrits@3i.co.za
- ☞ Lowveld Clivia Club Maria Grové (Secretary): PO Box 1146, WHITE RIVER 1240.
Tel + 27 13 741 3218 or 083 475 1176; Fax +27 13 741 5087;
e-mail maria@helvet1.agric.za
- ☞ New Zealand Clivia Club Alick McLeman (Secretary). 26 Merfield Street, Glen Innes, Auckland 1072,
NZ. Tel 64-9-5213062; e-mail: clivia@xtra.co.nz
- ☞ Northern Clivia Club Marlene Topham (Secretary). PO Box 54478, NINAPARK, 0156.
Tel & Fax: + 27 12 542 3693; e-mail: marleneto@telkomsa.net
- ☞ Northern Free State Clivia Club Louis Chadinha (Chairperson). PO Box 2204, Welkom, 9460.
Tel: +27573576067; e-mail: lchadinha@xsinet.co.za
- ☞ Border Interest Group Glenn Miles(Chairperson). PO Box 3164. Cambridge, East London 5206
Tel: +27714217812; Fax: 0866577892; e-mail: gmiles@live.co.za
- ☞ Northern KwaZulu-Natal Interest Group Mrs Joey Dovey (Chairperson). PO Box 8402, Newcastle, 2940.
Tel: +2734-3184179/083344 0572; e-mail: doveyw@telkomsa.net
- ☞ Overberg Clivia Interest Group Felicity Weeden. PO Box 1468, Hermanus, 7200.
Tel: + 27 84 5898 297; e-mail: lilylilly@telkomsa.net
- ☞ Waterberg Boslelieklub Ans Jacobs. PO Box 3893, Nylstroom, 0510
Tel & Fax: +27 147173674; e-mail: ansjac@gmail.com
- ☞ Zoutpansberg Enthusiasts Zanette Wessels. PO Box 390, Louis Trichardt, 0920.
Tel: +27 15 5177106 or +27 845700347;
Fax: +27 15 517 7091; e-mail: pawrsa@mweb.co.za

