

# *Cultivating Variegated Clivias*

*(Allan Gibson, Melbourne Australia, July 2022)*

While I have been collecting clivias for 30 years and had my first variegated clivia about 20 years ago, it is just in the past 7 to 10 years that I have been actively learning about and growing them. So I should note that for experience with growing variegates I still consider myself a “newbie”. The paper was written after a presentation at the Melbourne Clivia Club. It is not aimed at being scholarly. This article seeks to answer some of the foundation questions about growing variegated clivias.



Variegated clivias are those whose leaves are two or more colours. They are usually vertical stripes or horizontal, although a few seem to not fit either of these descriptions. The colours might be white, gold, yellow, or various greens. Variegated clivias are far less common than the green-leafed varieties but that doesn't mean the plants are difficult to grow.

## **How much shade do they need?**

A decade or so ago, I was told that growing variegates need extra shade. I am not convinced of this and my current position is that they need at least as much light as other clivias and perhaps even a little more light. This past year I experimented with seven *striata* plants with 30%-50% non-green variegation in sun in summer till about 11.30 in the morning. They did well in the position. It is important to note that I didn't just place the plants in the sun. Instead as the sun moved the plants went from full shade in winter to the full morning sun in summer. Melbourne can sometimes have 40 degree days and there were none of these days last season, so that is important to note. So while I'm not suggesting all my variegates would do well in that position or that all variegated clivias should have some direct sun, I am advocating really good light for the plants. Don't put them under shelves or in the darker corners of the greenhouse.

## **Can variegation change?**

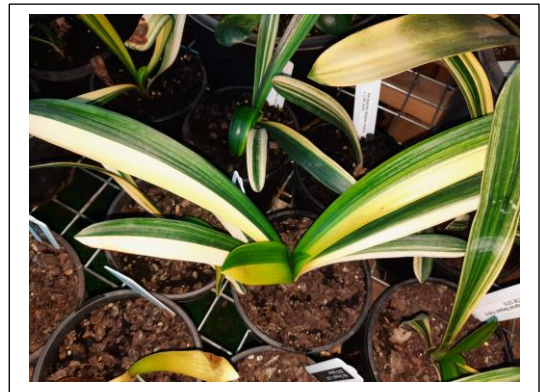
The variegated gene seems to be not set for many clivias. So while on some plants it appears that each leaf is very similar, on others there can be significant changes over the short term (within a year) or noticeable changes over 10 years. For example I have a plant that 10 years ago had one stripe down the middle

and now they has two. I have a fukurun (coloured on both outsides of the leaves and green in the middle) that is getting close to being fully white. The change is definitely bad news for the plant. Fully white means no chlorophyll in the leaves to sustain the plant. It will die if it continues in this direction.

In contrast some other plants in my collection have decreased in their level of variegation. I suspect decreased variegation is more common, but it might be that my disappointment is highest with this result. I can note that a number of plants with minimal variegation in their first few years have increased in leaf desirability. This is especially true of the Light of Buddha crosses.

I have not noticed a seasonal change in variegation. But I am aware that others believe there can be changes.

I have experienced with Mandarin Ducks (ie where half the leaf is white or yellow the other half green) that the variegation can change. Thus after the first two, and even with six or eight leaves, where the Mandarin Duck variegation is evident, the next set of leaves on one or both sides may change. It is beautiful but not the Mandarin Duck type. Others are staying the course as Mandarin Ducks.



Can position change the variegation? I don't know the answer to this question. I have heard growers mention this but haven't seen that in my collection when I move plants. My hunch is that it is more the changeability of the gene.

Pups or offsets don't necessarily mimic the parents. Some may be green, more variegated or less variegated. I have had a new pup with no chlorophyll from just an averaged variegated plant. It struggled and looked bad for 3 seasons before I cut it off. And of course some pups actually do look like the original plant. A to-the-eye green plant, with variegated heritage can produce some variegated offsets. Some may even be highly variegated. My practice when a variegated plant produces a green offset or mildly variegated offset is to take it off. The pup will grow more strongly than the parent plant and eventually be the dominant plant in the pot. The green or mildly variegated pup could produce some good variegated seedlings, so it may be useful in the collection. As is the case with green leafed plants, allow the pups to grow for several seasons before removing. The pups grow faster attached to the parent plant.

So my attitude now with variegates is to not become too overjoyed or devastated as the plants change their colours. They are beautiful, interesting all year round and all seem to be unique.

### **Is it a fungus or just lack of chlorophyll?**

Frustratingly in beautiful variegated leaves the part of the leaf that is yellow or white can experience some die back in the non-green part of the leaf. (Below left) I wondered if this was a fungus but spraying never helped. 😊 And it seems to happen regardless of position. (It is not sunburn!) If it happens with just a few leaves in the pot, I am happy to just remove the leaf or part of the leaf. But with plants where multiple leaves and new leaves are continually impacted I think it is bin time. For whatever the reason for the plant's struggle it is undesirable. I definitely don't want to breed from it.



There is a brown spot or circle fungus that I need to be aware. See above right. It is recognisable as a circle that appears both on the top of the leaf and the underside. It starts as a yellow speck, can grow to 50c coin size and sometimes be elongated. The lesson with this fungus is get it as soon as it appears or it will soon invade your collection. Once the leaves are damaged they are forever marked and will sometimes cause holes in the leaves. I spray with a fungicide and also physically remove the diseased leaf or section of the leaf. Don't buy a plant with it or bring one into your collection with this disease. I don't think this disease is any more prevalent in variegated clivias than green-leaved ones. The disease makes a mess of all clivias!

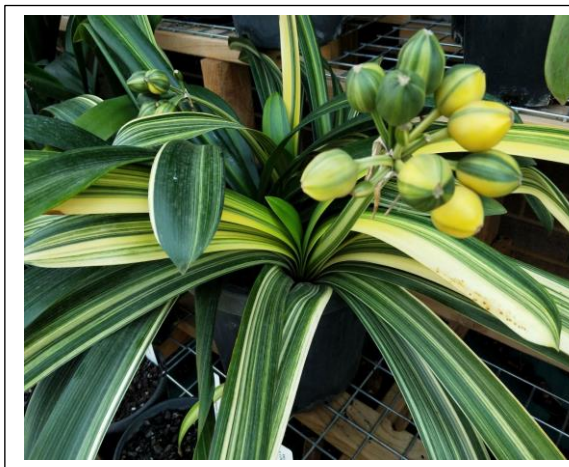
### **Any special fertilisers?**

I have not fertilised my variegates any differently to the other plants. I use a slow release fertiliser (6 or 9 month Osmocote), worm wee sometimes and very occasionally have used Seasol. They seem to grow fine. I do observe that some of the variegates have a great first leaf but then are slow for a year or two and



then seem to pick up the pace. I am unsure if this issue is fertiliser related or can be improved with fertiliser. But I am frustrated enough to experiment. One of the characteristics of growing clivias that have attracted me to the plants is that they are tough. I've been reluctant (or lazy) to consider any kind of labour intensive fertiliser regime.

I have noticed that some of my variegates have not done well after producing a good crop of berries. I am currently trying to specifically boost this group with fertiliser. Various people have given me this suggestion. This year I have mostly given all my collection a break from seedbearing. Producing off-spring in much of the animal and plant world year in and year out is often tough for "mums" and I suspect it could be similar with clivias.



Left: The berries of variegates are also varying colours.

Right: Seedlings from the same cross but growing at different speeds.

### **Are they more susceptible to rotting?**

I learnt the hard way in Melbourne that continual rain and low temperatures in winter impacts the clivias including some of the green leafed ones. My experience is that some of the horizontal variegates like Light of Buddha are a little more susceptible than the vertical variegates. But clivias generally don't like weeks of waterlogged pots. Now, most all of my clivias in pots are now under cover. I use a plastic over the shade cloth. I water weekly in summer with almost all size plants. In especially hot weather the smaller pots will sometimes get a second watering. In winter I continue once a week with the 6" pots but reduce to every 2-4 weeks with the mature plants.

I do note that mostly in my 2-4 year olds that the variegates have smaller root systems than I would have expected. So the plants may be a good size but the roots don't fill a 6" pot. In comparison, my green leafed seedlings fill the pot at this age. This difference means that I have to be careful about repotting. Why?

Because a plant with a small root system in too big a pot can easily result in rot. The rot is brought on as the pot doesn't dry out quickly. So my desire to care for the plant and re-pot has been unwise. I have had rot in summer and in winter because the variegate was in too big a pot for its roots. I don't desire a collection with multiple different watering requirements.

### **Are variegated clivias slow growing compared to the green leafed?**

My original advice from friends was that "yes" they grow slower and even after getting to 14 leaves may not flower for many years later. Friends have 10+ year old plants that have not yet flowered. But my answer from my own experience is "perhaps" and "it depends".

In observing the 3-4 year olds growing pattern there is much variation. To me it seems that some variegates grow as quickly as the green leafed ones regardless of their level of variegation in the leaves. But if there are 30 plants from the one cross, there is often a range of size and growth rate of the plants. This is genetics so a blanket statement of variegates are all slow is incorrect. Recently much of my breeding has been with smaller growing plants. I am trying to breed a good flower colour range into the LOB plants but to do this I am pollinating with larger green leafed plants. The size variation is quite evident.

So while I think it is true that variegated clivias may overall be slower to grow and flower. Just as well they are pretty!!!! In my collection with my growing conditions my green leafed clivias start flowering at 4 or 5 years. My expectation with the variegates is after 5 years but with variability.

### **What about mealy bugs?**

I have not found them any more susceptible to mealy bugs. I would note that sometimes the variegation camouflages mealy bug. The lower growing variegates and green leafed clivias often have less space between the leaves and this growth habit can conceal mealy bugs. Having space between your plants and maintaining a healthy collection is the best way to avoid the mealy bug infestations. It pays to keep an eye out for mealy bug and remove them quickly.

### **Conclusion**

Variegated clivias are generally pretty hardy like the regular green leafed clivias. Their colours can provide interest all year round. Each plant is a little different. Observing variegated clivias, their changes and their needs, provides added interest to the clivia collection. The beautiful plants on the right are Light of Buddhas.

