

Clivia
Club

P.O. Box 6240 Westgate 1734 RSA

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The Clivia Club is slowly but surely growing. We will gradually expand our ambit by small advertisements from time to time, and we also ask that our members recommend us to friends and acquaintances. Of course, the crunch will come next year when we go onto subscriptions.

We have decided that R10 for South Africans, and \$10 for our overseas friends will cover our postal expenses nicely. This will be for a minimum of four issues per year. Come on folks, rush to get your subscriptions in before we are sold out.

We need more of you to write in and tell us of your experiences, difficulties, and discoveries. What do you like about clivias, and what would you like to do with clivias. We should start to think of setting specifications for types and sorting the hybrids out into classes.

Are you contacting the other members? This is an important part of the process. I would be glad if all members would consent to list their telephone numbers. Some would naturally only want an evening call. I will start off by telling you my number is (011) 766-2776. In the daytime this is also the number of my daughter-in-law's nursery school, but I am always available, or a message can be taken. I have been in touch with a few of our members on the Reef, and we have had some interesting discussions. I also have quite a good collection of international photographs. These are essential to any serious clivia fan.

I would also like to ask overseas members who come across clivia articles in their garden magazines, if they would mind forwarding them to me. Either the original or a photocopy. I would like to begin assembling a library on our favourite flower.

Dear Mrs. Amos,

I am writing in response to Newsletter vol. 1 (2).

1. I would be very grateful to have one of the yellow-flowered Clivias offered on p.10 if any are still available, and I enclose a cheque for R60.
2. I would also be delighted to try some of the Ken Smith hybrid seeds, also mentioned on p.10.
3. Lastly, I would like to propose that we consider placing a joint order from the Japanese breeders mentioned in the first newsletter. In this way individuals can save on bank charges, transit costs, and documentation; and it will also be easier for the supplier to handle one fair-sized order rather than a dozen small ones. Some of the cultivars depicted on the brochures included with the last newsletter are really stunning.

Thank You in anticipation.

Yours sincerely
Piet Vorster

Dear Editor,

What good news! What excitement- maybe I will be able to buy one of these rare yellow Clivias.

Ever since I received my first Clivia Miniata as a present ten years ago, I have been sort of Clivia crazy. This one plant has multiplied to approximately 2000 plants, and you wont believe the sight when they are all in bloom. Maybe I will have the same luck with the yellow one. I will absolutely be holding thumbs until I hear from you again, and I will be hoping for a bit of luck as I am sure you will receive plenty of orders. Bless you for starting such a club!

Waiting most anxiously for a reply, I would like to remain,

Yours sincerely

L. van Heerden

P.S. I'm also interested in seeds i.e. Ken Smith's hybrids, if possible

Dear Mr. Primich,

As you can guess, I've dashed off this letter plus cheque for R60 within minutes of reading our latest newsletter. Please can I apply for a yellow clivia? (see page 10 of volume 1 no.2 sept. 92) I quite understand if you have insufficient to meet the demand, but then please put me in the draw and perhaps I'll be lucky. I'm holding thumbs I'll make the first cut though.

Thank you too, for answering my queries, As I'm very much a beginner, having "inherited" the normal orange Clivia miniata in my garden, I know nothing much about sowing the seeds etc.

And- a great big thank you for the exquisite colour pictures. I'm green with envy.

Yours sincerely

Mrs. C. Howie

Dear Editor,

Have just received the latest newsletter, and both my wife and I wish to compliment you on the most interesting discourse on the " Introduction to Clivia" and the letters from correspondents, especially those from overseas.

We have about fifteen clivias of the "species" all in pots, currently in flower; and they have made a spectacular show this season.

We are pleased to see that the yellow variety is now available and enclose our cheque for R120 for two of these plants if at all possible. We are prepared to collect these plants from you. May the club go from strength to strength.

Dan and Nell Mey

P.S. The subscription fee of R10 for locals sounds very reasonable

Dear Mrs. Amos,

Thank you for the latest newsletter, it is a wealth of information. Please keep up the good work. If any of our fellow "Friends of Clivia" have any literature that might help me in my major assignment to get through my final exams to become a horticulturist, it would be most welcome.

My assignment is on Hardy Container Stock, and I have chosen the Clivia spp. Also, has any work been done in crossing the Hippeastrum spp. with the Clivia spp.

Kind regards
Ron May

Dear Editor,

Thank you for sending me Volume one , number one of your "Clivia Club " newsletter.As you will notice from above, our address has now changed.

Jerd Seeds have, under my management, been trading for seven years. Whilst we mainly import flower seeds from all over the world, at times we have also exported.

Clivia miniata is one of our very special lines and holds a personal interest for me. At the moment we are offering two Clivia miniata types.

Clivia miniata "Twins" is an important commercial strain of Clivia for pot plant production. The breeder claims this to be the fastest strain to flower from seed and in addition, most plants flower twice a year, sometimes even with two flower spikes at once. The plants are selected for short and wide leaves, with rounded tips and large flowers of deep orange, in upright facing umbels. Strongly recommended for both potplant production and for the use in landscaping indoor and out.

Clivia miniata 'Mammoth' is a good, general purpose commercial strain that flowers fully the fourth year from sowing. The broad leaves are rather tall and upright. The flowers are extra large and deep orange with yellow centres. Some variation in colour occurs. They can also be used successfully for cut flower production.

Crop time is December - January usually and we advertise prices etc. October - November. As soon as we have established prices for this season I will send you some information together with a new full colour pamphlet we are having altered with our new address.

We are particularly interested also in obtaining any South African flowering seed. We have a big cutflower market and take pride in offering the biggest range of different cutflower seed in Australia. As we have been unable to trade with South Africa in the past we need to now re-establish contact with seed collectors, breeders and seed companies in your country. If you can help in this respect that would be of great benefit to me.

Incidentally, we have also a few plants of variegated foliage of Clivia miniata. Neither big enough in size nor of sufficient quantity to do anything with at this stage but maybe later.

Pauline Foster
Jerd Seeds

Dear Mr. Primich,

Thank you for all your information on the Clivia plant and news from around the world.

I'm sorry that I couldn't take up the offer of a plant yet, as I am a bit short at the moment. I am a student reflexologist and all my spare cash has gone into paying for tuition. However- please may I be next on the list when more are available - or if you have any leftover plants. I have plenty of clivia, but wanted a yellow. It is good that they are available in South Africa.

Thank you for the time you spend informing us "generals ". Enclosed is my R10 membership.

Yours sincerely

Penny Lennox

Bill Morris comments on Newsletter One

Jim Holmes says that *Clivia miniata* ranges from light apricot through orange to red. What we identify as the species here (grown everywhere where climate is suitable) flowers earlier than the usual "improved " forms (which are usually called hybrids - whether they are or not is debateable) which seem to be all the one colour (one clone??), a medium orange. As it sets some seed I am surprised that there is not more variation.

The Western Australian forms of *C. nobilis* that I have obtained seem to be larger-growing plants and flowers than my plants. I wonder if they are hybrids of *nobilis* x *cyrtanthiflora* or perhaps selections from *cyrtanthiflora*. Either way they are variable from seed and are generally a solid orange and no sign of green tips. They are nice plants and I think an improvement on the species.

I doubt if one can get white or yellows from F₂ or F₃ crosses using strains like "Miniata Twins" etc. except one or two per thousand seeds. One report cited about fifteen yellows and no whites from twenty thousand European seeds. Yellows are recessive, so an orange strain which had a yellow in the background (x generations ago) will generally produce seed that is heterozygous orange. That is orange carrying a yellow gene. When crossed with pure orange this will produce all orange offspring. Rarely, a heterozygous orange will get pollen which is from another heterozygous plant. Then that seedhead will produce seed giving twenty-five percent or less yellows.

Yellow clivia seed in most cases is not sterile. Some yellow clones are self-sterile, that is they will not produce seed when fertilised by their own pollen, but will produce seed when fertilised from another clone.

However, some yellows produce plants which are weaker than normal orange plants. These seeds or seedlings may rot if kept too wet, or if the seedlings are repotted when small. Thus it may appear that some seeds are sterile when planted under all but aseptic conditions.

Variiegated clivias like the yellows, turn up one or two or sometimes a little more per thousand seeds in the commercial clones. However, I obtained some seeds about eight years ago from Japan that produced nearly one hundred percent variegated plants. Some were totally yellow, and these died, while plants with more than fifty percent yellow were very difficult and very slow and most died. The plants that were green with ten to fifty percent striping have slowly grown to maturity, with four flowering last year and ten this year. I have been pollinating these plants, even if almost green, with the best variegated pollen and I expect them to produce almost one hundred percent variegated plants. On the mature plants the offsets are variable, some being less variegated, others more variegated than the mother plant.

Shape of flower. The European commercial strains mostly have bell-shaped flowers(wide-mouth tubular) Sometimes the flowerhead has so many flowers they can't open properly. I don't like this type of flower. I prefer a wide-open somewhat flattish flower and the best of these has wide petals so as to produce a full flower. Also, they have fewer flowers with long pedicels, so a large round head is produced.

Bill Morris comments on Newsletter Two

In Latin there are many words for various shades of red. Thus *miniata* is the Latin word for the colour produced by the pigment red lead, and this is a bright orange-red.

I do not find the *C. nobilis* to have the same flowering season as *C. Miniata*. Although both species may put up occasional stems almost any time, both have clear flowering periods; *C. miniata* in the spring and *C. nobilis* in the summer-autumn.

On page five there is an article on variegation in *clivia*. It is pointed out that almost all variegations are yellow stripes on a green background. "Pure white variegation is rarely produced. "I suggest that the *C. miniata* plant has a high concentration of carotenoid pigment (yellow) in all its tissues. Thus when the red (anthocyanin) pigment disappears from the flower, one gets a yellow flower due to the carotenoid pigment still present in the flower. Likewise, when the chlorophyll (green pigment) disappears from the leaves to give the variegated stripes they likewise are yellow due to the carotenoid pigment in the tissues. Hence one would expect to get white variegation only in plants with low concentrations of carotenoid in the tissues. As these plants are rare, e.g. white flowered plants, possibly pink flowered plants, etc., it will probably be a while before enough are around to find an occasional variegated one. If *C. nobilis* can produce white variegates, it suggests that it has a low concentration of carotenoids in its tissues.

Next, the matter of variegation in the seed pods. The seed pods of a plant (variegated or not) along with the flowers, peduncle, leaves etc., are all tissues of the mother plant. The non-maternal material is the fertilised seed which contains some genetic material from the father. Hence the pods will (or may) show any general characteristics of the mother's tissue. If the leaves are variegated then the peduncle and the seedpods can be variegated also. However this will not tell you anything about the seedlings which will be produced from the seeds in the pod. If the mother plant doesn't produce variegated seedlings then whether the pod is variegated or not, will not change the outcome. If the mother plant comes from a strain which does produce variegated seedlings, these will be produced whether the pod is variegated or not.

Regarding the question of tissue culturing yellow clones of *C. miniata*. I am sure the reason for the apparent lack of success with tissue culture is not the culturing itself but the lack of economic results. The aim of tissue culture is to produce large numbers of plants in a short time. However it is not usual to grow the multiplied plants to a large size in the flasks or bottles used. Usually one gets the plants to a few inches high (almost) with 2-100 plants per container, then remove them and grow them on to maturity. As a 2-3 inch *clivia* propagation is probably smaller than a one year old seedling, it is going to take 3-4 years more to reach maturity. Thus there is not much commercial advantage in the tissue multiplication. Another factor to be considered is the problem of transferring 20-100 soft pampered plants to separate pots or community pots and growing them on without high losses. As yellow seedlings seem more susceptible to damping off than the orange plants, it seems likely that these tissue-cultured plants could have very high losses when transplanted except under very special controlled conditions.

This leads me to suggest that tissue culturing of yellow *clivias* is quite possible but that getting the plants out of the flasks and grown to saleable size may have severe commercial problems. Thus it has probably been

decided that the project be dropped in favour of something more suitable.

Finally I was interested in your remark about the most favourable conditions for germination. "Warmth moisture and darkness." I certainly agree with the first two, but I have germinated all my clivia seed under the same light conditions as I grown my plants. That is, in shade with no direct sunlight (usually under the glasshouse or bush house bench). What I want to know is, what is the advantage of darkness? Does the seed germinate faster? If so how much faster? Or does the plant put up leaves faster? As I have been reasonably successful with my germination of seed I am intrigued by the darkness factor.

Yours sincerely
BILL

Jim Holmes grows Clivias

I started off with one yellow clivia plant about twenty years ago. It flowered well every year, but was self-sterile and made no seeds. Another problem was that my plant always flowered very early- July\August- no other clones flowered at this time. So I was frustrated for about five years until I thought I would try something different. In September I saved some pollen in the fridge, from a friend who had another clone of yellow. I put this pollen onto my plant when it flowered in August, getting my first seeds. Of about forty seeds, fifteen were yellow.

I have had a few mishaps along the way. The next year I did the same thing, and two days after fertilising them the maid cut off all the flowers and took them home with her on her annual holiday.

On the first seed set I had a friend/customer from Australia visiting and he saw those yellow berries and the plant in bud and twisted my arm for a few of those berries. He got about eighteen plants out of it and I understand my clone is doing the rounds in Australia, although I am not sure who has them now.

Of my original fifteen yellows I gave a couple away to friends in the Cape, a couple to friends in the U.K., one to U.S.A., one to Switzerland, two to Japan and the rest I still have. So I still have nine and the mother plant, plus plants from later generations. As the mother plant was early to flower, so are many of the offspring. Some are flowering now (July), and many flower in the summer as well.

I do experiment with my plants. For the past two years I have been harvesting the seed very early, in March and April. This way they ripen early and get an early start. I have sown all my seed this year and they are now germinating.

It would appear that some of my clones are breeding one hundred percent yellow. The plants are generally very vigorous with a fair amount of variation in flower-type.

Making the yellow available to the man on the street has been one of my aims, and I feel that in a year or so's time I may be able to achieve that. But this year I will have none for sale.

Jim Holmes

In The Compost Heap

The Ken Smith hybrid seeds dissolved like the mist in the morning. Who got my share I wonder? Strangely enough, there was not an unprecedented rush on the R60 yellows. I do not think you will see a price like that again for some time.

Are there really still people like Penny Lennox around? I suggest that our editor awards her with a flowering size *Clivia miniata* var. *Citrina* when she passes her finals. Let us put Laila van Heerden to work breeding yellows. We will then not have to wait and see whether the meristemming wizards can do what Bill Morris says they can do, and what they say they cannot do.

Remember Jerd seeds are looking for all types of seeds, not only *Clivia*. I am not too certain what Bill Morris means when he says bell-shaped (wide-mouthed tubular.) The classical *miniata* shape is an elegant trumpet i.e. a long thin tube gradually widening with a rapid flare at the end into a wide circle. Can one improve on this shape? Perhaps Bill's bell-shaped flowers are not seen in South Africa, so we do not really appreciate what he is driving at. Going back to the trumpet shape, some flowers are recurved, that is the petals turn back on themselves at the rim of the perianth, some do not, and some petals are long and thin, whilst others are broad and overlapping, Viva la difference! and breed the types you prefer.

Does anyone know if Jim Holmes chopped his maid's head off? We offer our congratulations to Mr. A. Gibello on his promotion from the Little Brak River to the Great Brak River.

Lily Borer