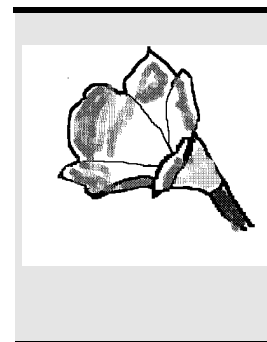


Clivia Club

PO Box 74868 Lynnwood Ridge 0040 South Africa



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EDITORIAL

This issue of the newsletter includes letters from Belgium, England, Australia, the USA and South Africa. There are a couple of contributions in Afrikaans which have been translated for our English speaking readers. Some historical aspects of the Belgian Hybrid are mentioned and it would be interesting to have more details of these. Is it a hybrid or a cultivar? Why is it that most of the hybrids and cultivars have been achieved beyond the borders of the Clivia's natural habitat! Come on South Africans, we have now won the rugby, the cricket and the soccer. We must also show our prowess in cultivating the Clivia! How about some papers in scientific journals?

It is remarkable that Clivia which come from relatively warm areas have adapted so well to colder climates. We wish our Northern Hemisphere members and growers every success with their Clivia, especially as it has been such a severe winter for them.

Congratulations to Pen Henry on her successes with Clivia and Hippeastrum at the Perth Royal Show. We hope she persists with her cross-pollinating and has many interesting varieties - perhaps something better than the 'Vico Yellow'. Have any other members had problems cross-pollinating with dwarf Clivias?

Les Hannibal discusses his busy life in California with regard to the cultivation of Amaryllidaceae and publishing achievements. If these interests are any indication of how to live longer and not show it, then he has the answer. The interest in Clivia and its relationship to longevity seems to apply to some of our club members as well.

Most of this newsletter is concerned with correspondence on the plant seen in the Ruwenzori Mountains in Uganda which was thought to be a Clivia. We thank Nick Primich for his hard work and his persistence in identifying the plant. I note with interest how this correspondence started on a formal note and by the end everyone was on first name terms, and enjoying the fun. Many other interesting botanical aspects regarding Amaryllidaceae are discussed in the letters and are included for general interest.

Gerry Camp passed away after suffering for many years from cardiac problems and angina. We extend our sympathy to his wife and family. He was very keen on his Clivias and established his own species identification chart which is included in this issue.

Allan Tait is one of the younger members and features in this issue's Personality Parade. We wish him a successful year in the Western Cape and hope he returns with good ideas about establishing indigenous gardens in municipal areas.

We welcome our new members and hope that they will also contribute to the Newsletter.

Nick Primich is to start a judging school for judging Clivias. Will anyone interested in attending this school please contact him at P.O. Box 6240, Westgate, 1734, or telephone him at (011) 768 2996.

There have been many requests for yellow Clivia seed. The secretary of the Club, Toy Jennings, will distribute seed to those who have made requests when it is available. Perhaps some members who have yellow Clivia seed for sale can personally contact those who have requested it in the newsletter?

Thank you to club members who expressed appreciation of the Clivia Club Christmas card and who in turn sent good wishes for the festive season. In particular, we thank Geoff Meyer for his generous donation and Ria Hartman for her donation and note of appreciation. Geoff Meyer has also donated a trophy to be awarded to the person with the best yellow Clivia at the Clivia Club Show in Gauteng.

Please take note of the dates of forthcoming events. Times and venues of the tours will be confirmed later. An abbreviated financial statement as at 31 December 1995 is included in this Newsletter.

The Newsletter will be published quarterly in March, June, September and December. This is the last Newsletter for those who have not paid their 1996 subscriptions.

Meg Hart

..*..

FINANCIAL STATEMENT FOR THE YEAR ENDING 31 DECEMBER 1995

INCOME/EXPENDITURE STATEMENT

INCOME

EXPENDITURE

	<u>1994</u>	<u>1995</u>			
FEES RECEIVED	7448	8372	COST OF PLANTS/SEED	12817	65204
PLANT/SEED SALES	18273	80266	NEWSLETTER	3105	6589
OTHER INCOME	-	10606	STATIONARY	1365	10034
INTEREST RECEIVED	55	626	TELEPHONE/FAX	100	3370
LOAN: NICK PRIMICH	1800	-	REPAYMENT OF LOAN	-	1800
BANK PREVIOUS YEAR	-	9757	OTHER EXPENSES	2532	8904
			NETT SURPLUS	7657	13686
	27576	109587		27576	109587
ASSETS			LIABILITIES		
BANK BALANCE	9757	13686	LOAN: NICK PRIMICH	1800	-
OTHER ASSETS	-	4403			
	9757	18089		1800	0
	<hr/>			<hr/>	

The 1994 financial statement of the Clivia Club was examined by James Lourens CFA(SA) B Compt Hons (Unisa) and was approved at the Annual General Meeting of the Clivia Club.

..*..

CORRESPONDENCE

Clivia miniata.....The Belgian Hybrids

From Willem Reuter

Bautershemstraat 20

During the 19th century the demand for exotic plants, particularly those appropriate for commercial development, led to the massive importation of exotic species into Europe from all parts of the world. Largely because of climatic factors, very few were really successful in the Low Countries. One which did well was the South African *Clivia miniata* and soon many Belgian families had acquired specimens which were given a variety of names.

Some well known nurserymen in the Low Countries began the process of 'hybridization' and in due course they produced an extra strong and richly flowering *Clivia* which came to be called the Belgian Hybrid. It quickly established its reputation far beyond the borders of Belgium and was exported to many parts of the world.

But how did these *Clivias* become so popular? Until the end of World War II Belgian families lived through the winters in large warm kitchens. *Clivias* were successfully grown in other parts of their houses which were not heated but kept as frost free as possible. These unheated rooms created a perfect environment for *Clivia* and they became a successful indoor plant in the Low Countries. They were cool and dry in winter, but fresh and not overexposed to sun in summer. Both the growth and the flowering of the plants were ensured. After the war, central heating was introduced to domestic dwellings, a condition which was unsuitable to *Clivia* growth. The fickleness of *Clivia* under these new conditions and the competition which they had to face from new plants which were more suited to centrally heated rooms led to the fall in popularity of *Clivia* from many homes.

Clivia miniata are still grown in a handful of commercial nurseries. These *Clivia* are small fast growing specimens which flower 2 - 3 years after sowing. So the indestructible Belgian Hybrids live on here and there in private collections..... and in foreign catalogues!!!!!!

..*..

Clivias in Rusland

Van Daan Dekker

Posbus 166, Dundee
7 Oktober 1995

Geagte Klublede,

Tydens 'n onlangse Sending uitreiking in die stad Samara (2 miljoen inwoners) aan die Volgarivier in Rusland, is ek aangenaam verras om in 'n winkel in Leningradstraat *Clivia miniata* plante in potte te sien. Ek kon 'n foto van die gesonde plante neem. Dit was opmerklik dat die plante aangepas het in die uitsers koue wintermaande vannaf November tot Maart (gemiddeld -18C). Die plante het reeds geblom met sade nog aan die blomstingels.

Die direkteur van die winkelkompleks vertel dat sy een steggie enkele jare tevore as geskenk ontvang het. Sy het slegs geweet dat dit 'n lelie tipe is. Ek kon vir haar die regte naam gee en meedeel dat die plant van Suid-Afrika kom.

Groete

Daan Dekker.

English translation of the above letter:

Clivias in Russia

7 October 1995

Dear Club Members

During a recent missionary outreach in the city of Samara (2 million inhabitants) on the Volga river in Russia, I was pleasantly surprised to see Clivia plants in pots in a shop in Leningrad street. I took a photo of the healthy plants. It is significant that the plants had adapted to the extremely cold winters from November to March (average -18C). The plants had already flowered with seed still on the flower stalks.

The director of the shopping complex said that she had received a single slip many years previously as a gift. She only knew that it was a type of lily. I could give her the correct name and confirm that the plant came from South Africa.

Greetings

Daan Dekker.

Adri Haxton says that she saw Clivia in flower in a bay window in Marken, Holland in the Spring of 1980! At that stage she had one in a pot in her flat which would not flower. I recently saw a very healthy Clivia in a shop window in Portland, Oregon, USA (Ed).

..*..

Clivia in Derbyshire

From Martin Stokes

37 Dorset Close, BU
5 January 1996

Dear Meg,

ref: Clivia Club

I had the delight of receiving my first newsletter a few weeks ago which proved fascinating reading.

Here in the U.K. the attraction of Clivia is its undemanding nature as a flowering house plant. Apart from a couple of months outside in a shady spot, the rest of the year is spent indoors (currently a wind chill factor of -12C outside!)

Apart from *C. miniata* and *citrina* 'New Dawn' (at 80 sterling!) there are no other species/forms available commercially. If any members have surplus propagating material of anything other than *C. miniata* it would be most gratefully received.

Yours most sincerely,

Martin J. Stokes.

I hope that a few of our members will correspond with you regarding yellow or other Clivia seed (Ed).

..*..

Questions about Success with Pollination

Extracts from a letter written by Pen Henry to Connie and James Abel.

120 Caporn Street, V
8 November 1995

Dear Connie and James

Good hearing from you. Thanks for such a newsy letter as I like being kept up to date with all that's happening.

Flowering season is nearly over. I had some disappointment as I have a dwarf yellow which I crossed with Twin's pollen last year with no seed set. This year I pollinated it with a mixture of yellow pollen and again no seed is being produced. I can't understand why it's sterile as it's parents were yellow x orange normal size plants and all the other from the same batch of seeds flowered orange, are large plants and now producing seed. I have the same problem with dwarf x *cyrtanthiflora* and dwarf *nobilis*. This year I gave up on these ones and now have a pod each. I'll let you know how the seeds turn out but it looks like one per pod. I wonder if any other members have had the same problem? They have set seed so they're not sterile but why won't they set seed when I pollinate them? Are they fussy?

The Perth Royal Show was a success with great public interest for the Clivia. They were on display for 8 days, 4 days longer than originally planned because of the interest. I won 3 FIRSTS, 3 SECONDS and 4 THIRDS. The phone calls I have and still am receiving have made it all worthwhile. A lot of people have *C. miniata* "common orange" growing in their gardens but have never realized the variety of colours that Clivia do come in.

At the Hippeastrum Championships I entered Clivia as usual in the potted plant section but this year I won FIRST and BEST. In 1993 and 1994 I won first only.

I'll have to contact my friend in South Australia about the *Haemanthus*. As soon as I get all the information I'll write to you passing it on. Thank you for trying to find seed for him. I know he appreciates your help.

I haven't heard from Toy for awhile and no sign of the *C. nobilis* seed I bought through the club. My seed won't be ready until next year but now some have your name on them.

Everyone is well here, one minute complaining about the heat and the next about the bloody rain. It's been so unsettled here lately.

We had a storm warning for today. Thunder, lightening and hail was predicted but so far we've only had rain. The last storm we had a couple of weeks ago brought 3 inches of rain overnight and 100 K winds. They warn us now that Perth will be getting a lot of cyclones this season. The rain doesn't worry me but the wind is horrific. I feel sorry for the Clivia as they're out in it. No real damage except for a few broken leaves.

I was sorry I couldn't make it to the show but I'll be there for sure next year. The shows can only get better as the years go by and if there were any mistakes last year I didn't notice. We learn from experience, now you have that experience, with more interest creating more competition amongst members and better plants entered. As I said, it can only get better.

Keep in touch as even though it's 10 months until the next show, time does go fast.

All the best to James and yourself
Pen

..*..

Requests for Yellow Clivia Seed

From Ann Garton

P.O. Box 27, Geeves
14 July 1995

Dear Mr Geldenhuys

As you will see from the enclosed questionnaire, I sent a cheque for my 'Clivia Club' membership to Ken Smith back in December 94. Just before receiving your letter, I wrote to Ken and sent some plants (not Clivias), so hope all is okay and the money reaches you. If it doesn't, PLEASE let me know as I still want to remain a member. It actually was debited against my bank statement on the 8th February 1995.

Since joining I have managed to obtain *Clivia miniata*, *C. miniata* larger leaf, *C. nobilis* and a yellow seedling very kindly sent me by Ken (Kevin Walter's strain) F₁ yellow x F₁ yellow in exchange for fresh Hepatica seed. We grow a large range of plants, mainly perennials. Clivias here (rain forest area with heavy frosts plus lots of rain in winter) are grown under the greenhouse benches plus outside benches - so far we haven't lost any, thank heavens - and I don't intend to either!

Is there anywhere or anyone in South Africa we could buy seed of other than the apricot-orange *C. miniata*? Whilst writing, I was wondering if there is anyone you or the Club might know of who'd like to correspond with a Tasmanian member? I can't say either of us is very knowledgeable about Clivias, although we have been growing *C. miniata* for several years. My main loves in the plant world have been *Primula auriculas* (we have quite a large collection), Peonies, Hellebores and Hepaticas - all cold climate of course. We're in our 50s and love plants generally anyway and hearing of how other people live their lives in other countries. I'll leave this idea with you - if you can help it would be lovely. If not - well, I had the letter to write anyway - so nothing's lost.

Hope the subscription issue is cleared up.

Regards

Ann Garton

A number of members who had paid their subscriptions last year were not credited for having done so, and we apologise for any concern and inconvenience which this may have caused. This was mainly due to the fact that the list of members was put onto a computerised system - it is always so nice to be able to blame the computer - and some details were omitted during the changeover.

Please consult the membership list for Australian members who may have yellow Clivia seed. The Clivia Club regularly receives Clivia seed from Yoshikazu Nakamura and Pen Henry and I am sure there are others who may have seed other than the ordinary orange available. Jim Holmes had yellow Clivia seed for sale at the Clivia Club Show in Pretoria last year.

I hope you will find some letters in your post box as a result of the publication of this letter (Ed).

..*..

Never Too Old to Grow Amaryllidaceae

From Les Hannibal to Nick Primich

4008 Villa Court, Fa
21 September 1995

Dear Nick,

Now there is no reason for you and Peter Smithers to feel that you are on the retirement list quite yet. I'm 89 and still irritated when the newspaper refers to someone about 55 as aged... I tramp up and down my hillside daily pulling weeds or trimming the trees, or watching the local suburban deer who regard me as a provider of good green scraps from the kitchen. So all in all, I'm busy and don't feel my age, or look it, as I have no grey hair...which bugs my doctor who can't find anything wrong other than a slight infection in the liver which these modern drugs should correct, but don't seem to!

What do I do to keep busy? Well, I have my *Crinum* collection and breeding, along with correspondence. And my *Amaryllis belladonna* x *Cybistetes* hybrids, so called *A. x multiflora* hybrids which are now in flower. Must have had 800-1000 blossoms out, and no two clones similar. Colours range from white to red with a variety of pink forms. I think I sent you seed once, but do you need more? Peter Smithers has some of my hybrids there in Switzerland. Then I've been revising the genus *Crinum*... a 60 page report. Some years back I translated Henry Nehrling's 'Die Amaryllis' from the German, and I'm updating my translation since Nehrling, like most continental gardeners, used *Amaryllis* in place of *Hippeastrum*, and so I'm using *Hippeastrum* for the various species, but lapsing over to *Amaryllis* where hybrids are mentioned. Most of the latter are now extinct. And similarly, I've retyped the 1986 Atherton Worsley 'Genus Hippeastrum' from a printer's unproofed manuscript - which was never published. He gives descriptions of the species as he found them in the wild, where the forms or species all tend to interblend from one to the other. He was a Railroad Engineer and represented British banks who financed railways in Brazil and Argentina, so got 'out back' to see the areas involved and collected bulbs while there, sometimes in barrel lots. Both publications cover areas now quite unknown, or unavailable in the botanical publications of 1900 or later. Its like turning up buried history.

As for the 1994 *Herbertia*, I had an article in it, so received several spare copies, so one is on its way by ocean mail to you. I was wondering who would best appreciate it! However, since publishing the article, which I turned in some years back, some question has arisen as to the diversity of *Cybistetes*, which Bidwill in Sydney, Australia, crossed with *A. belladonna*, since the illustration used shows a form with shorter than usual pedicels. Since the illustration was published in 1633 its obvious the bulbs were collected long before Cape Town existed. And I understand that the small streams at Cape Town dried up in the summer, so sailing ships went North to the Berg River to obtain fresh water before heading north or west across the Atlantic and home. So the bulbs must be from the Berg River area and flowered in March, when noted and collected. The question is, are these forms still in existence there now? The radial umbel and heavy scape, declinate filaments and colour change, from pale pink to red as the blossoms age, are *Cybistetes* features, but seems to be a localised geographical variant which has escaped notice. The woman who prepared this etching and others of *A. belladonna*, *Brunsvigia* and *Haemanthus* was remarkably accurate as to detail, so I don't think she erred other than foreshortening the pedicels, - or else, on growing her specimens in the Jacobean medical garden in Rome, the dry summers stunted the bulbs---But as I recall the Berg River area only has about 10 cm of rain a year too.

I take it that you have moved. And part of my glass house is of fibreglass, which saves me some problems. I had a pine tree near my unit and the squirrels raised Old Ned by dropping pine cones on the glass. That was real disaster.

Later:

I was just down in the back acre looking over the late flowering portion of my *Amaryllis x multiflora* hybrids. Out of a thousand or more blossoms I found two umbels with picotee markings where the petals

are white with red trimmings along the margins. I promptly marked the two plants and cross pollinated them. And I also found that one of my original *A. x parkerii* bulbs had recovered from the big frost in '90-'91, so I'm in luck. I thought these bulbs were extinct. Kew had lost their specimens. So if you would like seed I'll have some in 6 weeks or so. These hybrids are a great improvement over the usual *A. belladonnas*.

As I recall, I probably sent you a copy of the enclosed sheet. Unfortunately, I had made several typo errors, and got tangled up with *C. baumii*, citing it as an *Ammocharis* according to Milne-Redhead and Schweickerdt. Apparently, they were in error. So I would appreciate the latter sheet circulated.

Our summer weather is over, finally. The nights drop down to 60°F while mid afternoons are about 90°F --- that must be about 15° and 34C. Since we have had no rain since mid April, conditions are very dry. I have been irrigating some of the area as the trees are indicating some need of water, so I guess I'll get plenty of exercise for the next week or two moving the portable sprinklers about.

We are fortunate in having ample good water from the High Sierras' snow pack.

Sincerely,

Les Hannibal.

We hope we can answer your questions about the diversity of Cybistetes and whether they still exist in the Berg River area in a future newsletter (Ed).

..*..

Letters from New Members

Van Mabel Maritz

Van Riebeeckstraat
10 Oktober 1995

Beste Klublid

Ek het vanmiddag in my etens tyd hier by die werk in 'n ou Rooi Rose van 11 Jan 1995 gesit en lees en toe op die rubriek van Prof. Kristo Pienaar afgekom i.v.m. die Clivias.

Ek sal graag by julle klub wil aansluit omdat ek graag in my vrye tyd in die tuin werk en graag ook Clivia wil hê.

Ek is 'n bejaarde vrou en hou my in my vrye tyd met tuinbou besig.
Ek hoop julle sal my kan help.

Beste groete en lekker werk in die tuin.

Baie dankie

(Mev) Mabel Maritz

- 0 -

The following is an English translation of the above letter:

Dear Club Member

During my lunchtime at work this afternoon, while I sat and read an old Rooi Rose of 11 Jan. 1995, I came across Prof. Kristo Pienaar's column about Clivias.

I would like to join your club because I like to work in my garden in my spare time and I would like to obtain some Clivias.

I am an elderly lady and in my spare time I keep myself busy with gardening.
I hope you will be able to help me.

Best wishes and enjoy working in the garden.

Thank you very much.

(Mrs) Mabel Maritz

- 0 -

From Juliana Webb

Aftree-oord No 2, P/
13 December 1995

Mr James Abel,

The last newsletter was so interesting that I decided to congratulate you. I should have written to the secretary but as I also lived in Murrayfield the choice fell on you.

I have a beautiful *Clivia miniata* var. *citrina*. Messrs Wiese, Lötter and Fred Gibello have all seen my *citrina* and have taken some of my pollen.

I am 81 years old and am now so busy with sending Christmas cards and presents that there is no time for a long letter. I will write to the magazine next year to give a full description of my precious plant.

Kindly note that I am sending you a special card from the Klein Karoo to wish you a very happy Xmas and a prosperous 1996.

Best regards

Juliana Webb, Oudtshoorn.

We would love to hear more about your Clivia miniata var citrina. Where did you get it? How long have you had it? Have you grown any seed from it? What are it's general characteristics? How about sending us a photograph of it for the next show? (Ed).

..*..

The Mystery of the Ugandan `Clivia' Solved

Professor A.N.Bester wrote a letter to the Clivia Club about an article he saw in the April 1995 Getaway Magazine (see Clivia Club Newsletter Volume 4 Number 4 August 1995, page 3). This article mentioned that Clivia plants had been seen in bloom in the Ruwenzori Mountains in Uganda. As Clivia are considered to be endemic to South Africa and Swaziland, Nick Primich did a considerable amount of `sleuthing' to solve the mystery of "Clivia ugandensis" as he felt it was unlikely that they were indeed Clivia.

A letter was written to the editor of Getaway Magazine, Dave Bristow, for more information. Further correspondence followed with Professor A N Bester at Levubu and Hugh Glen and Robert Archer of the National Botanical Institute in Pretoria in an attempt to identify the plant.

Some of the relevant correspondence follows:

P.O. Box 75, Levubu
4 July 1995

Dear Mr Primich

Thank you for your letter dated 20 June 1995 enquiring about my reported spotting of *Clivia* plants in the Ruwenzoris.

I am not a botanical expert and thought what I was looking at were *Clivias*. The reason for my assumption was, because I have seen *Clivias* in various Transvaal and Natal montane forests and considering their close floral association with East African highlands, I thought that what I saw in the Ruwenzoris were also *Clivias*.

However, from your letter it appears that what I did in fact see was a close relative, *Cryptostephanus*.

I hope this answer saves you the money and time it would have taken to mount an expedition in search off this mysterious plant. Whatever it was that I saw - there were lots of them, so it is extremely common in the area.

Thank you for your interest in *Getaway*.

With kind regards

Yours sincerely
David Bristow (Editor)

- 0 -

Dear Mr Bristow

29 July 1995

I thank you for your reply to my letter of the 20.06.95. I did not realise at that stage that you were the editor of the *Getaway* magazine as I had only received cuttings of your article.

Perhaps I asked you the wrong questions, or did not phrase myself well enough, but I did not get the answer from you that I desired. *Clivia* and *Cryptostephanus* look very similar when they are not flowering, but very different when they are in flower. As you know, *Clivia* have bright orange and yellow flowers, whereas the species of *Cryptostephanus* that is probably involved; *C. haemanthoides*, has dark black purple flowers. Thus, did you see any flowers?

I would be very glad if you could give us an answer one way or the other. Then, do you have any contacts in Uganda we could approach to perhaps give us the name and address of someone who might be able to help further?

Thank you for giving our society of your time so far, and hoping to hear from you again.

Regards,
Nick Primich.

- 0 -

Dear Mr Primich

17 August 1995

Thank you very much for your reply to my earlier letter dated 20 June 1995.

I think there is only one satisfactory way to resolve this issue and that is for me to show you a picture of the flower. Enclosed therefore is a transparency which I trust you will return as soon as you are finished with it.

I would also appreciate your comments on this plant. If of sufficient interest, you might like to submit a short piece for our Nature Notes column.

On a second look at the flower, I wonder if they are not a species of *Cyrtanthus* - in fact the more I look, the more I think they are and I would be happy to rectify this mistake. Not only that but if they are *Cyrtanthus* I must apologise for causing you undue alarm. I look forward to your reply and thank you for your interest in the magazine.

With kind regards,

Yours sincerely

David Bristow (Editor)

- 0 -

Nick Primich visited Dave Bristow in Cape Town and returned his slide to him. They discussed the matter, and both resolved to do what they could to find out the name of the plant.

- 0 -

Dear Professor (Bester)

23 September

We are still floundering around trying to identify David Bristow's plant "Clivia ugandensis" or whatever. As you were the perpetrator of the problem I have sent you a picture to ponder over. I have just returned from Cape Town where I took the opportunity of visiting David Bristow and settling a few more questions.

Unfortunately, the photograph comes from a negative that I had copied from a slide which David had fortunately taken of the flower in question. Thus the quality is not all that good.

However, it is obvious that this is neither a Clivia nor a Cryptostephanus. Yet it would appear to be an Amaryllid of some sort. Note the stemmed leaves. South African amaryllids do not usually have petioles. I have left a copy with Kirstenbosch, and another with the NBI in Pretoria, so perhaps we may still get an identity. In any event I would dearly love to have such a plant.

Regards, Nick

To Dr Hugh Glen, NBI, Pretoria

11 October 1995

Dear Hugh

Firstly, let me apologise for forgetting that I had not sent the photograph. I was under the impression that I had sent it some time ago. Yesterday I turned it up in some unrelated file.

Well there, here is the photograph if you or your sleuths can make anything of it. Uganda, Ruwenzori Mountains, 5 km from Kurt Schaffer suspension bridge. Plants are plentiful in forest at altitude 600 m or so.

I hope to get around to seeing you one of these days. I need to get in your library and take copious notes. Keep in good health, and then indulge in some of your other desires.

Regards

Nick Primich

- 0 -

Dear Nick,

October 1995

Please let us now drop the formal salutation! My name is Dries (I used to assist my English-speaking friends by spelling it Dreeze in order to avoid having my name pronounced in such fashion as if I were a piece of mud that dries in the sun).

Now, the sun is presently shining on my darkest heart of Africa but the horror is that it is now fixed (or has been for the past 2 weeks) at 36° - 38°C. Not the ideal weather for Clivias and their owner - both droop, wilt and revive nightly.

Your letter and the photograph really made my day! Thanks so much - I do appreciate the trouble. (The song/negro spiritual comes to mind... "Nobody knows the trouble I had"...with Clivias??). When I saw the picture, the "jizz" of the plant told me it was a *Scadoxus* sp. Especially the leaves are very "scadoxy". The flowers look very much like *Cyrtanthus*. The stems also look "scadoxy". Having previously been the perpetrator of arguments about "hybrid", "subsp.", "var", "cultiv." I would rather stay clear of such thoughts and would name this beauty *Scadoxus ugandense* subsp. *pendulatum* var. *bristowii* cult. *nonclivia*. You can see what high temperatures do to brain cells!

Once again, thanks for your letter and the photograph.

Dries Bester

P.S. In the spirit of how things are lately done in RSA, can we not embezzle the Club funds? or do 'consultation' in order to collect some of these plants up north? AB.

- 0 -

10 November 1995

Dear Mr Primich

I apologise for the long period in replying to your letter of 11 October to Hugh Glen. I found the letter this morning in the bottom of my big leather bag.

It is only by chance that I found a name for the plant in the photograph. It is *Scadoxus cyrtanthiflorus* (C.H. Wright) Friis & Nordal. It is rare and known only from the Ruwenzori mountains in Zaire and Uganda.

I would like to keep the photograph for the herbarium. May I take the liberty to ask for a plant or a fruit if available?

Yours sincerely

Robert H Archer

- 0 -

Dear Robert

27 November 1995

I thank you for your answer, late or not. I was most interested and surprised to find that it should be included in the genus *Scadoxus*. If I remember, Friis & Nordal were a pair of Swedes who passed this way some twenty years back and separated *Scadoxus* from *Haemanthus* on account of the leaf system. Also, from the little I know of systematics, the flower is the basis of the classification.

This flower may well resemble the *Cyrtanthus falcatus*, but hardly comes near to any of our RSA *Scadoxus* with their nearly non-existent perianth segments, never mind a perianth tube! What do you think?

You are welcome to keep the photograph, but that was copied from a slide taken by Mr Bristow, editor of Getaway magazine, when on a trip to the Mountains of the Moon in Ruwenzori. He described them as being plentiful. Thus I do not have any plants, fruits, or seed in my possession.

Are you aware of any university in Uganda? Or any Department of Agriculture or such? If you could give me an address of any such institute, I would pursue the matter of importing some seed.

It would seem to be a desirous and decorative plant. Once again I thank you for the courtesy of your answer.

Sincerely

Nick (Primich)

- 0 -

3 December 1995

Dear Mr Primich

I agree that at first sight *Scadoxus cyrtanthiflorus* does look different from the other species of *Scadoxus*. It was previously classified as *Choananthus cyrtanthiflorus* (see enclosed photocopy of a Flowering Plants of Africa plate). However, apart from the long perianth tube there seems to be nothing that could be used to distinguish it from other species of *Scadoxus*. *Cyrtanthus* is a good example of a genus in the Amaryllidaceae, showing considerable variation in the perianth structure. Also the chromosome number of all the species of *Scadoxus* is 18 according to Nordal, whereas that of the related genus *Haemanthus* is 16. Some species of *Haemanthus* do have a short perianth tube. Since both *Scadoxus* and *Haemanthus* originated from a common ancestor (according to Friis) it is not impossible that the same character developed independently later on.

Although taxonomists seem to concentrate on flower characters for classification, all possible characters can and should be investigated for classification. Needless to say, it is not always possible or practical to study roots or the wood anatomy etc. It is usually flower characters that are used in keys.

I am enclosing addresses of possible contacts in Uganda. The plants referred to in the FPA plate do not exist any more at the Botany Department at the University of Pretoria.

Yours sincerely

Robert H Archer

P.S. Thank you for the photo. I forgot to mention that the long tube is probably an adaption to some insect pollinators, like in *Cyrtanthus* or *Clivia*. These insects are probably night flying moths with long mouth parts.

- 0 -

Dear Robert

12 December 1995

I thank you for your diligence in seeking out the information about *Scadoxus cyrtanthiflorus*. I have studied the enclosure from FPA closely, and now have a slightly better understanding of the plant than that from the poor photograph which is a copy from a not very good slide.

I am happy not to be a taxonomist. It is easier in the higher taxa, but at the species level it is more a matter of emotion than science. However, the peduncle that pierces the leaf sheath to emerge is a unique feature, the elongated pedicle that creates the pendant flowers, are further features that distance it from our local *scadoxus*.

In *Clivia*, the new emerging roots sometimes pierce the leaves. This brings me to mention the plant anatomy of these two genera. I follow the example of Duncan & Du Plessis in calling this a rhizomatous rootstock, rather than a rhizome *per se*. I would also like to mention that Germishuizen in Transvaal Wild Flowers, states on p 64: "...A bulbous perennial herb with a large bulb covered with a fleshy tunic". I scratched out one of my plants and I must say that I agree with him. In this case it is a further difference. However, Duncan states on p 94 of Bulbous Plants of Southern Africa: "...whereas in *Scadoxus* the rootstock is rhizomatous". I think here he is referring to *S. membranaceous*. Yet we have genera such as *Bulbine* where there are both bulbous and fibrous rooted plants together in the same taxon.

Once again let me commend you for your efforts. I have written to the two gentlemen you mention, and I will let you know if anything comes of it.

The Clivia Club thanks you for helping to lay the ghost of the Ugandan "*Clivia*". There is however, also a Kenyan one to look into.

I wish you well for the festive season,

Regards,

Nick Primich

- 0 -

Scadoxus cyrtanthiflorus

The following account of *Choananthus cyrtanthiflorus* (now known as *Scadoxus cyrtanthiflorus*) appeared in Flowering Plants of Africa 34: no page numbers (March 1960) (plate 1340) and is reproduced with kind permission of the editor.



PLATE 1340

CHOANANTHUS CYRTANTHIFLORUS

Uganda, Belgian Congo.

AMARYLLIDACEAE.

Choananthus cyrtanthiflorus (*C.H. Wright*) *Rendle* in Journ. Linn. Soc. Bot. 38:237 (1908);
Milne Redhead in Curtis's Botanical Magazine, vol. 158: pl. 9385 (1935).

The plant figured here was collected in flower by Dr. J Taeger of the Pretoria University while visiting Mt. Ruwenzori in February, 1958. It was cultivated in a hothouse at the University where it came into flower again a year later. The most striking morphological feature of this plant is the unusual manner in which the inflorescence breaks through the tubular leaf bases of the leafy shoot. The scape continues to elongate while flowering.

The history of this species and of the plant given the name *C. wollastonii* Rendle, considered a synonym, has been dealt with by Mr. E. Milne-Redhead in Curtis's Botanical Magazine, Vol. 158, Plate 9385 (1935). The genus is monotypic. Besides the type locality, Mt. Ruwenzori, the species has also been collected in the Belgian Congo. Plants are found at high altitudes ranging from 2,200 M to 2,800 M. Dr. Taeger collected it on the road to Kitandara in the deep shade of a Podocarpus forest while others collected it in the bamboo forests at higher altitudes. It roots superficially in the rich humus layer and this is a guide in its successful cultivation. It is a striking plant with its shiny leaves and cluster of reddish flowers. It was first classified in the genus *Haemanthus* which it resembles and the few ovuled ovary and the baccate fruit show that it is closely related to this. The inflorescence of *Haemanthus*, however, emerges normally either from the centre of the leafy shoot or next to it, whereas in the genus *Choananthus* the apex of the budding inflorescence has to pierce through the sheaths of at least six leaves.

DESCRIPTION.- Plants up to 70 cm high. *Rhizome* short, hard, fibrous, vertical with some spreading, straggling roots; above forming an annual leafy shoot. The shoot consisting of 4-6 leaves, the tubular leafbases of these and a few outer scales forming a "stem". *Lamina* oblong lanceolate about 32 X 7 cm, attenuated at the base, apex obtuse, apiculate, shiny, midrib stout, raised below. *Inflorescence* piercing the tubular leafsheaths about 5 cm above the rhizome; scape firm, stout, slightly compressed lengthening during anthesis to 30 cm; bracts about 6, surrounding umbel, thin, greenish white; pedicels up to 2 cm long when flower opens, erect at first becoming pendulous; umbel about 30-flowered; perianth tube 4.5 cm long, narrow at the base, green, widening slightly and gradually to the reddish throat, there about 1 cm in diameter; lobes oblong spreading slightly, shiny, bright red, apex obtuse and minutely penicillate; filaments inserted in one series at the base of the lobes, attenuate from a broad base, slightly exserted; anthers versatile, small; ovary cells with one axial ovule; style filiform, slightly shorter than the stamens; stigma minute (Taeger PRU 3261 in National Herbarium, Pretoria, No. 28676.)- A. AMELIA OBERMEYER.



PLATE 1340. Fig. 1. Inflorescence emerging from tybular leafsheaths: 2, base of lamina and throat of leafsheath. Text drawing: 1, whole plant; 2, longitudinal section of flower. F.P.A., March 1960.

..*..

Observations on Clivias in Natal

Extracts of letters from Gerry Camp to Toy Jennings.

1 Neville Road, Westville, 3630
20 August 1995

Dear Toy,

Thank you so very much for sending me the last 2 year's Newsletters. It has been a drought I can assure you! I have been reading them over the weekend spent here at Shortens, a luxury country house set in a sylvan setting. Not many Clivia around but nurseries here have them for R12 - R15 per plant, not flowering yet. Would recommend Selbourne Country Lodge for best Clivia viewing.

We have seen yellows in this area. They appear to originate along with the variegated among the ordinary *Clivia miniata*. I would estimate 1 - 2 every 10 000 plants in the wild. That seems to be the ratio in the wild and on farms here. One farmer has 200 yellows alone collected from their million Clivia over the years (unfortunately not for sale). They sell Clivia at R4,00 each, so anyone interested can contact me. I sell *Clivia miniata* seed at 50c each if anyone is interested. They originate from several areas i.e. from different gene pools, so in time will probably produce stronger, healthier produce when they are pollinated (and maybe a few yellows?).

In this area Clivia have been wiped out by the sugar cane but there are still many areas where they thrive under the trees just inland from the sugar and along the river.

We are surrounded here by indigenous trees and the bird life is superb. The yellows will be in flower shortly. Monkeys have just come up to the window, slightly ajar, and taken the fruit put there for them. They are wild and yet so trusting.

Looking forward to the Clivia Show here in Natal next weekend. Just hope there are yellows in flower for sale. My yellows flower much later in the year. The ordinary *C. miniata* are now coming into flower here in Natal. We are soon going to see the Natal equivalent of Namaqualand blooms in certain areas (all shades of orange from palest orange to brightest pink). South Africans hopefully one day will use our shade-loving Clivias as a tourist attraction along with the Cape Flower Show.

Today I saw my first "twin" - two flower stalks on the same plant. I have never really looked for this variety before - now I know they do exist! Not sure if these reproduce themselves - if self-pollinated or if they are freaks. So wish I could be in Pretoria on 9 September but it is my son's 21st birthday. The Clivia will be in full bloom and the pubs blooming full! Enjoy the dinner and the braai.

Clivia greetings from Natal and best wishes from us all.

Thanks Toy for your kindness and prompt assistance.
Yours sincerely,

Gerry Camp

- 0 -

23 August 1995

Dear Toy

Thanks for the call. You have no idea how the newsletters have inspired me. I'm already using Colchicine and pollinating my varieties. I would like a set of last year's conference papers. Cheque for R30.00 enclosed. Keep the balance for the club funds or some interesting seed.

As promised enclosed herewith my chart and Cynthia's reply. I made alterations as I thought fit but I may well be wrong even now about localities. You will note I changed my chart at Cynthia's suggestion. You have our permission to reproduce it for the newsletter if so desired.

Also enclosed is the photostat of Sima Eliovsan's bit about Clivia which Cynthia recommends for the layman. Also Margaret Roberts' interesting 2 pages on *Clivia miniata* which I am sure they won't mind us reproducing in our newsletter. I wrote to them to get permission in 1993 but they never replied. You may have better luck.

Thank you for giving me Bobby Maxwell's name for yellow Clivia. I will be seeing her this weekend and will have a few more to add to my collection of yellows. If you know of anyone selling variegated or white please let me know. Just let them name their price before I make a purchase.

Exciting things are happening here in Natal with us getting to know one another. I met Sean Chubb over the weekend and he is quite informed and ready and willing to part with his knowledge. We are all learning and with so much to do. All yellows are flowering. Hopefully I can sell some of my seed.

Have a good show and enjoy the Clivia. Regards to all, especially Nick, Fred and Piet Vorster if they are there. Thanks again for your help and especially the kind thoughts and suggestions re my health. People really just do not appreciate their health. I thank God daily each time I take my tablets for the relief I get. The main things are to keep busy, set your goals, and turn every disappointment or failure into a new challenge.

Best Clivia greetings,

Gerry Camp.

..*..

GERRY CAMP'S CLIVIA IDENTIFICATION CHART

December 1993

DESCRIPTION OF PLANT	LOCALITY	NAME
1 Flowers arranged spherically around stalk. Open trumpet shaped flowers.	All over Natal. Coast, Midlands	<i>C. miniata</i>
2.1 Flowers tubular and pendant from stalk end, <u>flowering in Autumn</u> . Umbel more spread out than <i>C. nobilis</i> & <i>C. caulescens</i> .	KwaZulu Natal Midlands.	<i>C.gardenii</i>
2.2 Flowers tubular and pendant from stalk end, <u>flowering in Spring</u> . Plants small. Leaf edge finely serrated. Leaf tip concave. Flower yellow at base near where seed forms with red/orange mid sections and green tip.	KwaZulu Natal South Coast and Eastern Cape.	<i>C. nobilis</i>
2.3 Flowers tubular and pendant from stalk end, <u>flowering in Spring</u> . Plants large. Leaf edge smooth. Leaf tip pointed. Flowers redder than <i>C. nobilis</i> (from seed forming area through mid-section) with a green tip.	Eastern Tvl. escarpment.	<i>C.caulescens</i>

..*..

Gerry Camp had a heart operation in 1987 and another two major heart operations within 18 months. He suffered severe pain from angina, but despite this was able to get around the garden and tend his

plants. He writes: "life would not have been worth living without the Clivia. Tremendous therapy I can assure you. My plants are thriving and thanks to Nick and seed bought from Nakumura, this has helped me over this period!"

Gerry Camp passed away 11 October 1995. We will miss Gerry for his enthusiasm and as he corresponded with many friends, his communications will be missed by them too. Our deepest sympathy to his wife Eve, and Andrew and Sharyn (Ed).

..*..

ARTICLES FOR THE ARCHIVES

From Adri Haxton

12 October 1995

Many thanks to Howard Cook of Gillitts, KwaZulu Natal, for sending me a copy of an article on Clivia published in the Farmer's Weekly on 5 February 1964. He found it amongst various cuttings which his grandmother kept. (This is the same article which Nick Primich found at the National Herbarium and which was reprinted in the April 1995 Newsletter). James Abel discovered a book of Mrs Saunders' drawings of indigenous plants, which includes drawings of Clivia noted in this article.

Gerry Camp enclosed several articles about Clivia in a letter to Toy Jennings. These included two from *South African Garden and Home* (Sept 1987 and December 1982), an article about *Clivia miniata* in *Indigenous Healing Plants* by Margaret Roberts and a description of all four *Clivia* species by Sima Eliovson in *South African Wild Flowers for the Garden*. The last of these, although first published in 1955, and not changed in later editions, still gives one of the best descriptions of the four Clivia species.

Any other material which members come across will be gratefully received.

Sincerely,

Adri Haxton

..*..

PERSONALITY PARADE

Allan Tait, the youngest of six sons, grew up on a smallholding in the Lyttleton area (later Verwoerdburg and now Centurion) on the southern outskirts of Pretoria. He was exposed to plants from a young age as his parents loved flowers and often arrived home with something unusual. As a child he and his brothers spent much time in the veld, before it was developed, and became acquainted with many veld flowers. His mother had a particular interest in Day Lilies and Irises. This hobby grew into a serious interest and she began importing these plants (mainly from Australia) to increase her collection. Mrs Tait started a small nursery which became a family affair and Day Lilies and Irises became the main lines. Today it is a general nursery called Sansia Nursery. Sansia is an acronym made up of the first letters of each of the son's names: Sidney, Ashley, Niek (for van Niekerk), Stephen, Ivan and Allan.

Allan matriculated from Eldoraigh High School in 1987. He already knew where his interests lay and started his National Diploma in Horticulture at the Pretoria Technicon. He spent his practical semesters with Spoornet and after completing his diploma in 1990 worked for them for two and a half years in East London where he was further exposed to indigenous plants and where his love for them received its greatest boost. In the Eastern Cape, Cycads are to be seen everywhere, Clivias flourish in the shade of trees close to the sea and Cyrtanthus, Crinum, Veltheimia and many more are in abundance. He realised how adaptable these plants are and how they can be used in many and varied conditions. His Clivia

collection was already established at that stage with both orange and yellow *C. miniata*, *C. nobilis* and *C. gardenii*.

Allan joined the Clivia Club in 1994. His main goal was to learn more about the genus as well as to interact with people who grew these plants, hoping to start an improvement programme. He has already progressed in this field and has developed a number of *Clivia* hybrids as well as *Cyrtanthus sp.*

In 1995 he entered a competition which was organised by the Institute of Environmental and Recreation Management at Kirstenbosch. This involved writing a dissertation on the use of indigenous plants by City Councils - mainly for the benefit of black communities. It included all relevant aspects from planning, implementation of the programme, involvement of the councils and communities and how to make the scheme viable. Allan won the bursary and although he is currently employed as a Horticulturalist by the Pretoria City Council, he is spending this year at Kirstenbosch gaining further experience in indigenous plants.

..*..

NEW MEMBERS

A warm welcome to the following new members:

AUSTRALIA:

Wayne Blackburn, Upstairs, 773 Nicholson St., North Carlton, Melbourne, Victoria 3054
Lois Harvey, 1/12 Russell St., East Gosford, N.S.W. 2250

NEW ZEALAND:

Gordon Redgate, P.O. Box 300, Te Awamutu.

SOUTH AFRICA:

Rena Anthony, 54 Byron St., Windsor Park, Kraaifontein, 7570
Percy Beckett, P.O. Box 716, Cullinan 1000
Paul Bester, Posbus 15544, Lynn East, Pretoria, 0039
Cliff Calder, P.O. Box 23466, Claremont, 7735
Frans Josef Füglistner, Box 121, Halfway House, 1685
Terrence & Linda Gow, 246 Milner St., Waterkloof, Pretoria, 0181
Frans Henrico, Posbus 35181, Menlo Park, Pretoria, 0102
Johanna Janse van Rensburg, Posbus 1058, Lydenburg, 1120
Johan Labuscagne, Posbus 11558, Klerksdorp, 2570
Ruben Lawrenz, 3 Christiaan St., Brakenhurst, Alberton, 1449
A. C. Lombard, Durbanstraat 86, Fort Beaufort, 5720
Eric Marsden, 149 Milner Rd., Rondebosch, 7700
Wynand Mouton, Posbus 325, Wilderness, 6560
Dr Raimund Schutte, P.O. Box 650 680, Benmore, Sandton, 2010
Koos Smit, Bus 11991, Aston Manor, Johannesburg, 1630
Niel Theron, van Heyningenstraat 16, Bloemfontein, 9301
Danie & Sylvia Steyn, Posbus 14386, Dursley, Springs, 1569
Magda van Vuuren, Delaneystraat 82, Danville, Pretoria, 0183
Emile van Zyl, Posbus 1494, Jeffreysbaai, 6330
Geraldine Vermaak, Posbus 4802, George Oos, 6539

U.S.A.:

Steve Unfus, 4301 Town-Country Drv., Charlotte, North Carolina 28226

..*..

FORTHCOMING EVENTS

- 23 March 1996, 14:30 Clivia Club meeting at the home of Koos Geldenhuys:
205 Dugmore Road, Queenswood, Pretoria.
Tel.(012) 333 9548
Gerhard Reynecke will speak on the "Nutrition of Clivia"
PLEASE BRING YOUR OWN CHAIRS.
- 1 June 1996 Clivia Club meeting at Pietermaritzburg Botanical Gardens
Time to be Contact person: Shaun Chubb. Tel. (0325) 81 978
confirmed Clivia cultivation workshop combined with a display of *C. gardenii* in flower.
- 27 July 1996,14:30 Clivia Club meeting at Witkoppen Wildflower Nursery:
Cedar Avenue, Witkoppen. Tel. (011) 705 2703
Andrea Hepplewhite will give a talk on "Indigenous Bulbs for the Garden".
- 7 Sept. 1996 Clivia Club Show - Pretoria National Botanical Garden
08:00 - 16:00 Contact person: Frikkie Potgieter. Tel. (012) 335 4590
- 14 Sept. 1996 *Clivia miniata* Show - Pietermaritzburg Botanical Gardens
Contact person: Shaun Chubb. Tel. (0325) 81 978
- 15 Sept. 1996 *C. miniata* tour of the Natal Midlands
Contact person: Shaun Chubb. Tel. (0325) 81 978
- 21/22 Sept. 1996 Clivia weekend in Zululand - based in Eshowe.
C. miniata and *C. gardenii* will be viewed in their natural habitat.
Contact person: Shaun Chubb. Tel. (0325) 81 978
- 5 October 1996 Clivia Club meeting at the home of James and Connie Abel.
14:30 89 Brampton Road, Lynnwood Manor, Pretoria.
Tel. (012) 47 6406
Wessel Lötter will give a talk and slide show on his Clivia hybrids.
- 11/12 Oct. 1996 *Clivia nobilis* tour of the Eastern Cape.
Contact person: Charl Malan. Tel. (0461) 29 112
- 26/27 Oct. 1996 *Clivia caulescens* tour to Levubu, Northern Province,
to view *C. caulescens* in their natural habitat.
Contact person: Toy Jennings. Tel. (012) 991 0843

Details, times and venues for some of the above visits will be confirmed later.

Private viewing

Margot McNeil's beautiful terraced Clivia garden at Lekgalameetse is open for visits by small groups by appointment. The best time to view this garden is when the *C. miniata* are in flower during September or October and is determined by the severity of the winter and the previous Summer's rainfall. To make arrangements, please write to Margot at P.O. Box 35, OFCOLACO, 0854 or telephone her at Trichardsdal, (0152302) and ask for 1530.

..*..

BEGINNER'S LUCK

When sowing Clivia seed, be sure to label it and date it. If not done at the time of sowing, one is apt to forget - especially if different species or varieties were planted. One can either write the details on a marker or on the container. Markers can be removed, so it is a good idea to label the container if it is something special. Once the second leaves of the seedlings have appeared, one can write on them with a permanent felt tip pen. This is also a good way to label adult plants, especially if they are being transplanted. Permanent tags such as plastic or metal can also be attached to the plant.

..*..

CLIVIA CLUB ITEMS FOR SALE

The following are available from the Club secretary:

Shirts (Navy or White - S, M, L, XL, with Clivia emblem on left hand side)	
T-shirts	R40,00
Golf shirt	R45,00
Separate pockets with Clivia emblem.....	R5,00
Clivia Cards (blank) x 4 (minimum order R20,00)	R20,00
Plant markers x 10 (green or white).....	R4,00
Black plastic pots	
20cm diameter.....	R1,50
28cm diameter.....	R3.50

Clivia plants and seeds

Please advise the Club Secretary (communications) of your requirements so that plants or seeds can be distributed when they become available.

PLEASE STATE EXACTLY WHAT SPECIES AND COLOURS ARE REQUIRED.

Members with plants for sale

Frikkie Marais has 70 mature Natal orange *C. miniata* at R17.25 each.

Piet de Jager has *C. gardenii* plants available at R17.25 each.

Connie Abel has mature *C. miniata* at R17,25 each and year old seedlings of *C. gardenii* (light colour) and *C. caulescens* at R12,00 each.

Sumia Lombard has 3 year old *C. miniata* at R12,00 each.

15% of the proceeds of these plants go to the Clivia Club.

Please contact Toy Jennings for the above plants.

..*..

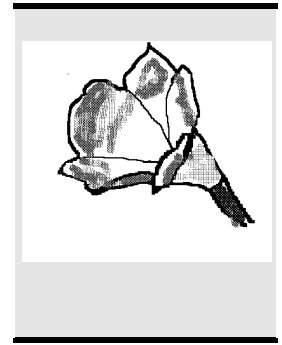
AP

nda turned out to be *Scadoxus cyrtanthiflorus*. It was absolutely delicious, but now I'm back here in the hope that the rain will have washed off all those dreadful insecticides and I can get back to munching Clivia. I hope that you remember to fertilize your Clivia plants during the growing season so that they will grow lusciously and flower well in the Spring. Don't forget to come to the next meeting to hear all about it.



Clivia
Club

PO Box 74868 Lynnwood Ridge 0040 South Africa



a. overseas

R20.00 p.a. RSA

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MEMBERS

- Abel 012 476406
- ampton Road, Lynnwood Manor 0081
- ennings 012 9910843
- OX 74868, Lynnwood Ridge 0040
- Haxton 011 8027985
- ox 977, Gallo Manor 2052
- Geldenhuis 012 3339548
- ox 11277, Queenswood 0121
- e Potgieter 012 3354590
- red Nicholson St., Mayville 0084
- Hart 011 6469392
- e Valley Road, Parktown, Jhb. 2193

end of May the last vestiges of autumn are apparent with some trees still carrying the last of their colourful foliage. Some *C. miniata* are flowering out of season, probably due to the good summer rainfall we've had this year. *C. gardenii* are beginning to flower in KwaZulu-Natal and Sean Chubb will be showing them off during the first weekend of June. Our Members in the Northern hemisphere are enjoying warmer days and their Clivias have flowered. Any spare seed you may have would be appreciated in the Clivia Club for distribution where demand continues to grow for yellow and unusual varieties. If orders come to you directly from members, please don't forget our rule, that 15% of the order's value should accrue to the Club.

correspondence from the Antipodes and from Southern Africa. Are our Northern hemisphere members too busy tending their summer gardens to drop us a line? Jenny Tonkin from Melbourne has a query regarding *Clivia x cyrtanthiflora*. Although she is not a member of the Clivia Club, her query is pertinent to our interests. Has anyone experience of hybridising these species?

New South Wales, has offered his findings on breeding variegated Clivias. He believes that variegation in various strains is caused by different defective genes. I am pleased he has also defined what is meant by the "Australian strain" as this has puzzled many South Africans. He also gives an interesting account of maternal inheritance.

ing Clivia for many years in Palmyra, Western Australia. In her letter she shares her thoughts, memories and anecdotes about her earliest experiences with the plant. Like many enthusiasts, she became a devoted Clivia grower through a fortuitous friendship, and is now part of the wider network in Australia and around the world.

that Keith Hammett has an MSc. student doing research on Clivia chromosomes. We also thank him for recruiting Mr. K Sahin who is a Clivia lover from The Netherlands.

or and against charging exorbitant prices for Clivia plants. The nurseries must make a profit, and considering that a Clivia in flower takes at least four years to bloom, and that they have been watered, tended and repackaged during this time, it is not surprising that they sell for between R20,00 and R25,00 at most nurseries (usually more if they are in flower). Most of our club members sell their mature *C. miniata* for between R12,00 and R17,25 (of which 15% goes to the Clivia Club). As *C. nobilis* take much longer to mature, they are usually more costly, as also are Belgian hybrids and the Yellows. However, the point that Pat Lang makes is that there is a big discrepancy between the grower and the retailer. How does anyone ever solve this age-old problem of the middleman taking the profit? Inevitably, the relatively high price of Clivia will encourage people to pilfer from the wild, both for gardens and for herbal markets. Who would not do this if there are empty stomachs to feed and if the plants are readily accessible? This does pose problems for conservationists as many Clivia grow in rural areas where policing is almost impossible. It would be difficult to change the customs by prohibiting the use of Clivia for medicinal purposes.

no Zimbabweans have found Clivia in the wild despite ideal climatic conditions in the Eastern Highlands and elsewhere.

oring the Internet, and this has led to discussions and articles about the chemical and medicinal properties of Clivia. Adri also features in the Personality Parade of this newsletter.

club, Gerhard Reynecke gave a talk on Feeding. At the same meeting Nick Primich told members of his proposed Judging School, and this is now under way with three meetings thus far.

ber from China, a professor of biology at N.E. Normal University, Changchun. His correspondence will appear in one of the following issues.

r, but there is much more in the pipeline. Happy reading.

..*..

C. cyrtanthiflora

Royal Botanic Gardens, Melbourne, Australia.
25 July 1995

me to contact regarding *Clivia x cyrtanthiflora*.

a project for the National Herbarium, Royal Botanic Gardens Melbourne, which necessitates the collection of cultivated plant material.

which at first glance registered as *C. nobilis*. However, on further examination, I now suspect that it is in fact the garden hybrid. The literature regarding this is somewhat limited -- more probably, I am most limited in accessing the relevant text -- and I was hoping for some guidance concerning literature which includes a decent key. What I have discovered is that there is a tendency in the technical literature to ascribe a few paltry lines to *C. x cyrtanthiflora*, and not include it in a key. Would you be able to point me in the right direction please? Dr. Glen has given me a reference in *Flowering Plants of Africa* 53, would there be any other lit. refs, that you could suggest?

..*..

Observations on Variegated Clivias

P.O. Box 17, Medowie. New South Wales 2318
12 December 1995

4 p.5 Les Hannibal reported that his *Clivia miniata* "striata" with "numerous gold stripes" was crossed with his yellow clivia and some other unvariegated clivias and "near half of the resulting seedlings showed the striata pattern" but with pale green stripes instead of yellow.

ple of years ago and got different results. In my case I used a Japanese variegated plant from a strain that produces almost 100% variegated seedlings and applied pollen from an Australian yellow clivia.

of pale green striped seedlings but I obtained about 10% variegated seedlings. The best of these were as good as any of the Japanese variegated plants I have raised and the others were similarly (bright yellow on dark green) variegated but to a lesser degree.

high proportion of variegates but with reduced variegation whilst mine produced a low proportion of variegates but when it occurred it was of normal Japanese type. I presume the variegated parent plants in these two cases were genetically different.

I call the Australian strain - an improved vigorous strain that has been grown here for at least 5 or 6 generations) occasional variegated plants appear. They are not common, possibly 1 in a 1000 seedlings at a rough guess, and they do not compare to the Japanese strain in the quality of the variegation. They also do not yield other variegates.

Some variegated plants from another grower who had raised about a thousand seedlings from a European improved strain. He obtained about 40 variegated seedlings, some very good yellow variegates, others less so, but generally considerably better types than from the Australian strain, although the plants were otherwise closely similar.

variegated seedlings themselves is yet to be tested.

3 genetic types:

1 where the percentage is very low, perhaps simply chance mutated individuals and which do not seem to pass the striation on to their offspring.

2 where the percentage is approaching 100%, and where it is genetically controlled so that almost all their offspring carry the trait.

3 where there is a higher percentage of variegated seedlings, perhaps indicating some genetic control and inheritance (not yet confirmed).

4 No. 4, Nick Primich mentioned cytoplasmic inheritance. This is sometimes (and more simply) called Maternal inheritance. It has now been described in both plants and animals. In humans it has been used recently to identify children whose parents were killed or disappeared during the military dictatorship in Argentina. As neither parent was available DNA analysis of the children could not be checked against their parents. However their extra nuclear DNA (DNA not in the cell nucleus = cytoplasmic inheritance as mentioned by Nick) could be checked against their maternal grandmother's extra nuclear DNA as this is only passed on through the female parent and is relatively unchanged from generation to generation (unlike nuclear DNA which undergoes a total mixing at each individual pre conception i.e. egg and sperm). Thus each child could be matched and returned to their true family if the grandmother (or mother's female siblings) were available.

5 Evidence is shown by the inheritance of variegation. In the Japanese variegated strain you only get variegated offspring if you use the variegated plant as the female (or pod) parent. If you use the variegated plant's pollen on an unvariegated plant (pod parent) then you get no variegated offspring. However from the results quoted earlier it is not that simple because when the variegated plant is used as pod parent all the seedlings get the same extra nuclear DNA from the mother. So if this controls the variegation why do we get distinctly different numbers (percentages) of variegates depending on the pollen parent? There must obviously be some interaction with the nuclear DNA.

6 I don't get variegation or not but the pollen parent controls if it appears.

7 Further information. Last year, to check again if the Japanese variegated strain's pollen carried any variegation genes, I put that pollen on an Australian strain, variegated plant. I thought I might get an occasional variegate but was unprepared for the result. The combination was lethal. I got perhaps 6 plants (all unvariegated) from

more than 100 seeds. The rest never germinated. My previous experience with crossing strains has been that it usually produce more vigorous offspring (so called hybrid vigour).

genetic cause of the variegation in the two strains is different and that when a plant gets both defects, it is lethal.

to hear of any other results by any other members on variegated crosses.

..*..

Australia

31 Solomon Street, Palmyra 157, Western Australia
16 January 1966

to send our subs in one lot. Thankfully he remembered me. All the pre-Christmas mail was piled on the dining room table. I hadn't even got around to reading the newsletter.

N. You must all be delighted with the membership, especially the Botanic Gardens where staff will have stored information to share.

70's when I bought the original yellow - called `Aurea' in July '78. It flourished then started to rot. The remnants were thrown behind the garage and to our surprise 3 shoots grew. In the meantime I replaced it from another nursery in November '85. This plant is now a healthy tub full, which I hope the landscape gardener will use at the retirement village I am moving to later this year.

man who taught me the love of South African flora, gave me a plant from seed she had acquired from her South African pen-friend. A native *Clivia miniata*. Alas the clump had to be removed when the large Chinese Elm was cut down after reaching power lines. However the clump produced 32 heads of flowers. A glorious sight, the dark green pointed leaves with all the flowers poking through.

low seed. Kevin Walters sent me his famous Relly Williams and I swapped mine for other plants. I don't save seed, only grow for the beauty of the flowers.

collector. My collection has gone to a young man who is far worse than I was, he has the years ahead of him.

when my children were high school students. Money was for their books etc., not my book list and seeds. Before Christmas I found a book I wanted in those days. "Bulbs for Australian Gardens" by R.T.M. Pescott. Over the years, two other publications I have listed this book in the Bibliography. Apart from recommended use of D.D.T. it is still full of information I needed years ago. It took me a long time to realise bulbs from the Cape were suitable for my garden 3 miles from the sea. Palmyra is a suburb of the Port - Fremantle, Western Australia. However, I can grow *Clivia* and *Scadoxus* from your Eastern areas.

maryllis hippeastrum very successfully. Mealy bug has taken over forcing me to get rid of his bulbs. Fortunately it hasn't reached the *Clivia* in another shade house. It is time to move and become "An Armchair Gardener" from my extensive Library - yes, I did finally get my books. Bye for now.

ove to her new home, and lots of happy hours reading her gardening books. No doubt she will be roped in to give advice on the gardens at the retirement village. The 'young man' to whom she has given her collection may well become another Yoshikazu Nakamura! (Ed.).

..*..

ri Haxton from Keith Hammett
488c Don Buck Road, Massey, Auckland 8, New Zealand
21 March 1966

are now the Clivia Club membership secretary as this gives me the excuse to write to you directly.

pany during the Clivia Club activities during 1994 and remember that your house was the very first I entered on arriving in South Africa.

1994 I paid two years' subscription, so now is the time to renew. Again I enclose two years' subscription. I gather that there are troubles with your mail system security-wise so I have bought a draft and will send it by registered mail.

to pass on, is that I have just initiated an Msc research project at Auckland University. The student will look at the chromosomes of all the *Clivia* species and hybrids that I have available to me. My trip to visit you was important in collecting material for such a study.

pidly and I am filling a large new shade house which I built on my return to New Zealand.

member of the club is:

n den Rijn,

33

eral European Hybrid strains and has an encyclopedic knowledge of many plants. However, Clivia is a special love of his.

ub members, especially Toy, James, Connie and Nick and assure them that I am active and will be more evident as soon as time permits.

s concerning Clivia since my return and have enrolled at least one new member. I intend visiting Nakamura again this June en route for the UK.

..*..

Africa

P.O. Box 10, Munnik 0703
10 January 1966

Curator, National Botanical Institute, Cape Town. I have the following comments:

As a commercial Clivia grower supplying various nurseries in the Gauteng area. In my experience donating seed to Kirstenbosch, while a noble gesture, will not necessarily lead to better distribution of *Clivia miniata* throughout the country. What primarily determines demand and therefore distribution of this plant is the price charged by retail nurseries. They are charging more than 4 times what they are paying the grower. Until nurseries sell these plants at a more affordable price I don't see any increase in the sale of Clivia, and therefore no increase in their distribution.

Should the Institute not look into this matter?

Could you send me a news letter once again.

the above letter

I agree that nurseries, understandably commercial, will tend to charge what the market will bear. However, with the rapidly increasing interest in our genus, volumes available are increasing and we have noticed an easing of price levels, especially of yellows.

Progress.

..*..

Thurlow Farm, P.O. Box 74, Eston 3740
27 February 1996

Wild are vanishing at an alarming rate. There are three main reasons, all of which are directly related to human activities. These are habitat destruction, theft and lack of enforcement of legislation.

Clivia is being lost in a number of ways. Clivia being shade loving plants have a restricted habitat niche. The indigenous forests are being denuded of their trees to make way for agriculture and to supply the rapidly growing population with firewood. Clivia populations occurring close to large informal urban populations are being destroyed on a daily basis. The mass influx of people into the urban environment not only need wood for fuel but also bring with them their culture of medical plant use. Clivia are collected by herbalists in the indigenous forests, the leaves and roots are removed to a greater or lesser extent and the plants are offered for sale either at a number of informal herbalist markets or by the traditional healers themselves. Clivia is used as an emetic to induce vomiting and is said to cure a wide range of disorders. Clivia is also used as a protective medicine or charm to ward off evil spirits, and it is planted close to homesteads as a protection against storms and lightning. Clivia is used extensively by traditional healers and herbalists and as a result large numbers are removed from our forests to satisfy this demand.

Clivia is now classified as specially protected plants and the formal trade of Clivia is controlled by a permit system. Dealers selling plants are required to issue permits to their customers and people transporting Clivia can be required to display proof of the origin of their purchases on demand. In this way a control of the movement of Clivia is enforced. But practically, this legislation is not enforced strictly enough and thousands of plants are still being removed from the bush, sold to large scale landscapers and gardeners alike. This is a lucrative business as the collector can collect Clivia fairly easily and cheaply and sell for a fair profit. This human greed leads to the rape of our natural forests and renders Clivia populations an unsustainable resource.

Clivia are being lost from their natural habitat since they are normally shallow rooted and grow mainly in forest debris and leaf mould. Clivia enthusiasts and gardeners can also be blamed for some of the destruction of wild Clivia populations. Enthusiasts should think what is best for Clivia and not what is best for themselves when visiting natural populations. There is enough genetic material available amongst enthusiasts without removing plants from the bush. Removing Clivia is illegal and if caught strict fines could be faced.

It is clear that in reality there is only one threat to our beautiful wild Clivia populations and that is people pressure. The Clivia populations have endured natural pressures such as Amaryllis worms, moles, locusts, drought, frost, floods, etc. for thousands of years and have come out on top. Clivia cannot and are not surviving this modern pressure which has been placed on them. People pressure is destroying, burning, chopping, grazing our forests and so denuding them of a most prize jewel of our floral kingdom. Our viable Clivia populations are becoming fewer and fewer. How much poorer would our world be if the only Clivia to be found were in gardens and not in the indigenous forests where they so rightfully belong. So next time you have the opportunity to collect or buy Clivia taken from their natural habitat, think what is best for Clivia populations.

The Clivia Club has become more active in the conservation of Clivia populations, since Clivia are predominantly found in our province. I believe that our Clivia Club's primary aim and objectives have to be to promote the protection of, and the conservation of our wild Clivia populations.

..*..

5 Wellburn Drive, Ballantyne Park,
P O Chisipite, Harare, Zimbabwe
27 February 1996

g our time in Harare to find out about the status here of our favourite genus. *Miniata* is popular and well known, but that is generally the limit of knowledge. They are available in nurseries at prices which are in line in Zimbabwe dollars, but low when converted to rands.

ne to talk about the genus and the Clivia Club in South Africa, but since their meeting clashed with our visit down south, I asked Rosemary King, their chairlady, to stand in and gave her background material for a talk. She says that there were about 80 members present, and that they showed a lot of interest and asked many questions.

extensively on the possibility of *Clivias* growing indigenously north of South Africa, and appears conclusive regarding their absence in East Africa. We have met a number of plant enthusiasts, including indigenous orchid and tree lovers, who spend as much time as they have available in the Eastern Highlands, and they have an extensive knowledge of their flora. They are adamant that no *clivias* have been found in Zimbabwe, but will keep their eyes skinned in future. It makes sense that the hot and dry valley of Kipling's "great green greasy Limpopo" should have proved over the millennia to be an impassable barrier to the migration of our shade loving genus.

een enjoyable, meeting some great people and seeing some lovely country, but it will be good to be back during the second half of the year and immersed again in our own collection.

..*..

INTERNET

e uncovered a few articles about *Clivia* on the Microsoft Internet Explorer.

rs who is a freelance garden writer and broadcaster. It was written for "Homescap/Patio Gardening" in the San Diego Union-Tribune on Dec. 17, 1995 entitled "Clivias like having their toes pinched", but contains a few errors. She mentions that there are only three species and that only the *Clivia Miniata* has been brought into cultivation. Although *Clivia miniata* is by far the most popularly cultivated species, it is by no means the only one! However, apart from what has already been stated in previous articles she mentions that in her native Holland *Clivia* "has long been considered an old-fashioned "Grandmother's plant", since every family seems to possess an offshoot from a plant in their grandmother's garden".

the "Lilac Festival" in Rochester, New York from May 10-19, 1996. The facing page of the advertisement has a photograph of a *Clivia miniata* which they call a "Kattir Lily"! The caption next to the picture states that the lily is the common name for a family made up of over 250 genera with about 4000 species, so we are very proud that the *Clivia* is the species chosen to illustrate this Lilac Festival. I am not sure, but I think that the *Clivia* in the photograph could be a Relly Williams.

Clivia miniata poisoning. It states that the plant contains small amounts of the alkaloid lycorine, of which the greatest concentration is in the bulb. Only if ingested in large quantities will it cause symptoms of toxicity. The general symptoms of poisoning in humans are collapse, diarrhoea, paralysis, salivation and vomiting.

refer to South African literature. In Joan Munday's book entitled *Poisonous Plants in South African Gardens and Parks - a field Guide*, she mentions that all parts of the plant contain poisonous alkaloids, mainly lycorine and cliviine and it is potentially lethal if eaten in large quantities.

For keeping us up to date (Ed).

..*..

CLIVIA

has been extracted from a paper entitled "*CLIVIA CULTIVATION AND DISTRIBUTION*" which was given by Mr. G. R. Nichols at the first Clivia Club Conference held in Pretoria on 17 September 1994. It is being repeated here for the benefit of those members who were not at the conference and because it complements other information about the medicinal properties of Clivia.

most interesting, from my point of view, because it brings the human interest factor to the paper. In all the years that I have observed the medicinal usage of Clivia - both species [*C. miniata* and *C. gardenii*] are used equally and both have the Zulu name of Umayime. I have purchased Clivia plants from herbalists and equal numbers of both species flower after a year or two, depending on the severity of leaf and root removal when gathered.

is used as a remedy for an umKhuhlane. The author states that an umKhuhlane "...indicates almost any general constitutional derangement of a febrile and generally infectious nature, and may include enteric, scarlet and malarial fevers, small-pox and measles, pneumonia, acute bronchitis and influenza, as well as all the commoner minor catarrhs and bad coughs to which one is periodically liable." It is used as an emetic, to induce vomiting (Bryant).

as an "iNembhe". According to Bryant this is something that is used to facilitate delivery, or to procure it when retarded.

Clivia miniata - are also used as snake bite antidotes. The roots are pounded and mixed in a cup of water, and drunk. A portion of the liquid is also used to bathe the wound (Bryant, Manana). They are also used to purify and cleanse the blood (Cele, Manana).

is a charm known as Intelezi. Intelezi is a protective medicine or charm calculated to render evil ineffective. All plants that are an Intelezi are used in different ways to ward off evil, sickness and mishaps that are liable to happen at the homestead, or may be caused by witchcraft. They are also used as a protection from storms (ukubethela) (Hulme). The process of ukubethela is where wooden pegs (izikhonkwane) are put into the ground around a homestead to ward off evil spirits (Cele). If lightning is to be warded off, the medicinal pegs are driven into the ground and the ceremony is known as ukubethelela (Hulme).

al uses of Clivia are many and varied, thus making it a most important component of a traditional healer's pallet of healing plants.

y this plant that seeds and reproduces itself at a relatively slow rate is coming under severe threat. Finally, the other reason that this genus is under threat is due to the loss of habitat at the hands of agriculture and urbanisation. Its restricted habitat niche also adds pressure placed on this intriguing genus. The natural systems of Durban have been reduced from 100% in 1850 to 5% functioning in 1994. Of the 5% remaining, only 1% is totally functional. The rest, even though it has been preserved, has been modified in some way or another by the activities of humans.

Medicine and Medicine-men. Centaur, Cape Town.

Communication. Umlazi.

Flowers of Natal.

Survey and Analysis of Traditional Medicinal Plants as used by the Zulu, Xhosa and Sotho. Bothalia Vol.19,1; pp 111-123

ongo Wolwazi. Pinetown Printers, Pinetown.

alist Handbook. NaturAfrica, Durban.

..*..

ENOUS HEALING PLANTS BY MARGARET ROBERTS

y, St John's lily

elie

beyima

Wild in shady ravines from Haga-Haga in the eastern Cape, along the coastal forests of the Transkei and Natal and in moist shady places in the eastern Transvaal, and has been a much sought after and much admired pot plant both here and abroad for over a century.

Glorious umbels of dark orangy pink flowers which are most abundant during spring, but in hothouse conditions can flower through the summer. They are followed by bright green and red berries. The straplike leaves are thick and dark green and the roots are fleshy, juicy and almost corm-like. Often suckers appear around the parent plant which have their own roots, and these can be cut away and set in moist soil in pots to start new plants. Propagation by the dried ripe berries is also fairly easy, but do remember the seeds only ripen approximately 10 months after the flowering season.

Exceptional, but do choose a big pot with rich composted soil, and place it where it will get morning sun. Do not divide the plant unnecessarily as it does not like being disturbed.

Used by the Xhosa and the Zulus as a treatment for snakebite. I was told by an old Zulu that the poison is sucked out and a tourniquet of vines applied to the affected limb, then the clivia root is crushed and the juice applied to the area.¹

Hot water is also administered to the victim of snakebite - but quite how much I was unable to ascertain, as a heated argument with the younger members of the family ensued!

Crushed roots has been used for decades by African tribes to treat febrile conditions and to ease childbirth. Once the baby is safely born, the young mother is given a drink of this tea to help her milk flow. Should she have difficulty in feeding the newborn, this treatment is continued until the lactation process is functioning well.

¹

The treatment of snakebite has become a controversial issue and this treatment is *not* recommended. Tourniquets and sucking the poison out are no longer advocated.

ory tests have shown that the clivia contains certain alkaloids, including cliviine, which consists essentially of a substance called lycorine, a lactone-containing alkaloid which would account for the clivia's remarkable ability to facilitate childbirth. The fascinating question is how those old Zulu folk-lore 'doctors' knew about it so long ago. I was told by a Zulu family that only the women knew of the plant's uses with regard to childbirth and that they taught men how to use it for snakebite. I was also warned that the plant is poisonous and therefore not to experiment with it.

l urban - regard the clivia as a sign of extreme good fortune and to have one growing near the home is considered to bring wealth in children, cattle and crops, good rains and good health.

iving business both in South Africa, their country of origin, and overseas. Their flowering period is long and even when the plant is not in flower its dark, glossy leaves are attractive in glades under trees or in pots. A friend of mine who grows clivia commercially has found after sessions of sorting and peeling the seeds that have been soaked in water to facilitate the removal of the skins prior to sowing, that her nails are strengthened and toughened and remain so for some time afterwards. Working as she does with clivia seeds she hardly ever has a broken nail. I often wonder what the cosmetic industry would make of that - perhaps a nail cream called Clivia Claws!

rom her book *Indigenous Healing Plants*, published by Southern Book Publishers.

G

3 March 1996 at the home of Koos Geldenhuys in Queenswood, Pretoria. There was a good turnout with approximately 30 Clivia Club members, some of whom had brought specimens of their Clivia in flower. There was a little uncertainty as to whether these were *C. gardenii* or *C. nobilis*, but as the leaves were unnotched and were not serrated, these were then established to be *C. gardenii*, especially as they were flowering in Autumn.

nteresting talk about the feeding of Clivias and after some discussion Nick Primich gave an outline about the Clivia Judging School which he was to start. Both are reprinted below for the benefit of members who were not

ng any plant is to go back to the natural habitat and try to replicate the natural situation - it is after all what the plant has adapted to and will for obvious reasons respond to best.

lower forest floor, the soil should be rich in organic material, well aerated and with good drainage. As the roots are well adapted to harsh competition from bigger trees, the clivia do very well in pots, even when the roots are totally overgrown.

energy is stored during the latter part of the growing season to overcome the drier winter period and to have enough energy for the initiation and early development of the flower. To help with this process, potash is of vital importance as it is a carrier of energy in the plant.

with a compound like 4:3:4 (33) will give enough nitrogen to stimulate long leaves and especially a long flower stem, but more important, enough potash to have a better quality flower (and better seed setting).

season a 1:0:1 (36) could be used together with a foliar feeding of micronutrients every 6-8 weeks especially for container grown plants as the micronutrients can become deficient over time.

and potash is important as the plant is grown not only for flowering but for its lush dark green leaves.

It is always better to feed less fertiliser more often, even to the point of more than once a day as with hydroponics.

Although the use of slow release fertiliser makes this easier, the rate of release is often erratic in our climate so that frequent feeding with standard fertiliser tends to be more rewarding. There is no reason why well fertilised seedlings should not flower at the beginning of the third season while the disease and drought resistance of mature plants will be greatly improved with good feeding.

Recommendations can be made:

SOIL: Broadcast one hundred grams per square metre of a compound fertilizer like 4:3:4 (33) plus a generous amount (approximately ten centimetres thick) of organic material or compost. Take care to work or dig the fertilizer and organic matter well into the soil.

Before preparation, both seedlings and mature plants need no further fertilising until well established.

For the hole mix the soil from the hole with ten grams of fertiliser, and enough organic material to make a sixty per cent soil to forty per cent organic material ratio. Plant with this mixture.

For potting, the same sixty per cent soil to forty per cent organic material with ten grams of fertiliser per plant, or straight potting soil with ten grams of fertiliser per plant can be used.

After planting.

At the beginning of the season, before the emergence of the flowers, spread fifty grams per square metre of a compound fertiliser 4:3:4 (33), taking care not to get fertiliser into the crowns. Follow this with a five centimetre layer of compost (not manure). During the growing season spread ten grams of fertiliser 1:0:1 (36) per square centimetre.

For mulch, otherwise damage to the sensitive feeder roots may occur. The compost will act as a mulch and keep the soil from compacting.

For foliar feeding, ten grams (less for small pots) of 4:3:4 (33), plus a layer of compost. Micronutrients should not be lacking, so spraying or foliar feeding with a micronutrient solution could be beneficial.

It does not give enough nutrients for robust plants, and must therefore only be complementary to a fertilisation program in normal garden situations.

For small seedlings should never receive fertiliser until well established, but soil prepared as for potting can be used to germinate seeds.

..*..

Notes for Judging School

It is not better than another. Why? Have you ever stopped to think why? It is a matter of judgement. You make a snap judgement. If one flower is beaten, broken and bruised, while another is in pristine glory, the judgement is easy and almost automatic.

We put many flowers together and make comparisons. We see how they compare against each other, and we choose the one we fancy. We make a judgement.

Someone else has done it slightly differently. He, or she, has in the mind a standard flower against which each flower in the show is compared. Each flower up for judgement is given a mark and the one with the highest mark will

be the winner. This is done mentally. The judge has spent years judging flowers and is skilled in the work. This kind of judge will seldom make a mistake owing to subjective preferences.

many flowers which have evolved over the years, and the judges who judge these flowers are fluent in the standards and apply them with amazing speed and accuracy.

for Clivia, and when they do appear on shows they are judged as to whether the judge likes them or not. Thus a subjective preference is given, which could have an influence on breeding.

standards so we may learn them and then judge the flowers in an objective manner. This is no simple task. What should be the standard? Perhaps some of us have a vague idea in the mind as to how a great clivia should look, perhaps others of us will only recognise a great clivia when we see it?

ly Grail for Clivia and we will have to suck one up out of our thumbs. We can look back on the history of garden flowers and benefit from a few common mistakes that have been made in the past. The first and perhaps the easiest trap to fall into is that biggest is best. I can remember in my youth, when I did not even know what Clivia were, I went to a Rose Show with my mother. We were both astounded at the great big Hybrid Teas that were beginning to impact on the market just after World War Two. We bought and brought these home joyously, and they proliferated in the garden and we drooled over them. When I first became interested in orchids I took to Cattleyas as a duck to water. Here again new hybrids were starting to come out, each better than the other. They just became bigger and bigger. I tried my hand at a few myself. One day someone gave me a *Laelia anceps*. This is a species orchid from the genus *Laelia*, which is not unlike *Cattleya*. However, it has quite a tiny flower. This little *Laelia* flourished in my glasshouse, and one day I walked in and beheld this plant that had grown somewhat, and it had bloomed, throwing its small but beautiful, delicate and graceful blooms across my glasshouse. I had never seen an orchid that appealed so much to me. It certainly changed my way of thinking, and I swapped all my fancy hybrids for less "spectacular" species orchids. After that I always referred to the great big *Cattleya* hybrids as "Hush Puppies".

ed from "giantism" was Hippeastrum. The Hollanders took several species of Hippeastrum and evolved this great big Royal Dutch Lily. A lot of people still call this the Amaryllis. Anyone who has been to my place in the Spring will know that I have several hundred of these in my garden. They are big and they are spectacular. Yet they are very limited, and have certainly come to the end of their development along the Big is Best road. I have several species that are smaller, more graceful, and even inviting one to hybridise them.

our minds that the flowers can get too big. O.K. let's breed a few big ones just to see how big they can get, but let us keep our standard clivia as we will set it.

new developments, and not close the door on anything just because it is different. We must be ready for diversity when it is needed, but our first priority is to set a standard for STANDARD CLIVIA MINIATA.

should keep it all as simple as possible, avoid complications, and leave a bit to the discretion of the judge.

itself must be taken into consideration. Guidelines should be laid down for leaves, yet we should be wary of eliminating worthy plants through clumsy and needless restrictions.

er count for anything? Many Clivia growers have never bothered to sniff them.

d Clivia Miniata to be a giant or a dwarf plant. Thus if we stated that the plant should preferably stand between X and Y cm, we will probably be better off than if we gave definite and compulsory sizes. Pity the day a judge or even an acceptance steward should have to wield a ruler! The acceptance steward could point

out to the competitor that his plant might stand a better chance in the giant or dwarf category, but not deny him entrance if he persists.

th a marking schedule that we would certainly use in practice but not on the actual show floor. We would have to practise marking slides or something like that.

ed to be marked? 1) Certainly the leaves, 2) the peduncle, 3) the umbel, for shape, quantity and disposition, 4) the florets, for colour, style and proportion, and then most important of all, the overall effect. We would need to examine the style and stamens. We do not want sterility getting any prizes.

e to set standards. All I require of participants is dedication. There is nothing there. We must build it up, and it won't get done if we come to one meeting and not the next one. Thus, do think it over carefully before giving your commitment. Then again, I will require input from all participants. No passengers.

sure it will be fun.

..*..

E

was born in Potchefstroom in 1947. At that stage her father was teaching agriculture at Paul Kruger Skoolplaas. (Does Botany run in the Genes?) From there they moved to Vryheid, to Ermelo, and then to the Amsterdam district where she started school at home, taught by her mother, after which she attended a two-man farm school. There was another move to Pretoria before returning to Ermelo where she matriculated. Adri completed a B.Sc in Maths and Stats at Potchefstroom University. Her professional career started in 1968 at Iscor in Pretoria where she received inhouse computer training and ever since she has been involved with computers! She has been freelancing since 1982.

became a sworn bachelor-girl, but ran out of excuses not to meet men and agreed to be introduced to James Haxton. They were married six months later in 1982. James is also in computers.

a miniata from Ina Immelman in 1977 - it never flowered in her flat until it was moved to James' house where it was placed next to the front door and received morning sun. At that stage it had several offshoots.

from a nursery as well as from Annatjie Smith from whom she obtained the funny tubular flowering ones! Annatjie told her about an article written by Prof. Christo Pienaar on the Clivia Club and the world opened up for her. The rest is old news.

..*..

owing new members:

s 373, Wapadrand, Pretoria, 0015

10, Wellington, 7654

Place, Blackridge, Pietermaritzburg, 3201

as 50115, Hercules, Pretoria, 0030

83, George East, 6539

Box 90355, Garsfontein, Pretoria, 0042

Verwoerd Drive, Ferndale Ridge, Randburg, 2194

3, Kroondal, 0350
695, Waterkloof, Pretoria, 0145
5, Levubu, 0929
at 6, Kilnerpark, Pretoria, 0186
01-265, Scottsville, Pietermaritzburg, 3209
treet, Franschoek, 7690
olier of African Bulbs, P.O. Box 39422, Queensburgh, 4070
1-265, Scottsville, Pietermaritzburg, 3209
5 Morcom Road, Prestbury, Pietermaritzburg, 3201
7, Gonubie, 5256
, Cramer View, Sandton, 2060

ology, N.E. Normal University, Changchun, P.R. China, 130024

0 AE Alphen aan den Rijn, The Netherlands

e Str., Titchfield, Hampshire PO14 4DU

y Rd., Highlands, Harare

..*..

TS

a Club meeting at Witkoppen Wildflower Nursery:
r Avenue, Witkoppen. Tel. (011) 705 2703
ea Hepplewhite will give a talk on "Indigenous Bulbs for the Garden".

a Club Show - Pretoria National Botanical Garden
act person: Frikkie Potgieter. Tel. (012) 335 4590

a *miniata* Show - Pietermaritzburg Botanical Gardens
act person: Shaun Chubb. Tel. (0325) 81 978

a *miniata* tour of the Natal Midlands
act person: Shaun Chubb. Tel. (0325) 81 978

a weekend in Zululand - based in Eshowe.
miniata and *C. gardenii* will be viewed in their natural habitat.
act person: Shaun Chubb. Tel. (0325) 81 978

**the contact Shaun soon if you are intending to attend this weekend so that he has an idea of the numbers
needed and can make the necessary arrangements for accommodation.**

a Club meeting at the home of James and Connie Abel.

Hampton Road, Lynnwood Manor, Pretoria.

(012) 47 6406

El Lötter will give a talk and slide show on his Clivia hybrids.

C. nobilis tour of the Eastern Cape.

Contact person: Charl Malan. Tel. (0461) 29 112

C. caulescens tour to Levubu, Northern Province,

to view *C. caulescens* in their natural habitat.

Contact person: Prof Dries Bester. Tel. (015) 583 0299

Please DO NOT contact Toy Jennings about this tour.

For some of the above visits will be confirmed later.

Plants grown in shade houses and therefore have to be in pots or some sort of container. It is very important for Clivia to have good drainage if they are to thrive. Without discussing the potting medium itself, three aspects are needed for good drainage: the apertures at the bottom of the container, material at the bottom of the container to assist drainage, and the position of the container on the floor or shelf.

The size of the container must be the right size. They must be sufficiently large to allow adequate drainage of water, but not too big to permit the potting medium to escape. If the container is on a solid surface there should be holes near the bottom of the pot on the sides as well as underneath. Longstanding pots on earth or brick surfaces often become sealed and water accumulates around the roots of the plants causing them to rot.

Stones should be placed at the bottom of the container. Stones or broken earthenware from pots or tiles are easily available and are used most often. However weight is a problem in bigger pots. Before the advent of plastic, many pots were earthenware or ceramic in nature, and were extremely heavy. This was more especially so, the bigger the pot. A mature clivia with several offsets requires a very large pot and a heavy pot is extremely difficult to move, especially if it has to be carted around to shows. So that brings us to the point of how to make the pots as light as possible. Some of our members have been able to obtain the burnt out coke from ISCOR, the steel factory, and this makes an ideal medium for placing at the bottom of large pots. Others use polystyrene, so readily available these days as it is used for so much packaging and many seedlings are now grown in these polystyrene trays.

Placing containers under pots prevents them from damaging the surface of the area on which the pot is placed, growers must be careful not to allow water to accumulate in these as clivias hate having their feet wet. In a shade or glass house it is advisable to have pots raised on mesh, bricks or anything which will help to prevent the container from sitting in water.

..*..

MEMBER SALE

Order form from the Club secretary:

(S, M, L, XL, with Clivia emblem on left hand side)

.....	R40,00
.....	R45,00
Clivia emblem.....	R5,00
(Minimum order R20,00)	R20,00
(for white) R4,00	

..*..

AP

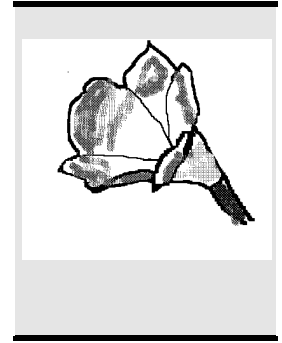
Clivia so much! I'm addicted to lycorine. Just as well I don't find it toxic.

Waking up inside the seed of one of the pods he was peeling and he is now trying to raise me in captivity so that he can show me off at the Clivia Show. I have to hurry up and hibernate before winter and try to think of some way of escaping. I may be able to fly away at the Clivia Show, meet a suitable partner and lay my eggs on the prize specimens.



Clivia
Club

PO Box 74868 Lynnwood Ridge 0040 South Africa



a. overseas

R20.00 p.a. RSA

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EE MEMBERS

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89 Brampton Road, Lynnwood Manor 0081
- ennings (012) 9910843
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- Haxton (011) 8027985
ox 977, Gallo Manor 2052
- Geldenhuis (012) 3339548
PO Box 11277, Queenswood 0121
- e Potgieter (012) 3354590
red Nicholson St., Mayville 0084
- Chubb (0325) 81978
ow Farm, P.O. Box 74, Eston 3740
- Hart (011) 6469392
70 The Valley Road, Parktown, Jhb. 2193

Southern hemisphere the clivia are beginning to bud and many of our Club members are busy preparing for clivia activities scheduled for next month. We have had a cold winter here in South Africa and we hope that the clivia will be in bloom in time for the shows.

from China from Professor Zhao Yu-tang appears in this issue. He also sent photographs of some broad-leaved varieties which will be on display at the Clivia Club Shows in Gauteng and Kwazulu-Natal. Like the Japanese the Chinese seem to place more emphasis on the leaves than on the flowers.

provoked some comments and questions from Nick Primich and Bill Morris. The question as to whether clivias are happy with their roots in water or not has been asked, and we hope we have clarified the interpretation of the number ratios of some South African fertilisers. Christo Lötter gives his ideas about clivia growing media and fertilising.

ribes his trip to the Entabeni Forest Reserve in the Soutpansberg mountains and he has whetted our appetites for the visit to Levubu in October to see *Clivia caulescens* in flower, and many other South African species in their natural habitat.

Botanical Institute at Kirstenbosch has at last received some clivia seeds from the Clivia Club. Thank you to all the members who donated seed for this clivia conservation cause.

e recently in the United Kingdom and Europe and visited some of the Clivia Club members while they were there.

tatic about 'Vico Yellow' and reports on cross pollination with 'Vico Gold' and with variegated leaf clivias in the hope of producing an even more spectacular hybrid. The scientific article in this issue deals with Sir Peter Smithers' excellent article on the origins of 'Vico Yellow' and 'Vico Gold'... and to think it all started from a seedling which had been thrown away! There is hope for all amateurs.

vaZulu-Natal and Gauteng have been busy with their activities, and now that the clivia plants are budding, members are nurturing plants for the shows. One member who will not be with us is Joe Pretorius. He died on 8 June after suffering for many years from lung cancer. He is survived by his wife Ronnie to whom we extend our deepest sympathy.

f the leading international clivia breeders, features as the personality in this quarter's newsletter. Many Clivia Club members have benefitted from the clivia seeds which he so generously sends each year. These seeds are a mixed bag, so it will be interesting to see how they flower in a few years time, particularly those with variegated leaves. He also sent a magnificent set of photographs of clivias (of different varieties, colours, shapes and sizes) grown at his Clivia Breeding Plantation which will be displayed at the Clivia Club Shows.

the 15% commission from sales from Club members be mentioned, as he feels that there is perhaps some misunderstanding about sales contributions to the Club. His view is that if a sale is facilitated by the Club through its Newsletter, but is conducted directly between two members, a contribution would still be appropriate. The decision obviously remains in the hands of the member concerned.

..*..

Dept. of Biology, Northeast Normal University,
Changchun, 130024, People's Republic of China
March 1996

self. I am a retired professor of Northeast Normal University, Changchun, China. I am an amateur clivia grower and have planted a lot of clivias.

m" or "city-flower" of Changchun, China, because many people in this city have grown this plant in their houses or greenhouses. There are many societies of clivia. The members have bred various cultivars or forms such as Yellow engineer, Buddhist, Victoria, Painter, Qindao bigleaves, Short leaves....., but all pay attention to the leaves.

and correspondence with you or your club, due to the clivia being native to South Africa.

about your club for the exchange of information, seeds or seedlings. If it is possible, please enclose some magazines published by your club.

- 0 -

6 April 1996

and the Journal of the Clivia Club and some other information.

flower or City flower in Changchun city. Citizens of Changchun all like this plant. There are a lot of gardeners who are planting and breeding it and some people have become very rich. In 1945, Manchuko, supported by the Japanese, was defeated, and some clivia which were grown in the Imperial Palace, made their way to the common people.

s always pay attention to clivia leaves. A good cultivar must have a few points as follows: the leaves must be 1. short, 2. broad, 3. bright, 4. erect, 5. thick. 6. veins green, 7. veins in good order, 8. background yellow, 9. top rounded... In some new forms, the breadth of the leaf is equal to the length, for example, the "Bird Clivia" (Chiao Lan in Chinese); "Horizontal Clivia" (Heng Lan) etc. But these are extremely expensive. One plant was about \$15-20 three years ago, about \$8 per anther.

er. I have only a few clivias growing in the window of my house, but I think that people who only pay attention to their leaves will be running on a narrow path or to a blind alley. I'll learn from experiences abroad; I'll cross them either for leaves or for the flowers, and be prepared to watch a plant with nondescript leaves for a whole year for the beautiful flowers. I hope to get some information from South Africa from the Clivia Club and through the Clivia Club Newsletter. I also hope to get some yellow flowering clivia, for example, Vico Yellow, *Clivia miniata* var. *citrina*, *Clivia miniata* var. *aurea*, etc. and I'll enclose some short leafed clivia or piebald clivia in exchange. I now enclose \$10 and the membership application to you.

- 0 -

and some information of 8 March 1996. I've read them carefully and there is a lot of news which I've never heard.

on clivia in China, but they have always closed their doors to new plants or to crossing their clivias, and have never had connections with abroad. As a Chinese idiom says "like a frog living in a well", they don't know how broad is the space.

I am very interested in clivia. I am a member of the Department of Science and Technology and the Clivia Society of China. Mr Chai Ze-min, the former ambassador of the Chinese Government to the U.S.A. and the U.N., is the Chairman of our Society.

ation from our customs, and there will be no trouble in importing or exporting clivia to and from China.

Chinese clivia which grow far from their native country. I hope you like them.

or cultivars which were cultivated in China for your club, and I hope to get some of the following clivias: *itrina*, or var. *aurea*, Vico Yellow.

..*..

out fertilisers

P.O. Box 17, Medowie, NSW 2318, Australia
12 June 1996

a question in relation to the article on "Feeding of Clivias" in the last issue of the journal.

were mentioned 4:3:4 (33) and 1:0:1 (36). Firstly what do the numbers 33 and 36 refer to? I suspected they were simply in place of names. That is, the first one was sold as fertiliser number 33, while the second was Fertiliser number 36. Is this correct or do they have real meaning?

ent of fertilisers is quoted on a weight for weight basis. Thus 4:3:4 would mean 4 gms of nitrogen per 100 gms of fertiliser, 3 gms of phosphorus per 100 gms of fertiliser and 4 gms of potassium per 100 gms of fertiliser. If this is the same in relation to the figures quoted I am very surprised to find a fertiliser available with such a low (N.P.K.) figure as 1:0:1.

ng in the ground) I give occasional feedings using 4:4:1 (an inorganic fertiliser) or 3.5 : 1.6 : 3.0 (an organic fertiliser made from chicken manure, steamed and pelleted). These are applied in dry form.

ally used 18:18:0 (again dry). But of course never used this on ornamentals. Also for clivias or other ornamental plants I can use a made up fertiliser (in water solution of low concentration) made from "Thrive" which in dry form is 27 : 5.5 : 9 or "Bloom Booster" which is 6.2 : 14.6 : 16.8 (for high P and K and low N).

have a recommended application rate of approximately 5-6 grams in 5 litres of water which is pretty dilute.

at anyone would buy a commercial fertiliser in which 98% was non fertiliser (1:0:1). If this is the correct interpretation of these figures, what is this fertiliser made from and how/why is it used? It would seem to be an expensive way to feed very little nutrient.

- 0 -

as answered the questions posed by Bill Morris.

, No.2 June 1996, the article on nutrition by Gerhard Reynecke provides very useful information. However, the fertilizers referred to are given in their South African nomenclature, and the following explanation may have value:

ree numbers refer to the ratio of N:P:K and the fourth to the total percentage NPK. For example, Gerhard first mentions 4:3:4 (33). In this compound there is a bit less P than N or K, with totals of 12% N (4H [33/{4+3+4}]), 9% P and 12% K = 33% NPK.

arisons, in South Africa elemental N, P & K are used, while most of the world refers to the oxides of phosphorus and potassium (the oxygen may even be absent, as in the 60% K₂O of potassium chloride which actually contains 50% K and 50% Cl with 0% O).

by Gerhard would be known elsewhere as:

	<u>N</u>		<u>P₂O₅</u>	<u>K₂O</u>
4:3:4 (33)	12,0	20,6	14,4	
1:0:1 (36)	18,0	0	21,6	

unaware of the language differences and only want to be fed properly.

..*..

and fertilising clivias

a letter written by Christo Lötter

P.O. Box 532, Hermanus, 7200
29 May 1995

ter and it is glaring accusingly at me! I apologize for only writing now, for only now expressing my gratitude for your letter and the lovely pen with inscription.¹

paper may be debatable but for the layman it is for example better not to use any compost in the soil mixture than to use mushroom compost. My own son would not listen - after 3 weeks all the roots rotted! The amazing thing now is that he replanted all these in ground pine bark chips and the recovery after 1 month is unbelievable. Well pine bark is also organic and so is palm fibre and I often use both in my sand mixtures for adult plants.

g then I realise clean coarse building sand such as I use will dry too quick. One will have to add a clay factor and then concentrate on drainage. Prof. Orchard used to emphasize 'pore-space and water retention'. What I have learnt though is that root rot occurs even in coarse sand with over watering and bad drainage.

d was with 'Supafeed' and 'Multifeed'. I used a watering can with a mix-nozzle. All that I can say at this stage is 'much better than 3:1:5(SR₂)!'. I still use 'Chemicult hydroponic mixture + Supranure' for the seedlings but alternate this with 'Multifeed'. What a difference.

the 'club'.

The pen was a gift which was given to the speakers at the 1994 Clivia Conference - Christo's paper was on Hydroponics.

SR refers to Slow Release. The nitrogen is released to the plants more slowly than with conventional fertiliser. The international ratio of NPK 3:1:5 is 3 : 2,3 : 6.

etter on ice for so long, Christo, but I thought it was worthwhile translating and that took a while to do. Thanks to Adri Haxton, the job has now been done (Ed.).

..*..

via

P.O. Box 6240, Westgate 1734
18 July 1996

st newsletter, Volume 5 No.2, and right at the end in the article for beginners (yes, I consider myself still a beginner) I found the statement "...clivias hate having their feet wet."

me time, but something seemed wrong here. The most vigorous growing clivias I have seen are those at God's Window, where they enjoy an average rainfall of three metres plus!

ivias do not like to soak their feet in water? Well, some of you who have visited my glasshouse may have seen a young seedling growing in a bottle of water. No one has ever asked me about it although it has been there for ten months, but I'm sure some of you have seen it. The older roots are covered in algae, whilst the younger ones are still almost white. It is also slightly bigger than its siblings growing in compost. Thus

I am certain that clivias can thrive with their roots under reasonably clean water. Perhaps muddy water may not be so good for them.

Tom Buck of Arcadia, California wrote a short letter in which he related how he revived a batch of shrivelled seed by placing it in a bottle of water in the refrigerator. They stayed there for four months and had regained their plumpness except for a few small ones that had dried out all together. He suggested further experiments along these lines, such as weak nutrient solutions and the germination of the seed etc.

I am looking for a simple and effective method of germinating seed at my place that would eliminate the fungus that attacks all open planted seed and destroys up to 20% of the seed at the germination stage. Thus I have tried germinating seed under water in various solutions. I have used weak copper sulphate solutions as a fungicide, mainly as it was easily obtainable. Obviously clivia roots are able to extract oxygen from the water.

I have advanced very far, but I would not hesitate to say that it is a highly efficient and easy to control method. It has also caused me to reaffirm my belief that clivia germinate more rapidly in the dark than in the light. They need a bit of warmth too. Try a few seeds in a 35mm film canister in your window sill. Put some in a black canister, and some into a translucent one. The sun will provide the warmth, but don't forget the water. Fungicide as necessary.

One of the main points about seed that is germinated in the dark, is that the orange flowered plants, which usually have the purple base to the leaves, show the first leaf deep red. Some of them become a beautiful deep plum purple. This unfortunately disappears with time.

I would like to construct an incubator that will provide a close even temperature control. Then I will follow with nutrient experiments and grow with lights etc. I would be very happy to hear from any member who has similar interests or who has conducted any experiments at all on these lines.

On succulents. Try this. Allow a plant to dry out in a pot for a few months. Take it out of the pot and clean off the roots. Weigh the plant. Then soak it in a bucket of water for a couple of days. Reweigh the plant. Register shock. The plant is able to store a great deal of water in its roots. You will notice that the shrivelled roots have plumped out and the whole plant is turgid. Ready for the next drought.

I have reached some people in an incorrect form. A letter from the USA, and one from Australia was directed to me at P.O. Box 6260, instead of P.O. Box 6240. The kind owner of 6260 destroyed the letters so I do not know from whom they came. This was probably in the middle of May 1996. I would be glad to hear from those two people. It seems strange that two letters from far spread countries should both have the incorrect address at the same time. My typing is done on a word processor, and my address is called up by a macro, so the odds of it being incorrect are infinitesimal.

I am working with his development of clivia hybrids. He is working very strongly with his Vico yellow. He has sent many seeds with this line in, overseas. He believes it will have a great impact on the clivia world. Well, he has seen and grown more clivia than just about anyone, so perhaps he is right, although I am always cautious until I see a bit of the new development. I think what we don't realise is the size of this plant. I have written to him and asked him to please take some exact measurements for us.

I have some seedlings from him where the Vico yellow is the pollen parent. They are but a few months old, yet are already showing a vigorous growth that I have seen in strong orange strains, but not so far in the yellow ones. They will certainly be vigorous, if not great plants.

I recently visited him a month or two back. Seeing that my only chance of corresponding with Dr. Hammett is now through these pages, I wonder if he could not find the time to give us an account of this plant. Another thing I

would dearly like to know from Dr. Hammett, is if he could give us an outline of what achievement is hoped for in the chromosome study he is guiding his pupil through? I think it is time he found a minute to give the Clivia Club a little direct input.

ers out there who have a great deal of knowledge, and a great capability, but we never hear from them. Might I have the audacity to remind them that the knowledge and contribution they give to the Clivia Club will be there for many future generations to use and employ? Please do give up a little bit of your precious time and share it with who knows how many thousands in the future. Come on now, you have all taken a bit out, so plough a little bit back again.

..*..

4301 Town-Country Drive, Charlotte,
North Carolina 28226, U.S.A.

12 April 1996

where I'm at on clivia.

a for 14 months, 10 years ago, and had several clumps of clivia in the landscape, and when I moved unexpectedly (in a company transfer) I brought a handful of seeds from my beautiful clivia and planted them in a flat - 32 plants grew and they are now large and beautiful but - no flowers!

lture of clivia but bits and pieces here and there. I've made some progress - this winter I put pots in the cellar with artificial light to keep temp below 60 and above 50.

d in New York 4 years ago are blooming each year, so now maybe this Spring, if I'm lucky, I'll have blooms. My desire is to have some yellow clivia one day.

cannot purchase the past bulletins, but one day I do want the complete set.

want to purchase some yellows, etc. to share with my plant friend in New York.

I received - its like really talking to these people in person.

d I look forward to our future relationships.

improves so that you can purchase those back copies and yellow clivia plants or seed. Good luck with your clivia growing project (Ed.)

..*..

P.O. Box 75, Levubu 0929
14 April 1996

...b, I have been creating enjoyable problems not only for some club members (cf. variety-hybrid controversy, cf. Ugandan *Clivia*) but mostly for myself. My whole short Easter vacation was spent transplanting ∇ 450 *clivia* seedlings (varieties and hybrids, as well as some of Mr Nakamura's types, including 24 yellows).

...y the unending work created by the new hobby that I packed up and escaped the slog by travelling ∇ 14 kilometres to the Entabeni Forest Reserve, high up in the Soutpansberg mountains. This was on Friday, 12 April 1996, and I wished to get away from it all for about 4 hours.

...ng through a magnificent patch of indigenous forest was the destination. Now, why would one go through all the trouble to look at a waterfall, now only visible after the good rains? Why would one trudge through mud and battle through thorny bramble (*Rubus*) and other creepers like *Toddalia*, *Coccinea adoensis* and the *Rhoicissus tomentosa* trip-wires?

...lescens plants, of course!

...nd third patch of *clivia* flourished along the upper reaches of a river. Not very dense and not as numerous as those in the Sacred Forest (Venda) that I described previously.

... *Combretum kraussii*, *Clutia abyssinica*, *Cryptocaria liebertiana*, *Drypetes gerrardii*, *Trema orientalis* and *Ocotea kenyensis* (Transvaal stinkwood), one reaches the really rocky and moist innards of the valley.

... *Impatiens duthieae* (Busy Lizzies) and shocking scarlet patches of flowering *Anomatheca grandiflora* light up the heavy shade cast by massive *Croton sylvaticus* (Forest fever berry), *Cassipourea malosana* (Onionwood) and *Xymalos monospora* (Lemonwood).

... *Maya bella* and new to this area, *Duvernoia adhatadoides* (Pistol bush) flourish in the rich, deep leaf mould. Big *Rawsonia lucida* (Forest peach) trees shed their bark, leaving bright cinnamon brown patches on the trunks (much like Bluegum trees do).

...s the stream, one finds the first *clivias* with their healthy, shiny leaves amongst the *Scadoxus puniceus* (Blood lily), *Peperomia retusa* and *Piper capense* plants. Closer to the banks *Orthosiphon labiatus* (pale mauve flowers), *Plectranthus* spp. with blue, white and pink flowers, brighten up the last stretch up to the waterfall.

... *Polystichum bowkeri* (Hen-and-chickens) as a ground cover binds the loose soil of the forest floor. Now for those who love ferns: apart from tall tree ferns (*Cynthia dredge*), *Dricranopteris linearis*, *Pteris vittata*, *Asplenium sandersonii*, *Blechnum giganteum*, *Todea barbara*, *Pteris catoptera* and many other species with mind boggling names - even growing as epiphytes on tree trunks. On the forest floor are many *Dietes grandiflora*.

... plants grow on the sheer rock walls close to the waterfall and their red berries contrast sharply against the dark rocks. Many *Streptocarpus polyanthus* (or *galpinii* ?) are scattered on the ledges, in cracks and wherever it is moist. There are even some deciduous *Agapanthus* (*campanulatus* ?) and white-flowering *Aeollanthus rehmanii* eking out a living in thin, composting soil on rocks. High up are some *Albuca glauca* plants.

... seeds. Those growing close to a beehive in a hollow tree trunk, seem to have up to 15 berries per flower head.

et seed in the area - mostly those on the cliffs. Very few in the deep forest. This can perhaps be best explained by the fact that we had the mother of all droughts until January 1996 and the clivias in the area, although flowering profusely, rarely set seed.

have 4 berries and these generally contain 1 seed per berry, rarely 2 seeds. Very few are ripe (bright red), most are still green and some vary from greenish-pink to pink as they ripen.

etative (stolons) as very few seedlings (+- 2 years old) were found. Plants do not have tall stems and no epiphytic tendencies were seen. Knee-high types, I would say.

by insects and I suppose some bored beetles devoured and cut up stems (which promptly rooted and are pushing up new plants through the fallen leaves and compost).

caulescens plants I have found in the area - fortunately in a forest reserve, a conservation area quite inaccessible to your ordinary hit-and-run "collectors". (One has to get a permit to enter the area - and even so, you will most probably get lost on the hundreds of kilometres of forestry paths, tracks and access roads).

ne and looking straight across the valley to the clivia paradise I had visited; Boy! was I tired but not the least irritated (and I was surreptitiously sneaking to the nursery to germinate a few new-found seeds....clivia fever strikes again and again...).

..*..

t
to James Abel (Chairman of the Clivia Club)

National Botanical Institute,
Kirstenbosch Botanical Garden,
Private Bag X7, Claremont, 7735
5 June 1996

cal Society members, interested in clivia, met at Kirstenbosch in order to launch a conservation project whereby surplus seed is donated to Kirstenbosch. The seeds are germinated and when the clivia are about one year old, they are offered to the nursery trade. Making clivia readily available will thus conserve clivia in its natural habitat.

o request your members to donate clivia seed to Kirstenbosch to assist us in our project. However, we have had no response to date.

meeting in September with this interested group and it occurred to me to ask whether there would be any objection to me inviting members of the Clivia Club in the Western Cape to attend. If there is no objection, please would you be so kind as to fax me contact details on fax number (012) 797 6570.

- 0 -

to Koos Geldenhuys (Treasurer of the Clivia Club)
National Botanical Institute,
Kirstenbosch Botanical Garden,
Private Bag X7, Claremont, 7735

17 July 1996

in writing back to you.

"*Clivia elgium*" seed you sent me. It arrived safely and in good condition. It is very kind of you and I look forward with interest to see what they produce. Once I have processed my seed, I shall send you some crosses to try.

I have cleaned *Clivia miniata* seed and I received a second package yesterday. Thank you so much for being so supportive in our efforts to help with the conservation of our flora. I am most grateful to you. Please thank your members for being so generous.

..*..

and Europe

though to return recently from a long-planned trip to Northern Europe to see relatives, to track some long-lost roots and to enjoy the garden splendour. We were almost too late for the overwhelming tulips and rhododendrons and on time for many others.

Travel & Breakfast industry in the UK in particular allows for a wide and flexible travel and in advance we contacted a number of Clivia Club members with requests, that were met with enthusiasm and hospitality, that we visit them in passing. Until now our clivia background has been essentially South African, and we offer the following impressions which we hope will be followed in the Newsletter in due course by detailed contributions from members in the countries concerned.

In northern Europe clivias have to be grown indoors in very limited and expensive space, and they have to compete for that space with many other beautiful conservatory plants. Our trip was in May and peak flowering is in February/March, but would we have endured the rigours of the winter with an earlier trip? We did miss the flowering of many beautiful forms, but, due to individual greenhouse settings, some collections were still in full flower.

We had as few as one or three pots of clivias, but undiminished enthusiasm. Included was a "yellow" belonging to Cynthia and Dennis Marriot, brought back by a friend from a trip to South Africa which turned out to be an attractive pinky-orange when flowering during our visit. Michael Jeans, in his new glasshouse, is building up a good selection of forms. Read's Nursery had a broad range of plants, but feature a *C. miniata* on the front page of their catalogue and had a lovely Wisley Red in flower. We were also fortunate to be shown the Bodnant collection, winner of gold medals at Chelsea, where the clivias which were in flower were magnificent. Regrettably the collection is not open to public display.

we saw more clivias than we have ever seen before. In a previous issue of the Newsletter (March 1996, page 4), Willem Reuter has described the background to the Belgian Hybrids, where the dominance of clivias as household plants in the late 19th and early 20th centuries has been broken by the adoption of domestic central heating. However, there is still an annual production of about 400 000 plants by fewer than ten farmers, regrettably most are discarded after flowering. As an example, Pierre and Isabel de Coster market 70 000 flowering clivia annually in February/March. In just over 0,5 hectares of glass they house their parent plants, in full fruit from intensive hand pollination, as well as the seedlings (sown in December), the intermediates transplanted in September (9 months) into 9cm pots, and the ready-to-flower transplanted in May (18 months) into 13cm pots. Of each year's sowings, 20% will flower after two years and the balance at three years. For South Africans with garden plants reluctant to flower at less than five years, the major difference is surely the minimum glasshouse temperature for seedlings of 16E to 18E C.

of the same area under glass devoted to seed production only, with the whole production being exported to the USA. The scale and rapidity of commercial production in the expensive facilities have resulted in little selection, and most of the plants are uniform with flowers of a typical orange miniata form and only moderately broad leaves. However, with so many specimens available a number of very attractive individuals were seen, and it is unfortunate that air travel precluded their collection.

Other plants for greenhouse space was for us not a misfortune, since we also saw many genera and species that were new to us. We were also impressed by the sheer scale of horticultural production, nearly getting lost among the literally thousands of hectares of glasshouses in Holland. We were impressed by the particularly high level of plant differentiation, technology and mechanisation.

There were little known, and it must be accepted that they have limited commercial value. The European members were, however, interested in being told about them and grateful to be given a few *C. gardenii* and *C. caulescens* seed that we were able to take with us. Flowering *C. gardenii* (just brought in from the Cape) were included in the gold medal winning Kirstenbosch stand at Chelsea, and pots of the species were seen at the RHS gardens at Wisley. A *C. nobilis* was just coming into bloom at the magnificent 1 hectare conservatory in the 93 hectares of the National Gardens at Meise in Belgium, where the plant collections from all around the world were very impressive. Very few citrina specimens were seen during the trip.

World-wide knowledge of clivia became more evident in discussions with Kees Sahin of Holland, who reflected on his experiences in Japan, and stated that the genus is particularly popular in Korea and China, and in such flower-loving nations clivias will be kept in tens of millions of homes. When and how were they introduced?

One of the trip was of how limited our (and probably many other members') world-wide knowledge is, and of the Club's challenge in researching and publishing information.

..*..

4-28, Kurodo Mobara-city 297,
Chiba Prefecture, Japan
April 1996

Vico Yellow and Vico Gold flowered on the same day. Sir Peter Smithers has given a full account of these flowers. I have now discovered a very interesting fact in addition to his report on Vico Yellow. Vico Yellow has produced a flower exactly like Vico Gold by crossing it with Vico Yellow pollen.

Way of producing a flower superior to Vico Yellow? I knew this would be difficult, but I was convinced that it was possible by using Vico Yellow. And now I know I was right about this.

See a variegated type from both tissue cultured seedlings and normal seedlings. It also produces double flowers sometimes.

I have encountered these phenomena and have felt a great deal of enthusiasm.

As to Vico Yellow, Dr Hirao held the view that Vico Yellow would be the major material for breeding clivia. From now on, I'm hoping to find make more interesting discoveries by observing Vico Gold.

It is possible that I shall encounter even more wonderful flowers and plants produced from the precious clivia plants given to me from wonderful friends all over the world.

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CLIVIA 'VICO YELLOW' AND 'VICO GOLD'

THE ORIGINS OF *CLIVIA MINIATA* 'VICO YELLOW' AND 'VICO GOLD'

Sir Peter Smithers
Vico Morcote, Switzerland

CLIVIA by Terry Hatch about nerine breeding in New Zealand draws attention to the unfortunate practice of raising hybrids without preserving the records, if any, of their antecedents. To the commercial grower this may be of little consequence, but to the breeder it is a misfortune. As both of the yellow clivias raised here are now being used extensively for breeding in Japan and elsewhere, I feel that I should put on record what I have been able to discover about the origin of their seed and pollen parents and the curious history of these two clones. For much of the information which follows I am indebted to Mr. J.L.S. Keesing, Living Collections, Kew, and his staff.

CLIVIA OF SOUTH AFRICA 11 (1931) shows a full page plate of *Clivia miniata* Regel var. *flava* Phillips var. *nova*; *a forma typica floribus flavis differt*. (National Herbarium Pretoria, No. 8724). It then goes on to state as follows:

A typical *Clivia miniata* as found in Natal. The illustration on the accompanying plate, also found in Natal, differs from the species in having yellow flowers. We received the specimen from Mr. B Nicholson, S.S.O., of 'Mbabane, Swaziland who obtained the plant from Mr. C.R. Saunders of Melmoth, Zululand. Mr Saunders informs us that one or two plants were found in the Eshowe Forest, Zululand, about the year 1888, and a number of plants have been propagated from seed but took many years before they flowered. Mr. Saunders also informed us that two or three years ago a plant flowered at the Royal Botanic Garden, Kew, but as far as we are aware has not been figured. The fact that all plants raised from seed have yellow flowers indicates that we are dealing with a pure strain; but except for the colour of the flowers we have not been able to obtain any tangible characters which would separate it from *C. miniata* and have, therefore, kept it as a yellow variety."

did not mention the colour of the fruits. The fruits of *C. miniata* 'Kewensis Cream' are bright yellow and so are those of its two yellow progeny to which this article refers.

flowered plants mentioned in the description above as flowering at Kew, apparently in the period 1920-1930, is not clear from this text, but it may have been intended to imply that they were of similar origin to Mr. Saunders' plants, and this seems to be confirmed by what follows.

The Hon. Lewis Palmer, Treasurer of the Royal Horticultural Society, whom I knew well as a meticulous plantsman, wrote as follows to Mr. Marais at Kew:

Charles Saunders, administrator of Zululand) in October 1925 at his home near Eshowe he had several large tubs of it (the yellow clivia) in flower on his stoep. He kindly gave me two plants which I brought back to England and gave to my father-in-law, the late Lord Wakehurst. He gave one to Kew and kept the other. After consulting Sir Arthur Hill, Lord Wakehurst decided that the proper name for the plant was *Clivia citrina* or *Clivia miniata* var. *citrina*. Both plants flowered and Lord Wakehurst exhibited his at an R.H.S. meeting in 1927 or 1928 under one or other of those names. Both plants set seed and subsequently died". (My underlining.)

seedlings in both cases reverted to the orange colours of *C. miniata*, but in both cases *C. miniata* had been present and in flower. This induced the late Mr. Raffill of Kew to endeavour to segregate back to the lemon colour by selfing the seedlings and selecting and I know that shortly before he died he had been successful and for some reason called the plant *C. miniata* var. *flava*. Whether it was the F₁, F₂ or F₃ generation I don't know. In the meantime I visited South Africa again in 1948 and was able to obtain another plant from a friend of Lady Saunders who had a stock in her garden. This flowered in my greenhouse and I selfed it without any other clivia being present and the resulting seedlings have come true to colour...".

and clivias from Mr. Russell at Castle Howard under the names of 'Kewensis A', 'Kewensis B' and 'Kewensis Cream'. This material was received by him at Kew. It has been a practice for plants raised at Kew to be named "Kewensis", vide *Magnolia* 'Kewensis'. No doubt this would not now be admissible under the International Rules, which prohibit the latinising of hybrid names. However that may be, it is clear to me that what I received were three clones from Raffill's segregation program. 'Kewensis Cream' was therefore not *C. miniata* var. *citrina*, neither were clones 'A' and 'B' pure *C. miniata* var. *citrina*.

'm' flowered and produced seed in bright yellow berries. Its pollen had been used on clones 'A' and 'B' which were growing in the same greenhouse but were not segregated. Pollen-dabbing at its worst! My excuse: I did not take the cross seriously.

flowered, all producing colours in varying shades of orange with more or less yellow in the throat and widely varying forms. But there were no yellow flowers and no yellow capsules. However, at the time of potting the seedlings there were more than I could accommodate in my greenhouse devoted to nerines, so a quantity of seedlings were planted out, really thrown away, under the staging. In or about 1978, to my astonishment, one of these flowered with fine yellow blooms, certainly not inferior to 'Kewensis Cream', which were followed by yellow capsules. The plant prospered and I sent an offset to the late Dr. Shuichi Hirao, most eminent and generous of plantsmen, in Japan. He thought highly of it and sent me a plant of his yellow clivia, which was, I must say, far inferior in quality of flower. He told me that it had been obtained from the late Mr. Gordon McNeil in South Africa. In 1984 Mr. Les Hannibal wrote to me that he had also received a yellow clivia from Mr. McNeil which closely resembled the Hirao plant.

my second astonishment in this story, was to receive a copy of the JOURNAL OF THE JAPAN HORTICULTURAL SOCIETY, No. 89, 1985 which figured my yellow clivia in colour on the cover. Inside was an extensive illustrated article on "Breeding of Clivia for Commerce" by Uema Tsu. The Japanese are the ultimate plantsmen, and I should have been alerted by this publicity to the fact that the plant was highly significant.

l, still quite young. It was a couple of years later that I received a letter from Yoshikazu Nakamura, Clivia Breeding Plantation, 4-28 Kurodo, Mobara 297, Chiba Prefecture, Japan, saying that "Shu's" widow, attaching an importance to the plant which I failed to do, had wisely given it to him. Might he have "permission to breed from Smithers Yellow, world's best yellow clivia, the one to beat". My third and final astonishment in this curious story - I replied that so far as I was concerned he was free to use the plant in any way he pleased, provided that the name would be `Vico Yellow". I fear this proviso may have come too late as I understand that the plant is already proliferating in Japan under the former name, `Smithers Yellow'.

ade by Yoshikazu Nakamura is a crossing with some of the magnificent variegated leaf clivias, which transmit the variegation to seedlings. It must be admitted that whereas a clivia plant is spectacular for two weeks in the year, these wonderful variegated plants are spectacular for fifty-two.

e there subsequently flowered a second yellow seedling which is very similar to `Vico Yellow" but it is too early to say whether it is superior. It is a very strong grower.

Lord Aberconway and his Garden Manager, Mr. F.C. Puddle, raised a series of clivia hybrids at Bodnant stated to be "between *Clivia miniata* var. *citrina* and the salmon *C. miniata*. An exhibit of these hybrids received a Gold Medal from the Royal Horticultural Society and on advice from the Society, two selections were assigned the names *C. x kewensis* "Bodnant Variety" and *C. kewensis x "Bodnant Yellow"*.

ng, suggesting that the Bodnant plants were raised from the Raffill (Kew) segregations. After a further consultation with the Society I am advised as follows: "If one breeder (in this case Raffill) gives a horticultural collective name to his progeny of a particular stated infraspecific cross, it does not dictate that anyone else performing the same cross is bound to use the same collective name. Botanical collective epithets are generally use only for interspecific crosses and are binding on other workers. If Kewensis Group is to be used to cover plants ultimately derived from the work of Raffill at Kew then it would indeed be inappropriate for this collective name to be used for the Bodnant plants - assuming their yellow flowered plant was not one of Raffill's introductions. If it is really needed, then they would require a separate collective name."

end registering *Clivia x kewensis* `Vico Yellow' and *Clivia x kewensis* `Vico Gold' with the Registrar of Amaryllids.

onfusion among breeders, a separate name is indeed needed for the Bodnant plants. This seems all the more appropriate in view of the fact that the late Lord Aberconway, then president of the Royal Horticultural Society, did not consider that his plants should be included in `Kewensis'. In my opinion he was right.

colonial" South Africa in the old world of Lords and Ladies, Knights, Administrators and Honourables, ends up in modern Japan. It is a happy ending. The painstaking work of segregation by Charles Raffill, a very distinguished hybridist in other fields, particularly magnolia, has finally been preserved and rewarded, quite by accident, and without any merit at all on my part!

Clivia x Kewensis `Vico Yellow' has been registered in Japan by Miyoshi & Co., 3181-Takeahara, Kamisasae, Kobuchizawa, Kitagoma-gun, Yamanashi, Japan 408, and is being distributed by them from tissue culture.

ared in *Herbertia* 1994.1995, Volume 50, pp 9-12, and has been reproduced for educational purposes.

..*..

CLIVIA CULTIVATION WORKSHOP (1 JUNE 1996)

Clivia Club held a Clivia Cultivation workshop at the National Botanic Gardens in Pietermaritzburg at the beginning of June. The occasion was well supported with approximately 30 members attending. The support from Gauteng was appreciated. It is good to know that there are dedicated enthusiasts prepared to travel.

The workshop coincided with the flowering of *C. gardenii*, of which the Pietermaritzburg Botanic Gardens has huge plantings, possibly the largest plantings of *C. gardenii* anywhere in the world. They were in full flower and the mass of these small flowers was most impressive.

A discussion of the differences among the pendulous species. Good examples were on show of *C. nobilis*, *C. caulescens* and *C. gardenii*. Of particular interest was a specimen of *C. gardenii* which has a stem of approximately 45cm with side branches and the occurrence of *C. gardenii* seedlings with no red pigmentation. A photographic display from Japan of *C. x cyrtanthiflora* was most interesting and the variation on colour and shape of flowers was amazing. Much input came from the members present and there was a discussion on potting medium, fertilisation, pests and diseases and general clivia cultivation issues.

Many thanks to the KwaZulu-Natal committee and to the members for their support and enthusiasm.

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VIA CLUB MEETING AS SEEN BY ONE OF THE MEMBERS

al, for a short holiday, we (i.e. James & Adri Haxton) with Denise Currie stopped at the Pietermaritzburg Botanical Garden to join the locals for the 1996 *C. gardenii* meeting.

familiar faces and to match new faces to already familiar names - the advantage of being responsible for the membership list! It was sad to learn about the death of Bobby Maxwell's
so since only a year ago we all enjoyed their hospitality when the gardenii meeting was held at their lovely place.

c Garden's two large beds of *C. gardenii* in full flower and could experience the different leaf textures of *C. caulescens*, *C. nobilis* & *C. gardenii*. I want to congratulate Brian Tarr & his staff on their garden as well as being host to the Clivia Club. How about the Johannesburg Botanical Garden and the National Botanical Garden at Roodepoort?!

n Tarr & Sean Chubb. Brian in his talk mentioned that they have categorised 5 different yellows, being:

y yellow - starts with green centre

base flat

y ugly flower

ellow - true if selfed

in 1870 from Melmoth to Kew Gardens, vigorous plant; 80% yellow seedlings.

ll flower on display with a stem about 45cm long - unbelievable! Then he also displayed a true *C. gardenii* that is obviously a miniature. He had a pale coloured *C. gardenii* of which the
e absence of red on their leaves. Has anybody experienced this before and what did the seedlings' flowers look like?

rable and worthwhile meeting. Thank you Sean & Brian!

..*..

MEETING HELD AT WITKOPPEN WILDFLOWER NURSERY (27 JULY 1996)

he Clivia Club meeting was held at the Witkoppen Wildflower Nursery at Fourways in Sandton.

sed the Clivia Club meeting. She is one of the top (if not the top) indigenous horticulturalist in South Africa. Her knowledge of our indigenous flora is extensive. She decided to highlight those plants which would complement a Clivia setting rather than speak to the converted and those who had far more in-depth knowledge about Clivia.

t the plants, but also had specimens of the plants to show at the meeting. The types of plants ranged from ground covers through to trees and shrubs for shade, as well as other bulbous plants which could be companion plants in a bed of clivia. It was really interesting to learn about this different aspect of clivia growing. This is especially true for those who are still building up their collection of clivias and would like to fill in the gaps or create the correct amount of shade.

ere were many questions when the meeting was thrown open to the floor. Some of the questions raised concerned our friend "the Lily Borer". There were also questions about rust on plants.

erview of her visit to Belgium with her husband. She told us briefly of the wonderful way in which Pierre de Coster and his wife run their clivia operation.

as on display at the meeting. This piece of equipment is ideal for growing clivia seeds (other seeds too, of course!) It consists of either 3 or 7 domes that fit over trays. These trays are placed on a larger tray which contains the heated cabling. The smaller trays are filled with the chosen media (it seems that washed river sand works best) and the seeds planted as they would normally be, given a light watering, the dome put in place and the cable switched on. The seeds begin germinating within approximately two to three weeks.

successful with 26 people attending, including the Sims from Kroonstad, who made the trip of 200 Km especially to attend the meeting.

the Witkoppen Wildflower Nursery supplying tea and coffee and wonderful eats.

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plant lover's home in Japan. I was almost too small to remember my first encounter with clivias, but can recall my grandfather scolding me when I damaged leaves of his clivia, and also recall the orange flowers every year. As my father had been growing flowers, I was familiar with the plants since my school days. After graduating from school, I found a job in a company, but collected clivia as a hobby.

time there was a person who was collecting yellow clivias nearby, so I visited him. He was Mr Miyake and was a friend of the late Dr Hirao, who gave me inspiration for the rest of my life.

plants, especially Alstroemeria and Amaryllis, but also grew clivias. He took me into his huge greenhouse and showed me several yellow clivia. He took several seeds and gave me some but it was about twenty years ago and they were very valuable at that time. All those seeds produced yellow flowers.

on in my life, and he recommended that I stop working at the company and work at his farm until I got started. During the time that I was there Mr Miyake taught me seedling management and other information, and gave me clivias without charge. Even though the late Dr Hirao's plants went to the specialists, he asked them to give me his whole clivia collection. So this became the reason for my success in a short period. I admire Mr Miyake and he admires Mr Hirao. As I got busier, the time spent at Mr Miyake's farm got shorter.

growing clivias, but Mr Ken Smith sent me lots of information regarding them. I was overjoyed by the opportunity to get to know about clivia overseas, and decided to visit Australia. It was my first overseas trip and I was worried as I could not speak English. Ken came to meet me at the airport. He took me to various places and introduced me to many of his friends and they helped me in every way. After this I visited South Africa in 1994. Nick Primich took me everywhere. Thank you to everyone who helped me during my visits.

towards my breeding programme, and it gives me great enjoyment in every way. Clivias were not cultivated fully in Japan and I had great expectations. I envy clivia members in South Africa, the natural habitat for clivia. Techniques could be developed, but the breeding base would still be the natural gene resources.

producing beautiful flowers far beyond any of my wildest dreams.

by Mrs Yoshiko Dobson

..*..

ect by profession and a perfectionist by nature. He began his interest in horticulture with orchids and had built a series of greenhouses in Pretoria with a variety of these plants of which some were exceptional specimens. A few years ago he turned his interest to clivias and at the time of his death had one of the best collections in Gauteng. Despite ill health in recent years he prepared a large shaded area of his patio and meticulously organised his plants to create a remarkable visual effect.

with Belgian Hybrids, the initial stock of which came from the Coromandel Nursery in the Eastern Transvaal (now defunct). According to his associates and friends Joe rapidly became a devotee and through his painstaking regard to potting media, feeding and cross-pollinating he became well-known for the quality and variety of his plants. It was not surprising with this background that he was a regular winner of prizes at Clivia Shows. He and his wife Ronnie shared the highest points with Rudo Lötter at the 1995 Clivia Club Show in Gauteng.

or his skills in cultivating clivias and in the competitive arena. But most of all he will be missed for his friendship and advice to others as Joe was always willing to share his knowledge with friends and members of the Clivia Club.

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at we learnt of the death of Prof. Christo Pienaar earlier this year. He was best known for his presentation of Veld Focus on the TV programme 50/50 on Sunday evenings, but he was also a member of the Clivia Club. His enthusiasm will surely be missed by all lovers of South African flora and fauna.

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Following new members:

Gordonsbaai, 7151
at 47, Parowvallei, 7500
ykstraat 35, Franshoek, 7690
n, P O Box 11659, Dorpspruit, 3206
3, Crestview, 6025
Menlopark, Pretoria, 0102
x 32558, Glenstantia, Pretoria, 0010
ery, Posbus 1455, Knysna, 6570
Stockville Road, Gillits, 3610
Road, Valhalla, Pretoria, 0185
Rowallan Park, 6025
Place, Pinetown, 3610
Pretoria, 0001
299, Sedgfield, 6573
24, Stellenbosch, 7600
Hilton, 3245
Kuilsrivier, 7579
7, Levubu, 0929
x 98, Howick, 3290

venue, New York, NY 10011, USA
Darby Avenue, Las Vegas, NV 89102, USA

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Clivia Club Show

Venue	Pretoria National Botanical Garden
Time	08:00 - 16:00 - Show open to the public
Entrance fees	R4,00 per person to the National Botanical Garden (R1,00 for senior citizens and children) and R2,00 per person to the Clivia Club Show

Programme for the day

06:30 - 08:00	Acceptance of plants for the show and acceptance of plants and seeds for sale
08:00 - 09:00	Judging
11:30	Annual General Meeting
16:00	Show ends. Show plants and plants not sold may not be removed before 16:00.

Prizes will be awarded in the following classes:

- 1 Best Yellow
- 2 Best Red
- 3 Best any other colour (*C. miniata*)
- 4 Best broad leaf
- 5 Best variegated

- 6 Best pendulous
- 7 Most unusual
- 8 Best hybrid (C. miniata x any pendulous)
- 9 Best clivia on show

Plants and seeds for sale must be marked clearly with the following:

- 1 Owner's name
- 2 Price of plant or seed
- 3 A list of plants and prices in duplicate.

Members will be responsible for selling their own plants and seed. 15% of the sales will go to the Clivia Club.

There will be talks and demonstrations on the care and treatment of clivia.

Contact person Frikkie Potgieter. Tel. (012) 335 4590

Visits to clivia gardens in Pretoria

Venue Meet at the upper parking area of the Glenfair Shopping Centre, cr. of Lynnwood and Daventry Roads

Time 10:00

Clivia Club Braai

Venue National Herbarium, Pretoria National Botanical Garden. **N.B. Not at the Abel's home**

Time 12:30

Price R30,00 per person (No charge for entering the National Botanical Garden)

Contact person Toy Jennings Tel. (012) 9910843

Please let Toy know if you intend coming so that arrangements can be made for catering.

Clivia miniata Show

Venue Education Centre, Pietermaritzburg Botanical Gardens

Time 08:00 - 16:00

Programme for the day

11:00 - 12:30 Staging of plants

12:30 - 13:30 Judging

14:00 - 15:00 Annual General Meeting

16:30 Show closes

Prizes will be awarded in the following classes:

- 1 Best C. miniata - orange
- 2 Best C. miniata - orange, broad leaf
- 3 Best C. miniata - yellow
- 4 Best C. miniata - any other colour
- 5 Best variegated
- 6 Best pendulous - nobilis, gardenii, caulescens, cyrtanthiflora
- 7 Open class - most appealing, unusual or attractive plant
- 8 Best clivia on show

There will also be prizes for the best photograph on show and for the best cut flower.

Plant sale tables will be available.
Raffles will take place with unusual plants.
All members and visitors welcome.
Contact person: Sean Chubb. Tel. (0325) 81 978

PLEASE NOTE THAT THE CLIVIA CLUB TOUR TO THE NATAL MIDLANDS HAS BEEN CANCELLED

Clivia weekend in Zululand - based in Eshowe.

C. miniata and C. gardenii will be viewed in their natural habitat.

Time Saturday 14:00 and Sunday
Contact person: Sean Chubb. Tel. (0325) 81 978

Please contact Sean soon as possible if you wish to attend the visit so that Sean has an idea of numbers.
Accommodation must be arranged by individuals themselves - a list of places to stay is available from him.

Festival of Music at Franschoek

This is not only a music festival. There will also be plants for sale. Will anyone interested in selling plants please contact Gert Wiese at (021) 966546

Gauteng Clivia Club meeting

Venue National Herbarium, Pretoria National Botanical Garden. **N.B. Not at the Abel's home**
Time 14:30
Topic Wessel Lötter will give a talk and slide show on his clivia hybrids.

Clivia nobilis tour of the Eastern Cape

Contact person: Charl Malan. Tel. (0461) 29 112

Clivia caulescens tour to Levubu, Northern Province, to view *C. caulescens*

Contact person Prof Dries Bester. Tel. (015) 583 0299

Please DO NOT contact Toy Jennings about this tour.

or some of the above visits will be confirmed later.

..*..

Clivia Club shows will be doing so in order to purchase yellow clivias. Yellow clivia in flower are extremely expensive, so the alternative is to buy a smaller seedling. But how will you know whether the seedling will bear yellow flowers? A seedling from a yellow parent is not necessarily yellow, and you will have to wait many years for it to flower. However, in most cases it is easy to tell a yellow seedling from an orange one, but only when the plant is very young.

ments, anthocyanin the red pigment and carotenoid the yellow pigment. Yellow clivias are mutations or "sports" due to a lack of red pigment. If only the yellow pigment is present, the flower will be yellow. The easiest way to differentiate a yellow seedling from an ordinary one is to examine the colour of the young seedling at the base of the leaves. Ordinary clivias have a purplish or reddish leaf bases when they are young whereas those of yellow clivias are green.

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FOR SALE

from the Club secretary:

(S, M, L, XL, with clivia emblem on left hand side)

T-shirts R40,00

Golf shirt R45,00

Clivia emblem R5,00

(Minimum order R20,00) R20,00

(for white) R4,00

..*..

For Sale:

Pure Natal orange *C. miniata* at R17.25 each.

Clivia plants available at R17.25 each.

C. miniata at R17,25 each and year old seedlings of *C. gardenii* (light colour) and *C. caulescens* at R12,00 each.

Year old *C. miniata* at R8,00 each.

Direct (not Toy Jennings) for the above plants. The sellers are asked to observe the honour system by donating 15% of the sale of their plants to the Clivia Club.

For Sale at UMTENTWENI, Natal North Coast

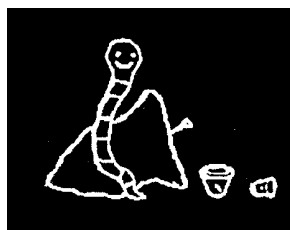
Property, 3.5 acres, 1 Km from the sea, 4 Km from the centre of Port Shepstone. Half an acre under clivias, 800 Anthiriums, indigenous trees: Phone Toy Jennings at (012) 9910843 or Althea Platt at (03969) 50578 or (03969) 50393. If sold through this advertisement a percentage of the sale will go to the Clivia Club.

..*..

Hi AP

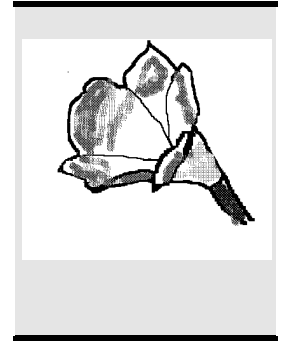
Hi the world again! I think I must visit China sometime to see whether those broad leafed varieties are tasty. At present everyone is so busy polishing up their plants for the shows that I am nervous to climb out of my pupa in case I get zapped.

Yours
Lily Borer.



Clivia Club

PO Box 74868 Lynnwood Ridge 0040 South Africa



a. overseas

R20.00 p.a. RSA

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clivia flowering season is over in the southern hemisphere, and the AGM, shows, visits and other Clivia Club activities are behind us. It has been a busy year for the committee and for all of those who were involved in organising events. We hope that our members are using this time of the year to fertilise their clivia so that they can develop their flowering shoots for next year.

nce this time, and some will have to be kept over for other issues due to a lack of space. Once again there are thought provoking letters from many members covering many aspects of clivia culture.

ria Show in Pretoria in 1995 and subsequently became a member. We have included an abstract of her master's dissertation in this issue which corroborates much of the information already known about the chemistry and pharmacological properties of clivia. She is presently enlarging on aspects of this topic for her doctoral thesis.

nners at the shows. I question the class for 'best pendulous' as there are usually only one or two entries in this class (as these flowers are flowering out of season). At the Pretoria show there were many beautiful specimens of miniata variations (often referred to as hybrids) which were all put together under 'best hybrid'. Perhaps we should think about classes for 'best miniata variations' or 'best miniature miniata'. Prizes could be given to the pendulous varieties when they are in season at Clivia Club meetings.

not only busy at clivia shows but also at two other shows in Pretoria. Clivias on show attracted much interest and enlisted many new members. Sets of photographs taken at the Clivia Club Show in Pretoria by James Haxton are available to members. Please see order form enclosed.

newsletter is Toy Jennings who has been our public relations secretary for over a year. She has dealt with mountains of mail and has spent many hours giving advice about clivia over the 'phone. We will miss her friendly presence here in Gauteng and hope she stirs up lots of clivia activity in the Cape where she and Peter have moved.

members since the last newsletter, mostly recruited from the shows, and since there are so many we have published their names and addresses on a separate list at the back of the newsletter. We wish you all a very warm

welcome and hope you receive the information you want about clivia in the newsletter or from the committee or other members.

e published in the next newsletter with details as at the year's end. The renewal notices will be enclosed in the first newsletter of 1977. Next year's issues of the Clivia Club Newsletter will be published in January, April, July and October, so that adequate time can be given for notices and arrangements for shows, club meetings and visits. For those who need to make early bookings and arrangements, the date of next year's Clivia Club show in Gauteng will be on 6 September 1997.

..*..

increased, to 334 from 15 countries. We have 281 South African members. Current overseas membership is as follows (5 August 1996):

	17
	2
	1
	1
	2
	1
	5
	1
	1
	1
	1
	8
	11
	1
	53

publicise the club where appropriate. The membership list has become a comprehensive document, but members are requested to ensure that the club has their full contact details and telephone numbers, so that others may get in touch (where there is a danger of over-load from visitors, please feel free to ask the membership secretary to not publish that detail).

All members together is the Newsletter, which has appeared promptly each quarter. Our editor has had a wealth of contributions from members, but, as always, we request wider participation, for an improved reflection of member's interests. What may appear to be mundane observation by one may be a nugget for another - tell us what you would like and constructive criticism is always welcome.

eral communication. We believe that the seed distribution scheme is working well, but regret that we have found that it can only function where members have clearly indicated their needs AND paid a deposit so that despatches may be made promptly.

held in Gauteng and KwaZulu/Natal, and small groups have been on all four species tours. It is very pleasing to see the activity in other countries - may they continue and broaden. A start has also been made on developing clivia judging principles, with regular discussions having been held.

contributions on botanical aspects, and it is great to hear of the Msc research project initiated in New Zealand. There has been little co-ordination of technical information by the Club, and, without doubt, many of us do not know how much there is known and published. For example, we recently received extracts from Plant Life (1949) describing cytological studies of *C. nobilis* and *C. miniata*. The committee recommends that a technical position be created to systematically collect such information, to summarise extracts for the Newsletter and to advise on the investment of available club funds for further research.

Today promises to be the best to date, as we have gained experience from the past. We are delighted that Pen Henry from Australia is able to visit and that she is also able to participate in the KwaZulu/Natal activities over the next fortnight.

Committee for 1996/7 consist of the chairman, treasurer, editor, show organiser, membership secretary, public relations officer (previously communications) and, for the first time, technical advisor.

metres from Gauteng, it has been very rewarding for me to be aware of the very hard work done for us all by the committee and other members. Such work is purely voluntary, and while generally enjoyable, it also includes substantial drudgery. All credit to them for their freely given contributions and I propose a resounding vote of thanks.

..*..

M (7 SEPTEMBER 1996)

AGM held on 7 September 1996 at 11:30

present, the chairman's and the treasurer's reports were presented and accepted.

Members should cover the cost of the Newsletter, with other activities being self-funding on a regional basis. Members with responsibilities such as the publication and mailing of the Newsletter (and other matters) are devoting a lot of time for our benefit, and they are encouraged to have more onerous tasks done commercially. Fees have not been increased for three years, and it was proposed from the floor (Geoff Meyer), and accepted unanimously, that from 1997 they should be R40,00 per annum in South Africa, and US\$20.00 per annum (or the equivalent in any other currency) elsewhere. Back copies of the newsletter will cost the same per volume. Where possible, the Club will make sales items available at cost to branches, which may then raise funds by charging a suitable margin.

Technical Committee member, surplus monies, generated largely by the show and seed sales, will be used by the committee for the encouragement of research into the genus, and institutions internationally are encouraged to make proposals for the disbursement of the (modest) funds available.

the election of office bearers, who were proposed individually from the floor, and elected unanimously. A special word of thanks to Toy Jennings, who is moving to Cape Town, for her very substantial contributions, and a warm welcome to Elda de Witt and Louisa Liebenberg.

..*..

fontein

38 York Road, Waverley, Bloemfontein, 9305
11 June 1996

ou about the CLIVIA evening we had in Bloemfontein on 19 January 1996. As Chairman of the local Branch of the Botanical Society it occurred to me that we should invite Mr Wessel Lötter from Hercules Pretoria to address the local branch on the Clivia Hybrids of which he is such a noted authority. I have heard him speak on this subject at a meeting of the Clivia Club in Pretoria, and wished to share this wonderful experience with others. It was also viewed as a much needed boost for the local branch especially as we had recently acquired the new Lapa with facilities. We were keen to invite our local Botsoc. members to a function there.

d we had over 60 members present that evening which augured well for the type of meeting the members of the local society would wish to attend. We were very fortunate in being able to line the walls with the beautiful photographs of different clivia which Toy Jennings was able to let us have. She went to a great deal of trouble to get the material to an hotel in Pretoria from where it was collected by a Botsoc. member who was returning to Bloemfontein.

rainy but how bad could it get?. Wessel had intimated that he would fund his trip to Bloemfontein and had decided to fly down on Saturday morning the 19th. Shortly before I had intended departing for the local airport to wait for Wessel I received a phone call; it was Wessel. On asking him if the aircraft was early or had I misunderstood the time of his arrival, he replied that he was not in Bloemfontein but still in Pretoria. He had not been able to board the aircraft as the boarding time had lapsed. It then transpired that Wessel and family woke that morning, in plenty of time to get from Pretoria to Johannesburg airport, but there had been a terrific downpour the night before. The subway between Pretoria and Hercules was flooded making it impossible for any traffic to pass through it. They were forced to use alternative but much longer routes with the result that on eventual arrival at Jan Smuts, the aircraft was still on the ground, but Wessel could not be issued with a boarding pass. The only alternative was to obtain a seat on the aircraft which was leaving later in the afternoon. They then returned to Pretoria.

Wessel did eventually arrive in Bloemfontein and that the lecture was such a resounding success. Other speakers the evening were Mr Martin Lumley of the local Botanical Gardens who spoke on bulbs, tubers and rhizomes in general and SV Potgieter who spoke on the distribution of clivias in South Africa with the help of a special map that James Abel had so kindly provided. A pamphlet was made available to members which explained the different species of clivia and where they occurred in South Africa. Information on their cultivation and nutrition was compiled from information distributed by the Clivia Club and the clivia article by Graham Duncan in Vol. 4 Number 5 of the Newsletter. The coloured print of the Brenda Clarke painting distributed by the Clivia Club as a Christmas Card made a very successful cover for this pamphlet.

he generosity of Wessel Lötter, who paid his own airfare, and the help of Toy Jennings in having made this a memorable evening for Botsoc members and clivia lovers in Bloemfontein.

Although posted in June it still has not arrived by post. Steph faxed a copy to us for inclusion in this newsletter.
Better late than never (Ed.).

..*..

brids?

by Adri Haxton
30 June 1996.

PO Box 21065, Valhalla 0137

to the Clivia Club for publication.

assumptions about the "Belgian hybrids". I have made these statements several times but I would like comments from members. When I talk about Belgian hybrids I refer to those plants with unusually wide short leaves and large firm umbels. These must not be confused with good hybrids with wide but long leaves.

6 1896 - 1897 by Harvey and Sonder the following assumptions are made and I quote from page 229 (* and underlining mine):

C. miniata (regel, Gartenflora, 1864, 131, t. 434; leaves 16-20, oblanceolate, suberect, bright green, 12-2 ft. long, 12-2 in. broad narrowed to the apex and gradually to the base; peduncle stout, ancipitous, 1-12 ft. long; flowers 12-20 in an umbel; pedicels 1-2 in. long; spathe-valves several, linear or lanceolate, greenish, 12-2 in. long; perianth erect, bright scarlet with a yellow throat; tube infundibuliform, a-2 in. long; limb 2-22 in. long; outer segments oblanceolate, * inner oblanceolate-oblong, 2 in. broad; stamens shorter than the perianth-segments; anthers yellow, 3 in. long; ovary globose, 3 in. diam.; style reaching to the top of the perianth- segments.

Introduced into cultivation by Backhouse in 1854. *Var. Lindeni, André in Ill. Hort.* 1878, t. 343, is a robust large-flowered variety with * the inner segments of the limb an inch broad.

Between *C. nobilis* and *miniata* a fine hybrid has been raised, which is now common in European gardens under the name of *Imantophyllum cyrtanthiflorum*. A full account of it, with figures, will be found in Van Houtte's *Flore des Serres*, t. 1877, and by Groenland in the *Revue Horticole* for 1859, vol. viii. p. 258, fig. 65. It has a curved perianth, with the inner segments of the limb twice as broad as the outer, and exerted stamens.

w things:

as 1859. Variations of this *miniata* species were known in 1854 viz. *var. lindeni*. A variation however is not a hybrid but simply another form of a species that exists in nature. *Var. lindeni* also does not refer to short, broad leaves; only to large flowers. When we observe wild populations in nature we do see wider leaves, narrower leaves, longer and shorter peduncles, larger and smaller flowers and umbels etc. as for example *var. lindeni*.

nature is the very wide and short leaf of the Belgian hybrid. When exactly the Belgian hybrid originated I do not know. I am however of the opinion that chemical induction was used and not only normal cross breeding.

erse effects:

e to disease like the powdery mildew which is common on this hybrid.
old hardy than normal *miniata* plants, including the yellow forms.
of over watering, is more common than in other *clivia* species or hybrids.

resistance is based on plants in my own collection which were bred under the same circumstances.

ybody who would like to comment on my views.

..*..

the taxonomy of *Clivia* hybrids

Botany Department, University of Stellenbosch,
Private Bag X1, 7602 Matieland
4 September 1996

of the newsletter which has just arrived. I wish to comment on two of the entries:

With regard to Bill Morris' enquiry on p. 5 about the meaning of "33" in a fertilizer formulation of 4:3:4(33), it should be known that fully 33% of the substance is fertilizer, the remaining 67% being chemically inactive carrier. It is unpractical to dispense with carrier. In fact, 33% active component is very high and is quite likely to result in burn damage unless it is very thoroughly washed in.

With regard to the name "*Clivia* x *Kewensis* 'Vico Yellow'", I am afraid that both Sir Peter Smithers and Miyoshi & Co. are wrong:

- a) Firstly, the epithet "*Kewensis*", has not been "effectively published" to the best of my knowledge, and thus cannot be used.
- b) While not explicitly stated in the article, it seems that the epithet dates from about 1970. However, new cultivar epithets published after 1 January 1959 must have "fancy names" markedly different from Latinised specific epithets (such as '*kewensis*').
- c) Plants brought from the wild into cultivation should retain the names that are applied to the same taxa growing in nature. The yellow-flowered plants at Kew are merely "sports" of *Clivia miniata*, and should retain that name. It should also be noted that these were validly named *C. miniata* var. *citrina* in 1899. It is irrelevant to the present argument whether separate taxonomic status for yellow-flowered is justified; but if so, all yellow-flowered forms should be called *C. miniata* var. *citrina*.
- d) An "x" before an epithet signifies that the plant concerned is of hybrid origin, which is not the case here. The "x" is a mathematical symbol, not an alphabetical character.

<p>The correct name for this plant is therefore almost certainly <i>Clivia miniata</i> var. <i>citrina</i> 'Vico Yellow'. I urge those involved to rectify this matter with the registering authorities, and to apply this as well as other cultivar names correctly in the trade.</p>
--

led to Louisa Liebenberg our technical advisor, and we hope for a reply in our next newsletter (Ed.).

..*..

nobilis

P.O. Box 17, Medowie, NSW 2318, Australia
6 August 1996

own and reread my set of Clivia newsletters. We all owe Nick Primich a great debt for his enthusiasm and drive in getting the Clivia Club off the ground and for the quality of the first years of the newsletters. I always find a few things that either I have forgotten or which didn't penetrate the first time. Also they tend to stimulate me to put pen to paper as I find a few more points to write about, hence this letter.

o 5 (1993) the opening article by Estelle Brink, after some botanical notes on this species, she states that "*C. nobilis* has been in cultivation for 165 years since Bowie first planted (?) it in 1828 and many horticultural forms, sports and varieties have been produced, these remain just that, i.e. horticultural forms of interest to the gardener but not botanically significant..."

. Except perhaps in South Africa *C. nobilis* is a real rarity. In most countries it is not in cultivation and the name has been transferred to what appears to be some sort of hybrid with some *C. nobilis* characters.

een a "form, sport or variety of *C. nobilis*? I have never read of any such variants and I would be very happy to hear of any. I am sure this is a confusion with *C. miniata* which is the only species with "many horticultural forms".

ervations regarding *C. nobilis*. I have now received about 5 lots of *C. nobilis* seed from various sources, some ex habitat. The seed has been small, compared to the seed of the other three species, generally only 6 mm or so in diameter and quite round. With the other three species I have only observed round seed when there has been only one seed per pod and in these cases the single seed is usually larger than when there are multiple seeds in each pod.

nobilis by Vorster (Flowering Plants of South Africa 53 p 70-74, 1994) and the old Botanical Magazine plate and notes (Bot. Mag. 55, plate + 2856, 1828) say seeds "1 or more, globose or flattened" and "about six, somewhat triangular" and depict fairly normal sized seed pods. I find this difficult to reconcile with the seed I have received because such small round seeds, if only one to a pod, could not produce a normal size seed pod. In general my *C. miniata* seeds, if circular, are 10-12mm in diameter (also *C. caulescens* and *C. gardenii*). So there are two questions, why are the seeds sent to me so small and why are they always round?

n that the radicle produced by the germinating seed is very thin, about 1.5 mm thick against 3 mm or so for the other three species. In fact the germinating seed looks more like a *Haemanthus* sp. germinating than a *Clivia*. Only when the radicle enters the soil does it suddenly expand to a diameter about the same as the other species. In fact the sudden expansion makes it look like it is producing a bulb, rather than a root, again like a germinating *Haemanthus* seed rather than a *Clivia*.

how slow growing *C. nobilis* is compared to the other three clivia species. I now have seedlings from 1993, 94 and 95 (as well as seedlings now about 8 years old). These all have other characteristics quite different from the other clivia species. These are as follows.

Leaf colour is a very dark green (almost black green) instead of the usual green of clivia seedlings. They also appear dull, not glossy like the others.

The leaves rapidly become near horizontal instead of being upright to inclined.

The leaf tips are quite blunt and often notched, instead of tapering and pointed as are seedlings of the other three species,

Most seedlings (but not all) have a pale, very obvious line down the centre of the leaf. These characteristics (plus others) taken with the very slow growth of the young plants suggest that *C. nobilis* is quite different (distinct) from the other three species. This suggests that the idea that the three pendulous species are simply one variable species is unlikely to be true.

quite different from the other three species and perhaps there are three species rather than four i.e. *C. nobilis*, *C. gardenii* (including *C. caulescens*) and *C. miniata*. The caulescent stem of *C. caulescens* is probably not important as all clivias can develop long leafless stems under various conditions, if old enough, and also apparently *C. caulescens* occurs in areas of the Transvaal (away from the escarpment edge localities) where it doesn't develop a stem. In fact the long stem and aerial roots may be only a development for a particular environment (e.g. very high rainfall, low light, etc.).

C. nobilis, it is worthwhile comparing Vorster's illustration with the original Bot. Mag. drawing and with the Kirstenbosch Horticultural notes pamphlet no. 22 (dealing with *C. nobilis*). I find it hard to believe that they are the same species. Perhaps *C. nobilis* varies more than the written descriptions suggest. I would very much like to hear what members acquainted with this species in the wild think of these illustrations. Which one best depicts the plants they know? Also does *C. nobilis* vary from South to North? Do the northern plants tend to resemble *C. gardenii*? Although the two species seem geographically separate now (see Vorster's distribution map) it is quite possible they were closer or even overlapped in the recent past (a few hundred years?). I would very much like to hear from the South African members about these matters.

- 0 -

C. nobilis

PO Box 6240, Westgate 1734
15 October 1996

and kind thoughts. I would reply to your complaints about your job by saying the person who can most readily remedy that matter is the one who is now reading this. I will attempt to answer, or to perhaps supplement Bill's questions and statements.

from Bill wherein, strangely enough he carries on a discussion we are having on *Clivia nobilis*. I must thank Bill for his kind words about me, but I only did what I believed in and enjoyed doing it.

23, and took them to England. There are records of them growing since this time and having been hybridised with *C. miniata*. to obtain the original *C. X cyrtanthiflora*. They were grown in England, France, Belgium and Germany before the turn of the century. I think that in USA and Australia, false forms of *C. nobilis* came into being. Perhaps they were hybridised with *C. gardenii* to speed up their growth.

none of the older reports ever mention the slow growth of *C. nobilis*. Perhaps in those days they had more patience than we have to-day.

ral forms of *C. nobilis*. I have even seen a plant or two that I suspected of being a hybrid between *C. gardenii* and *C. nobilis*. When Bill has finally grown his collection up to flowering stage, he will find that he too, has several forms of nobilis.

A, is quite informative, but there are a few points I would take issue with. When Dr. Vorster still corresponded with me, he intimated that he would lump all the species of clivia. I heartily disagreed with him and offered him a forum in the pages of Clivia Club to debate the matter. Make no mistake, Dr. Vorster is an erudite and capable man. I do not slight him in any way, but it is possible for an amateur to get a better insight into a single genus, whereas a botanist will be au fait with a thousand or more. That was the last I heard from Piet Vorster, but I wish him well.

is he will observe that a single seed will also grow considerably bigger than two or three in a pod. *C.nobilis* has a normal size seed pod for itself. One cannot compare it with the others. The seeds, the berries, the pedicels are all smaller. In the wild seed are not numerous, and even when you pollinate them by hand you do not get the count that you would on the other species. Perhaps two or three seeds in a very fleshy pod, and very prone to falling off. Although I agree that seedlings' leaves assume a horizontal position, when the plants grow bigger, the leaves become more upright. They are also thicker and very stiff. The ends are notched, blunt or rounded without the dagger-like point we see on the other species. Dr. Vorster's key is not the happiest of keys. The phrase "leaf apex abruptly tapered" is also an unfortunate choice. What it says is surely not what the good doctor means. The type species selected by Dr. Vorster is perhaps an off-type specimen, and the flower would have certainly gained more florets in subsequent flowerings. I will also disagree with him on the flowering season. I have seen nobilis flowering in every month of the year, as do those which I grow at home. *Clivia caulescens* seems to share this feature with *C. nobilis*. The other

flowering periods except for an odd out of season flower here and there.

compare Natal and East London plants, I should perhaps inform you that John Winter recently took a trip to the Transkei for the express purpose of investigating *C. miniata* in that area. I asked John to keep an eye out for what he could see of *C. nobilis* whilst he was at it.

me pertinent comment to make. For, as far as I can make out, it appears that there must be a point where nobilis and gardenii overlap or coalesce.

with gardenii, I cannot agree. Firstly, their flowering habit is different, i.e. *C. gardenii* flowers May, and *C. caulescens* flowers more or less continuously. Then caulescens is a bigger plant than gardenii. Take one of each, more or less the same height or leaf-length. Examine the size of the base. *C. caulescens* will be substantially bigger than *C. gardenii*. Also examine the angle of the leaves at the base. *C. gardenii* forms a tighter and closer chevron than any of the other species. It also has an almost pink colour in this area. You may encourage the growth of a stem on a miniata for instance, by allowing a big clump in the garden to get very big, and then removing an offset from underneath this mass. You will find that it has developed a stem in its efforts to reach the air, but I think you will struggle to get aerial roots on it. I do not wish to use flower characteristics for this purpose as I find that flowers vary so significantly. But then that is surely the most attractive feature of our beloved Clivias. There is so much variety there.

has already been said in the past that the revision of the genus *Clivia* is long overdue. Yet if someone undertakes the daunting task let it be thoroughly done, and not skimpy little jobs like we have had in the past. I would imagine that thousands of specimens would need to be examined in the wild in difficult habitat that covers thousands of square miles. In this day & age can we afford it? Come on you members with access to the wild, get out there and photograph, measure and count. It all helps.

..*..

via

89 Brampton Road, Lynnwood Manor 0081
October 1996

all map showing the areas of origin of Clivia species. Connie included a copy in a letter to Bill Morris. We were pleased to receive a reply from him in which he queried the fact that I had shown overlaps of *caulescens* and *miniata/gardenii* near northern Swaziland and of *miniata/gardenii* and *nobilis* in the Transkei.

ritative, but it does reflect rather vague multi-hand reports of *miniata* at Barberton (we have seen *caulescens* nearby at Ngodwana), and there have been equally vague reports of *nobilis* near Transkei's northern border and of *miniata* near Kei mouth. Such reports raise the interesting question as to how one determines whether a species found far afield is there from origin or is an escapee from a garden, sown by a bird? There seems to be little question that birds do eat the pods and deposit the seed, giving it a good nutrient send-off!

Does this really occur? In other words do you know of areas where the various species actually occur together? Even areas where they are close to one another? If so then there could (should) be unusual plants where gene interflow has occurred. Do you know of any?"

ave firm evidence for overlapping areas, and are grateful for the question. The Club's species map still has rather few points of reference, and I would like to appeal to members to report personal sightings from all areas. To avoid exploitation, they do not have to be precise but may be in the form of "thirty kilometres south west of Nelspruit". Following Bill's train of thought, of special value would be reports of two species in the same locality. Even in the case of *miniata* and *gardenii*, do the respective spring and late autumn flowering periods preclude cross-pollination? But if out-of-season flowers are fairly common in gardens, does this happen in habitat and has it been seen? Or do the habitats in fact not overlap, even in Kwazulu/Natal, with *gardenii* being found at slightly lower altitude with lower precipitation?

of closer determination of the origin of our species.

..*..

habitat

4-28, Kurodo Mobara-city 297,
Chiba Prefecture, Japan
October 1996

ife breeding Clivias, but that one's whole life might be only about 60 years. Even learning from past experience is only about 200 years. However, in the native habitat one can see the Clivia from the original state to its progression so far. There are Clivias which bear fruit easily but some of them are individuals which do not bear fruit.

ng-awaited translation of the September newsletter arrived from Mrs Y. Dobson. After reading the letter of Prof. Dries Bester, is it not possible to say that plants which grow in difficult circumstances can have a very high ability of pollination? The views of people who love Clivias can be wide and one can enjoy learning from them. I envy the members of South Africa who can learn from Clivias in the wild.

regarding the size of Clivias. Vico Yellow and Vico Gold are both big flowers. I have not yet seen any others which are bigger than these. The peduncles are also thick, strong and long so these are big clusters as a whole.

China due to the kindness of Prof. Zhoa Yu-tang. Clivias are more popular than in Japan and are big business. There is a great possibility of huge developments in the Chinese economy if they could see the world through the Clivia Club.

flower in my greenhouse and other hybrids are also flowering. I am planning to widen the market by lengthening the seasons of flowering.

..*..

P.O. Box 6240, Westgate, 1734
21 October 1996

disk sent last week. I enclose a letter from Welland which is very interesting and thought you may like to put it into the mag. Please forward the membership request to whoever.

e clivia horizon. Last year I noticed a rust that was doing slight damage to my plants here and there. I did not become duly concerned, and carried on with my usual anti-fungal treatments.

bumper crop of flowers. My plants had all put in good growth and were looking well, then.. in May I expected my few gardeniis to flower. Some of them did, but not very well. I noticed rust marks on the peduncles. In some places the peduncle had actually split. The rust is a pale orange-brown in the region of 163-167 on the RHS colour chart. The scars on the peduncles look much like a gravel rash on our limbs except for the colour of course. I also see similar marks coming out on the leaves of plants that did not flower. I did see one or two umbels ranging from rotted florets to pock-marked tepals. The ovaries and pedicels of many of these had little pimples all over them.

ws flowered and about 20% of my reds. I visited John Winter at Cape Town where I found he had a similar tale of woe. I had noticed traces of this disease at the show on some plants, and have seen it on some other member's plants at home.

efekto @ (012) 804-1008. He said he had not heard of it yet, but recommended I use Funginex in conjunction with Bravo. Perhaps some of our committee members could liaise with Mr. Smit if there are reports of this problem becoming prevalent.

00 seed that had been hand pollinated for breeding purposes. This year I will be lucky to get 500 seeds out. I am doing a weekly drench spray with the fungicides, and hope to have an encouraging sign soon of nobilis or caulescens blooming unscathed.

m is not *Stagonospora curtissii*, as it leaves quite different marks on the leaves and having grown amaryllids in its presence for many years have never seen it damage flowers. It may well be *Macrophoma agapanthi*, which is responsible for the yellow brown tips you see on clivia leaves from time to time. It could also be another organism altogether. If anyone has a mycologist as a buddy perhaps they can get this thing identified for us. I don't like to be a prophet of doom, but Mr. Bill Smit said he expected the fungi to be just as prevalent this year as they were last year.

..*..

their feet wet!

P.O. Box 10556, Linton Grange, Port Elizabeth, 6015
8 October 1996

After I saw the article about clivias growing in water and starting seeds that way. I was also interested to see that it was stated in a previous article that "clivias hate having their feet wet". On account of this statement I thought that I had to write you a letter to dispel the myth of clivias not liking their feet wet.

As fortunate to be able to stay over at a sugar farm in the Wartburg area. As there were many clivias in the garden I asked the owner about them and she replied that some of the plants were indigenous to the area and grew in a valley not too far away. The following morning I made my way to the valley which lay in the middle of the sugar cane lands. It had obviously once been forested but now there was only relic forest. A waterfall ran down from a rocky escarpment into a little stream below which was covered in Impatiens, large-leafed Streptocarpus and Lithophytes. Imagine my surprise when I encountered clivias growing in the stream which was thickly vegetated with other water-loving plants such as Kniphofias. These were Clivia gardenii and were growing with their roots steeped in water in full sun. The time was July, when Natal usually has drier conditions. I concluded that if the plants were growing wet in winter then surely they would be wet during the summer months. Strangely enough these clivias seemed to prefer the stream and boggy area and none were encountered on the rock face.

Disas and benefit from flowing water and the nutrients and debris washed down with it. Full sun also doesn't seem to worry them as long as their feet are wet!

confirming that Clivia don't mind having their wet feet. As the editor wrote the original article, she apologises for having misled the readers of the newsletter (Ed).

..*..

er in South Africa

P.O. Box 6292, Homestead, 1412
3 September 1996

Primich's letter to the Club dated 18th July 1996 regarding Myths and Legends about clivia published in Volume 5 No. 3. September 1996 makes me feel guilty. Yes it is true since the Clivia Club was formed and the resultant regular News-letters, we as club members have learnt more about the cultivation and collection of clivias.

5 of September 1996, I was most impressed with the views submitted by clivia growers, especially in China as well as other overseas countries which we were not even aware of, as mentioned by Connie and James Abel's letter regarding their recent overseas trip and as put by them "when and how were clivias introduced to Korea and China, amongst others". Clivias are not kept in tens of millions homes in South Africa as one would have thought seeing they are flowering plants of South Africa. It is a known fact that the average South African home gardener is still unaware of the existence of this beautiful plant. Even our well known garden journals do not elaborate on this exotic plant and thus encourage the ordinary gardener to

add it either as a pot plant or a shady area garden plant, naturally protected against frost. Hence due to its poor publicity the clivia is still unknown to many South Africans.

I started my own collection as many as thirty years ago. My first yellow clivia was offered to me by a friend who owned a Cape nursery, at the price of R10, which was then regarded as an exorbitant price to have to pay for a plant. She told me she could only let me have one plant as they were very rare. I naturally took it and many of my garden friends have never seen an orange clivia, let alone a yellow one. After my friend's death, the nursery was taken over by a German who wanted me to sell him a yellow clivia again as he did not have them. Later on I noticed in his catalogue he was offering 'very rare yellow clivia's (C. Citrina)' at R300 each stating only limited stock available. The latest catalogues of this same Cape nursery make no mention of C. Citrina (the German has also sold the nursery to the present owner).

Or clivia which I self pollinated last year with another hybrid cream clivia obtained from a different source. These cream flowers produced bright yellow berries. I can only assume the price of the cream seeds will be much higher than those of the yellow clivia. Which is the subject matter of this letter to you. I noticed from the current news letter a lot of mention was made of the cultivation of amongst others, yellow clivia seedlings but what about the cream flower. Again is it because the clivia is not so well known. Books at bookstalls may describe a clivia as C. miniata or rarely C. Citrina but nothing more is described about this plant. We today, as collectors of this beautiful plant who have in our collection various C. miniata, that is various oranges (at least seven or more different coloured oranges and shapes of flowers), red, broad leaf, variegated, various pendulous, C. miniata x pendulous, yellows and creams (termed as whites), even some Belgian hybrids but try to refer to any of these in plant books (overseas and local) and no mention is made of them. Even the late Christo Pienaar mainly referred to C. miniata and C. Citrina (the latter only rarely). If I did not have the stock I have (albeit very costly) and compiled photo albums to prove the colours when not in bloom, I could be one of those ignorant gardeners who cannot share the pleasure of having these beautiful plants in my garden. This can only be done by encouraging garden journals to publish this species more widely, bearing in mind that the Clivia Club's newsletter is only received by its members. Photos of the various shapes, sizes and colours should be made more known to the public. Clivia Club should approach the one or other garden journal and advertise the benefit of being a member of the club, i.e. obtaining Clivia Club items for sale, plants and seeds for sale etc. It now being too late to attract attention to the Club Show. Again very few people know about the forthcoming event and due to lack of knowledge will not go to the show.

Li-tang's letter to the Club Secretary, that he is sending new forms or cultivars of clivia cultivated in China for our club. What are my chances as a club member of getting some of these new cultivars. I am prepared to pay the Club's price.

Nakamura is mentioning a 'Vico Yellow' is a crossing of the variegated leaf clivia. To my knowledge I know the variegated leaf clivia to have orange flowers and I fail to see any crossing with an orange flower to produce a yellow flower. My yellow clivias only seed if I cross pollinate them with another hybrid yellow clivia - the seed berries also being yellow. Fortunately I have about five different hybrids of yellow clivias and can easily cross pollinate them. These hybrids include amongst others the Kirstenbosch and Gordon McNeil yellows.

Nakamura implies is that he has crossed 'Vico Yellow' with a variegated variety in order to get a yellow with a variegated leaf (Ed.).

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ed

Dr Wynand du Plessis, translated by Adri Haxton

PO Box 38, Nylstroom 0510
1 July 1996

my thanks for the surprise gift I received?! I honestly cannot describe how exiting it was to receive the parcel and to open each set of seeds! Each seed has already been marked and planted in its own "nursery". For this, again my greatest thanks.

head of me health wise; one month of radiotherapy radiation, but through the grace of God I can say that I am feeling fine, and gestures like this carry the love of God.

ed bank.

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ns

ted by Adri Haxton.
28 June 1996

PO Box 166, Levubu 0929

received. Three quarters of them had already germinated but I do not think that will cause any problem. I enclose a cheque.

the vicinity. There is such a variety of colour and form. The seed pods vary from round to oblong and the pod colour varies from light yellow to almost purple. The shape of the seed vary from round to triangular. Does anybody know whether these differences are perhaps a result of earlier cross pollination with *miniata* or *caulescens*? I shall send a few photographs next year.

..*..

HISTORY OF *CLIVIA MINIATA*

P.O. Box 68275, Bryanston, 2021
18 July 1996

the medicinal uses of our lovely *Clivia miniata* plant in the last issue of the "Clivia Club" interesting reading and thought I might enlighten members further regarding the scientific research into the chemistry and pharmacological properties of the plant.

Clivia miniata Regel in South African traditional medicine has been well documented in the literature and excellently summarised in Nichols's paper published in the last issue of this Newsletter.

Clivia miniata has been examined by a number of researchers and has concentrated on the isolation of various alkaloids from the plant. The following alkaloids have been isolated so far (Martin, 1987):

clivacetine	miniatine	cliviamartine
clivatine	hippeastrine	cliviaaline
lycorine	clivojuline	cliviahaksine
clivimine	haemanthamine	cliviasindhine

clivonidine

clivisyaline

ning higher plants for biological activity, Vanden Berghe et al., (1978) and Ieven et al., (1979) found that crude extracts of *Clivia miniata* possessed both antimicrobial and antiviral activity and that *Clivia* was one of the most active antiviral Amaryllidaceae plants. *Clivia* was found to be active against poliomyelitis, Cocksackie, Semliki forest, measles and Herpes simplex viruses. Further research by Ieven et al. (1982) proved that this antiviral activity was due to the alkaloid lycorine which has since been exhaustively researched for biological activity. Lycorine has been shown to possess antineoplastic activity, inhibits growth in higher plants and yeasts by inhibiting cell division and cell elongation, inhibits ascorbic acid biosynthesis, inhibits protein synthesis in eukaryotic cell by inhibiting the peptide bond formation step and might be an effective insect antifeedant (Martin, 1987). Nothing has been published regarding the biological activity of any of the other chemical components of *C. miniata*.

onal medicine for the treatment of febrile and infectious diseases has therefore been vindicated by this research proving the antimicrobial and antiviral properties of lycorine. It must, however, be stressed that this plant is poisonous and potentially lethal if taken in large quantities (Veale et al., 1992).

of *Clivia miniata* Regel in pregnancy and childbirth the subject of my postgraduate research in the Department of Experimental and Clinical Pharmacology, Medical School, Wits University.

edies are used by black South African women to induce or augment labour (Veale et al., 1992) and the potential toxicity of these ethnic oxytocic agents has been well reported in the literature. Some of these plants (including *Clivia*) are known to be poisonous (Veale et al., 1992). The extreme caution exercised by pregnant women in first world countries regarding the use of medication during pregnancy contrasts sharply with the use of so many herbal preparations by a large proportion of pregnant South African women. *Clivia miniata* is one of the plants most often quoted to be used in pregnancy and was therefore selected to initiate the research into the pharmacological properties and potential toxicity of these herbal oxytocics. ("Pharmacology" is defined as the science of the properties of drugs (i.e. medicines) and their effects on the body.)

ical investigation of an aqueous extract of *C. miniata* leaves revealed that it initiated uterine contractions and was able to increase the strength and frequency of contractions induced by oxytocin (used to induce and augment labour in obstetrics) (Veale et al., 1989). More detailed studies (Veale, 1992) revealed that the herbal extract reacted with more than one receptor in both the ileum and the uterus, one of which seems to be the muscarinic cholinergic receptor. The *C. miniata* extract was also found to act as an antagonist on the serotonergic receptors in the uterus in a similar manner to ergometrine (used in obstetrics to manage 3rd Stage labour). These results proved that the crude extract of *C. miniata* was responsible for multiple receptor interactions. Further postgraduate research being undertaken by me at present is aimed at identifying which of the chemical components of *Clivia* is responsible for these effects on smooth muscle and what the mechanism/s of action is/are.

s of *Clivia* on smooth muscle could be due to any of the alkaloids already identified or other non-alkaloidal components. The isolation and identification of these active principles promises to be a very interesting and fascinating research project!

Ieven M, Vanden Berghe DA, Mertens F, Vlietinck A, Lammens E. Screening of higher plants for biological activities. I. Antimicrobial activity. *Planta Medica*, 1979; 36: 311-321.

Ieven M, Vlietinck AJ, Vanden Berghe DA, Totte J. Plant antiviral agents. III. Isolation of alkaloids from *Clivia miniata* Regel. (Amaryllidaceae). *Journal of Natural Products*, 1982; 45(5): 564-573.

Martin SF. The Amaryllidaceae Alkaloids. In: Brossi A ed. *The Alkaloids - Chemistry and Pharmacology*, Volume 30, New York: Academic Press, 1987: 255, 265.

Vanden Berghe DA, Ieven M, Mertens F, Vlietinck AJ. Screening of higher plants for biological activities. II. Antiviral activity. *Journal of Natural Products*, 1978; 41: 463-471.

Veale DJH, Oliver DW, Arangies NS, Furman KI. Preliminary isolated organ studies using an aqueous extract of *Clivia miniata*. *Journal of Ethnopharmacology*, 1989; 27(3): 341-346.

Veale DJH, Furman KI, Oliver DW. South African traditional herbal medicines used during pregnancy and childbirth. Review Article. *Journal of Ethnopharmacology*, 1992; 36: 185-191.

Veale DJH. The pharmacological effects of *Clivia miniata* on isolated rat uterus and ileum. Dissertation, Msc in Medicine, Wits University, 1992.

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FIELD VISITS - PRETORIA (7 & 8 SEPTEMBER 1996)

show held at the National Botanical Gardens in Pretoria and it was really encouraging to observe how clivias had improved since 1994. Not only had members learnt how to care better for their plants, but more exhibitors with really magnificent specimens made their appearance. Wessel Lötter, Pen Henry and Koos Geldenhuys were the judges.

fact was that no less than three exhibitors took all three awards, 1st, 2nd and 3rd in a particular class. They were Anna Meyer, for **Best red**, Pat Gore for the **Best broad leaf** and Rudo Lötter for the **Best hybrid**. Toy Jennings did it again! The award for **Best clivia on show** was won by her in 1994 and now again in 1996. Congratulations, Toy.

ere as follows:

Any other colour

Norman Weitz		1st Toy Jennings
Anna Meyer	2nd	Toy Jennings
Kerneels Buitendag		3rd Frans Gerber

ly one exhibited)

y one exhibited)

Anna Meyer with her unusual "peach" or "apricot" coloured clivia.

Rudo Lötter with his orange with the white tips to the petals.
Koos Geldenhuys with his red with white and green centres.

o awarded 2nd best on show and Norman Weitz 3rd best on show.

visited the show and plants offered for sale were soon all sold out. Turnover amounted to R55 000. This is R2000.00 less than last year, but this could be attributed to the prolonged cold winter in the Cape which retarded the flowering of clivia there for a month. So the Cape members did not attend.

a yellow clivia in flower which was raffled and this brought in R550. The plant was won by Gert Wiese of Durbanville.

o local Pretoria gardens on Sunday 8 September. These were at the home of Dr. & Mrs Pansegrauw which was visited last year and to the nursery of Anna Meyer. Both had wonderful shows of clivia. The visits were followed by a braai at the National Botanical Gardens in Pretoria and the catering was again done by parents of children at TIQWA School (for disabled children.

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CLUB SHOW (14 SEPTEMBER 1996)

the Clivia Club held their Annual Show on Saturday 14 September 1996. With an almost complete collection of original forms of yellow on display much discussion ensued. The forms were:- Natal Yellow, Eshowe Yellow, Watkins Yellow, Tsolo Yellow, Howick Yellow, Karkloof Yellow and a more recently discovered form. These original clones make up the base of almost all yellow genetics found today. A breathtaking sight with huge variation in form, shade and appearance. To think these forms of yellow clivia have created so much magic for clivia and are the source of much enthusiasm in the clivia world today. With these clones present in Natal the genetic material which these plants offer can never be lost. Two original clones of peach were also shown with one fine specimen taking the Grand Prize.

ople attended a slide show presented by Wessel Lötter on clivia variations and hybrids, a most interesting and extremely well presented show which created much enthusiasm amongst those present.

ötter and Brian Tarr did the judging and our show winners are:

Miniata Yellow

1. Natal Botanical Gardens
2. Carole Beckett
3. Natal Botanical Gardens

Miniata - Any other Colour

1. Olive Naude
2. Sean Chubb
3. Sean Chubb

Pendulous

1. Sean Chubb

Cut Flower

1. Sean Chubb

Photograph

1. Val Thurston

re Naude

ow:- 1st - 3 points
2nd - 2 points
3rd - 1 point

ns - Brian Tarr 23
7
6
4
3
2

Natal committee for all your hard work to put this show together.

members elected at the Show for 1996/7 are Sean Chubb, Carole Beckett, Brian Tarr, Des Andersson and Val Thurston.

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HORTICULTURAL AND GARDENEX SHOW (3-6 OCTOBER 1996)

lenbosch exhibited his yellow clivias at the South African Horticultural and Gardenex show a month after the Clivia Club show in Pretoria, by which time all the clivias in Gauteng were over. He had a dazzling display of some 30 yellows at the show held in the Furniture Hall at the Pretoria Showgrounds. This was the largest South African flower show to date. Jim's yellow clivias were one of the main attractions and many people said that they had never seen a yellow clivia before. A yellow in full flower was raffled and was won by G Lindhout of Florida Lake.

s did shifts to help Jim and answered questions, sold raffle tickets and handed out order forms for his plants and application forms for membership of the Clivia Club. It will be interesting to see how many new members will follow as a result of this.

...*..

3 MEETING (5 OCTOBER 1996)

as held at the National Herbarium, Pretoria Botanical Gardens and was attended by about 30 people. Wessel Lötter gave a talk and slide show on clivia hybrids. Wessel speaks with much confidence and experience as he has been hybridising with clivias for 26 years. There were numerous slides of all species, colours and shapes of clivias. Thank you, Wessel, for sharing your wealth of information with us.

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10 GARDEN FESTIVAL (19 OCTOBER 1996)

at the Pretoria Botanical Garden and several of the Clivia Club members manned a stall. There were a few plants on show and the Clivia Club photographs were displayed. The stall attracted much interest and many new members were signed up.

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TOER NA LEVUBU (26-27 OKTOBER 1996)

ulescens besigtigingstoer het uiteindelik aangebreek en entoesiastiese klublede het Saterdagoggend 26 Oktober 1996 by die Entabeni/Timbadola afdraai byeengekom en gegroet.

ers die Heiligewoud te besoek ingeval dit sou reën en die pad onbegaanbaar sou wees. Ons is deur na Thohoyandou verby Philiphiwaterval en Thathe-Vondodam na die Thathe-Vondo bosbougebied. Daarvandaan is ons V20 km na die Heilegewoud - ongeveer 1770 m bo seespieël, waar 'n kol Clivias gesien is. Op die wandelpad het ons 'n groot kol Clivias met 'n verskiedenis skakerings tussen geelhoutbome en streptocarpusse gevind. Reusagtige bome oortrek van mos, rankplante en klimop slaan 'n mens se asem weg. 'n Tipiese reënwood klimaat heers hier.

eringe geniet het is ons oor Joubertstroom en Witvlag na die Entabeniwoud. Opmerklik was die geweldige skade wat die reusagtige brande van Augustus 1994 aan die aangeplante plantasies aangerig het. Inheemse bome en plante in die kloue het ongeskonde die inferno oorleef.

Clivias is hier geving - die gevolg van bobbejane en ape wat die blomstingels afbreek om die nektar te suig.

ies het ons voëlkenner in vervoering gehad. Waterfuchias en boomvarings is in oorvloed te sien.

1 besoek en Clivias gesien wat effe anders is as dié van die Heiligewoud. Die staproetes na die plakke wat ons besoek het is bykans onbegaanbaar en daar moes hande viervoet teen steil wande en rotse uitgeklouter word.

n braai het 'n besonderse dag afgesluit. Dankie aan Gordon Smart vir die terrein en die reuse braaivleisvuur asook aan die dames vir die bykosse.

27 Oktober 1996 afgesluit met 'n besoek aan Bertie en Erda Guillaume waar ons verversings geniet het. Sy kwekery is ook besoek en talle plante het van eienaar verwissel.

e minste nie - 'n groot dankie aan Dries Bester vir die puik reëlings en die entoesiasme waarmee hy sy kennis met ons gedeel het. Doen so voort Dries sodat ander klublede wat nie die geleentheid kon bywoon nie, ook die vreugde van 'n caulescens tour kan smaak.

ter by Adri Haxton

TOUR TO LEVUBU (26-27 OCTOBER 1996)

g tour eventually arrived. Enthusiastic club members gathered at the Entabeni/Timbadola turn off on Saturday morning 26 October 1996 and greeted one another.

ly forest first in case it should rain and render the road impassable. We went through to Thohoyandou past Philiphi waterfall and Thathe-Vondo dam to the Thathe-Vondo forestry area. From there we travelled approximately 20 kilometres to the Holy forest - about 1770 metres above sea level, where a group of Clivia was seen. On foot we saw a large group of Clivia with a variety of shades amongst yellow wood trees and streptocarpus. Gigantic trees covered in moss, creepers and climbers are breathtakingly beautiful. A typical rain forest climate prevails here.

travelled via Joubertstroom and Witvlag to the Entabeni forest. Obvious was the extensive damage caused to the plantations by the fires of August 1994. Indigenous trees survived the inferno unscathed.

e found here - the result of peduncles picked by baboons and apes in order to get to the nectar.

ur bird watchers in raptures. Water fuchsia and tree ferns were plentiful.

l saw Clivias that differed slightly from those at the Holy forest. The trails were almost impassable and we had to climb steep faces and rocks on hands and knees.

ique day. Thanks to Gordon for the facilities and the braai fire and also to the ladies for making the side dishes.

Sunday 27 October 1996 with a visit to Bertie and Erda where we enjoyed refreshments. His nursery was also visited and many plants were traded.

thank you to Dries for the excellent organisation and the enthusiasm with which he shared his knowledge with us. Keep it up Dries to enable other members who were unable to make use of this opportunity to also taste the joy of a caulescens tour.

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FIELD AT LEVUBU (26-27 OCTOBER 1996)

P.O. Box 10, Munnik, 0703
5 November 1996

Levubu held two firsts for us. Despite living fairly nearby, it was the first time my family and I had been to the "Sacred forest" and Vera Falls. Also the first time we'd seen *Clivia caulescens* flowering. What a beautiful setting it was. High up on the Soutpansberg east of Louis Trichardt, the rainfall is one of the highest in the country. The drive up to our first stop was pretty rough, the last few kilometres not suited to the faint-hearted, but in the end, well worthwhile.

On the moss-covered rocks along the trails surrounded by abundant ferns, in particular carrot ferns and a variety of other attractive mosses. The *Clivia* were growing in abundance under the shady trees, between rocks, even across the paths we walked along. The plants looked extremely healthy and lush - but not too many flowers. Dries Bester thought this could have been due to Samango monkeys and some bird species which share a fondness for eating these flowers. Apparently there was a much better showing last year. Dries has obviously spent a lot of time in those forests, as his knowledge of the area and the flora was excellent. We couldn't have asked for a better guide to the 16 of us.

Through the trees we went on to Vera Falls. Dries had organised permits for all of us at both sights, so getting into the protected forest areas was no problem. Although the *C. caulescens* at Vera Falls were not as abundant as in Sacred forest, the climb to the falls was worth the effort, even if only to prove that the ancient were not as ancient as they thought!

Admired by everyone.

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She was born on 8 October 1928 in Hopetown in the former Cape Province. She grew up and completed her schooling on the platteland. At the age of 19 she sallied forth to the Transvaal and started working at the Department of Defence in Pretoria. She also worked at Hospital Services at the Nurse's Training College, the Council for Scientific and Industrial Research (CSIR) and the South African Bureau of Standards (SABS) in a clerical/secretarial capacity. In 1981 she retired from the SABS after 21 years of service, mainly doing travel arrangements for the staff.

She was introduced to *Clivia* by Mrs. M. Jennings, who was a keen plant and flower lover, who had Toy's love of gardening, introduced her to *Clivia*. Once the bug had bitten she quickly increased her stock and varieties from many growers of *clivia* all over South Africa and overseas. In 1994 and again in 1996 she was awarded the prize for 'best *Clivia* on show' as well as receiving other prizes.

She fully supports her wholeheartedly in her interests and activities. They have two daughters. Toy's other hobbies include reading and doing embroidery and she loves to travel when she gets the chance.

Her husband's friendliness, helpfulness and boundless enthusiasm. She is an inspiration to many.

..*..

October 1996 in Pretoria shortly after the show and not long after her husband, Joe Pretorius. She had suffered from ill health for many years. With her death their magnificent collection of clivias has been broken up. We were privileged to view these when they were all still under one roof. Visits to their home were included during the weekends of the Pretoria shows from 1994 to 1995.

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INTERNET

Speciality list offerings from Gene Calkins, The Glasshouse. The list includes *Clivia miniata* Hummel's Yellow for \$150.00.

Gene Collins (a member) is advertising a limited number of variegated plants (photograph included) as well as a reference to the 'Hummel' yellow in the speciality list. This plant originated in the collection of Ed Hummel who was a well-known hybridizer during the fifties and sixties and Gene thinks it is one of the best yellow clones offered anywhere.

Trade nursery Henk Braam B.V. from De Kwakel, Holland offers *Clivia* seed for sale.

Botanic Gardens Conservation International "Cultivation and Propagation Methods for Plants in Botanic Gardens: a sample database". October 1992. Includes *Clivia caulescens*, *miniata* and *nobilis*.

..*..

ed as soon as possible after they have been picked as they are then more viable. However, if the pods are shelled too soon after picking they are messy and difficult to handle. Place them in a cool dry place for about two to three weeks. Once they have dried a little they are easier to shell. Do not leave them too long as they may start to germinate in the pods, and the young roots or stems are then damaged when they are peeled.

Use coarse washed river sand. (Do not use garden soil or compost as the seeds often become infested with fungi and die). Sometimes there isn't time to prepare seedboxes with a suitable medium and so as not to waste valuable growing time they can be germinated in plastic boxes.

Use a double layer of moist paper towelling in a plastic container (Tupperware or old ice cream containers are ideal) and cover these with another double layer of moist towelling. Spray the inside of the container with fungicide. Put the lid on the container and place the plastic box in a warm dark place - on the shelf above the fridge is a good idea as it keeps the box warm. Check the boxes about once a week to make sure that they are still moist and spray lightly with more water if necessary. Remove any seeds that are rotten - they usually turn brown and soft. Replace the paper towelling if necessary.

When the seeds have developed roots and stems they will be ready to plant out into seedboxes (a good potting mixture with plenty of coarse river sand). Different varieties of *clivia* develop differently. Some have extremely well-developed root systems with hardly any stems, others have good shoots and small roots. Make sure when planting that the roots face downwards.

..*..

SALE

12,00 and down

2 and down

1978

..*..

AP

mistakes the editor has made in the last few issues! In one she changed her gender, in another she talks about Clivia not liking wet feet, and in the last she spelt "anthocyanin" incorrectly. Really! What is this newsletter coming to?! If it weren't for Nick Primich pointing out all these details you would be totally confused.

Yours
Lily Borer.

