



BULB LOG 02.....14th January 2009

Thanks to everyone who made contact regarding the Bulb Log now being in the PDF format: the response has been very positive. Thanks, also to those who had a go at identifying, from last week's Log, the mystery plant in a dormant state, most were close and some correctly identified *Corydalis cashmeriana*.



Narcissus romieuxii albidus zaianicus flash



Narcissus romieuxii albidus zaianicus natural light

I have been experimenting more with using the small built-in flash on my Olympus digital SLRs and here are two examples of the same plant, taken firstly with flash then using the natural light. Part of my reason for using flash is that the light levels are so low just now that it is almost impossible to get a sharp picture with a good depth of field. Flash also reveals more details and especially seems to capture the crystalline appearance of the corona. The name on the label of this plant is *Narcissus romieuxii* ssp. *albidus* var. *zaianicus* and I am trying hard to verify that is the correct name for this plant but it is not so easy. I received it as small bulbs a number of years ago from a very good grower who is very knowledgeable but, to put it politely, they were not in the first flush of youth and had been growing bulbs for a very long time and, as I have found and demonstrated in the Bulb Log, it is very easy for pots to get mixed or contaminated by seed falling in. Once that happens the vigour of the youthful seedling can take over and before you know it the original bulb that the label referred to has died out and been replaced by the young seedlings. Getting back to *Narcissus romieuxii* *albidus* *zaianicus* : it is very difficult to ascertain exactly what that flower looks like as the literature is far from clear and some suggest that this is an unnecessary taxon. A few taxonomic pointers of this pot full are that the style only just protrudes while the anthers do not and the filaments are not the same colour as the petals but are a darker shade - yellow/green all suggesting some type of *N. romieuxii*. I am glad that I stick mostly to growing these lovely dwarf bulbs which is much easier than trying to sort out the names for them.

Sowing *Nomocharis* seeds



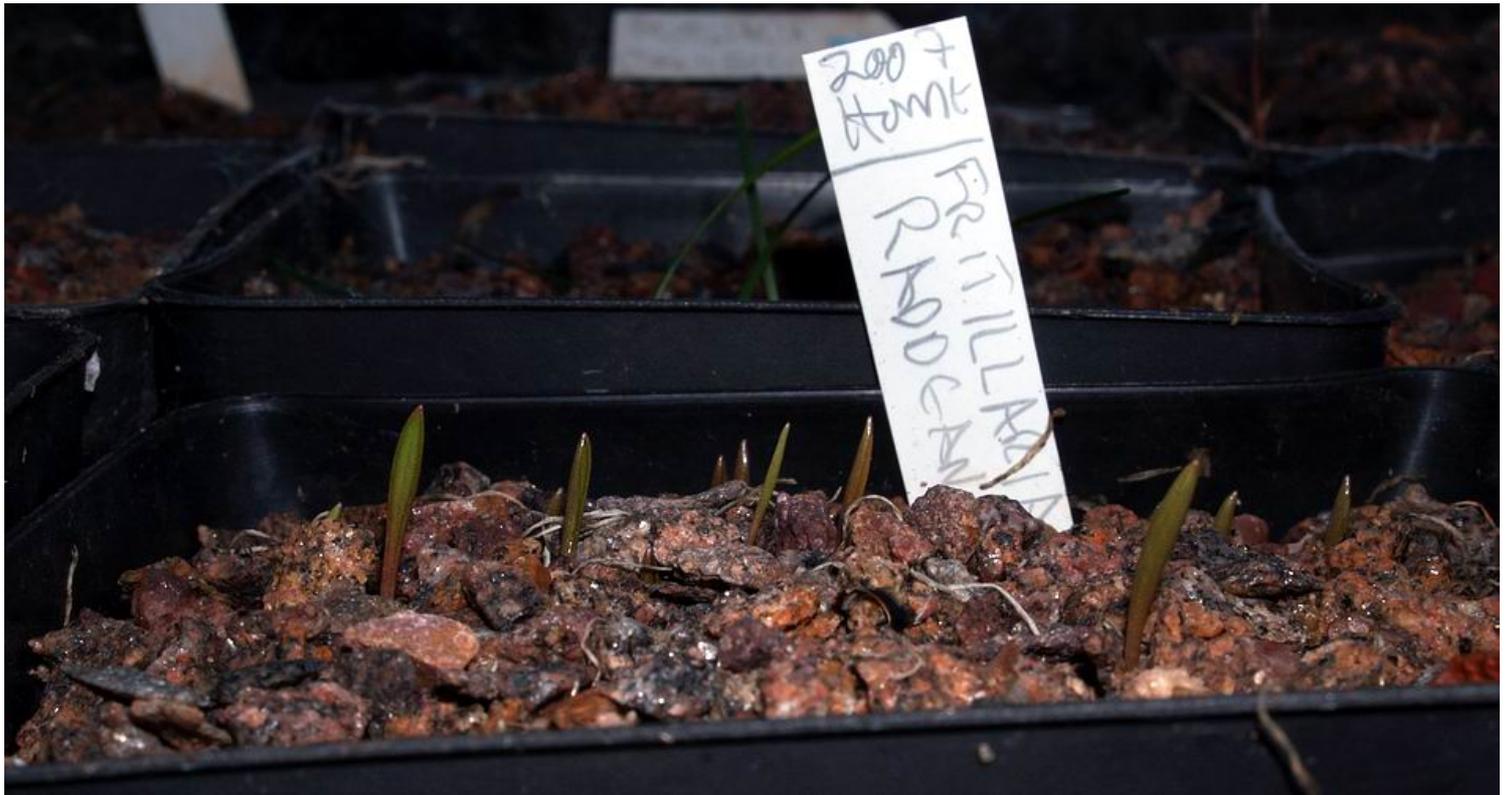
Now is the time I like to sow *Nomocharis* and other lily seed. In the past when I have sown it in the autumn it has germinated almost immediately giving me the problem of how to take such young seedlings through a winter. Needless to say I rarely managed to keep them going through a cold damp dark Scottish winter so I learnt my lesson and now I sow them in January and they will germinate when spring arrives. As you can see (pot on right) I sow them

quite thickly then I just work the seeds into the surface with a small implement (pot on left) before covering them over with gravel and placing them in an outside frame.



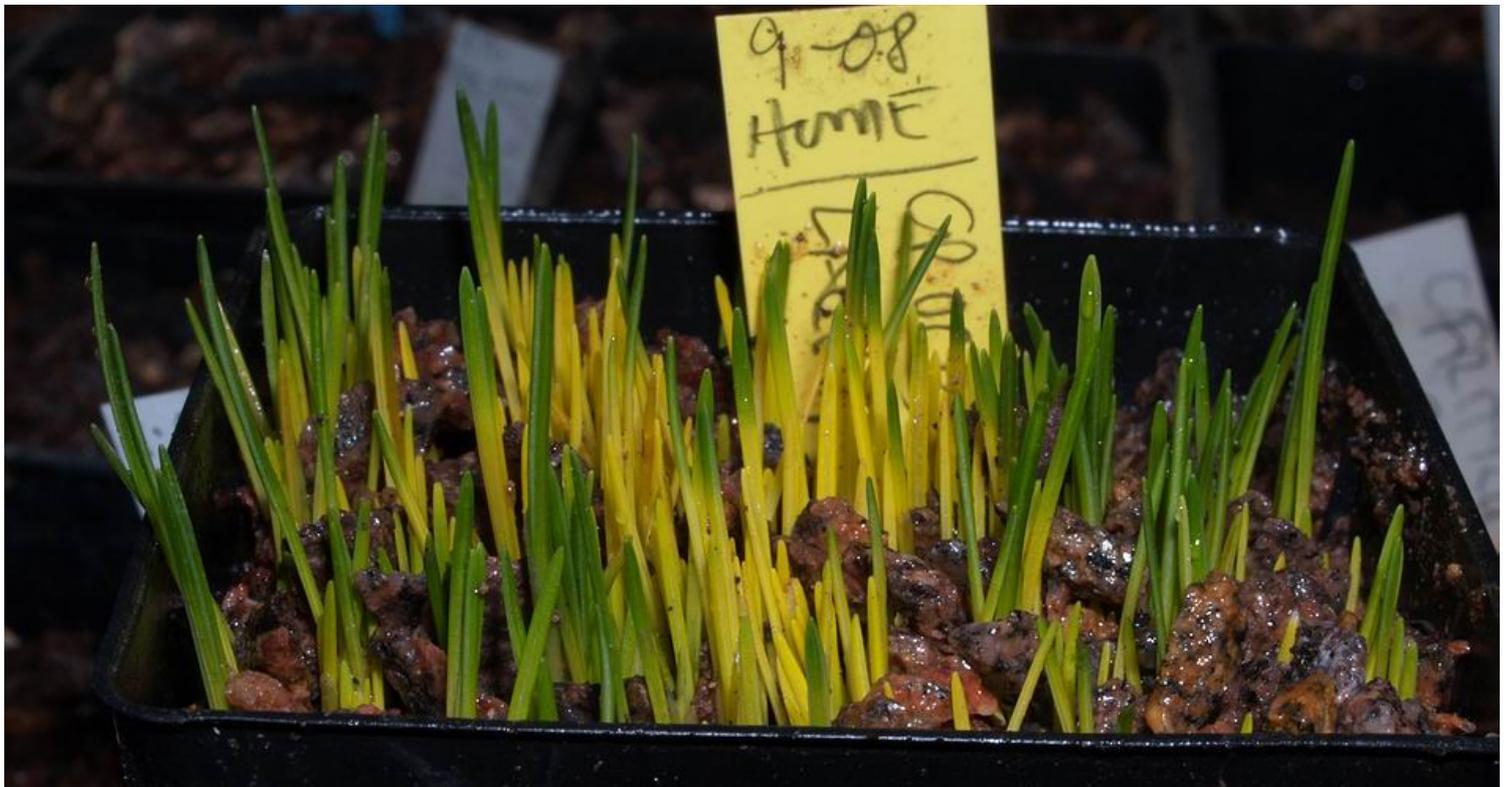
***Cyclamen coum* and seedlings**

It is nearly always around the time that the mature bulbs would be coming into growth or flower that the seedlings of that species will also germinate and you can see the young seed leaves towards the edge of this pot of *Cyclamen coum* - this is just where they spilled from the seed pods last summer. You should also notice that there is a problem with one of the mature leaves which is showing the signs of a mould forming – I have removed that leaf to prevent further infection.



***Fritillaria raddeana* seedlings**

In the Frit-house I found this pot of *Fritillaria raddeana* seedling leaves appearing for their second year of growth. They first germinated last year around this time as quite narrow leaves and now they are a wee bit wider and will grow that bit bigger as will the young bulbs underground – I will not replot these until summer of 2010.



Germinating *Crocus laevigatus* seeds

I first showed this pot of Germinating *Crocus laevigatus* seeds a few weeks ago as the dense mass of young leaves were heaving the gravel up and out over the edges of the pot. Today they were at it again pushing the gravel up until I gave them a good watering which washed the gravel down and revealed the pale part of the leaves where the

light has been excluded - now they are in the light the chlorophyll will quickly form making them all dark green. Also notice how nice and large the leaves are for the first year of germination – that is because I have sown the seed deeply more than half way down the pot putting the young corm in a much more stable and conducive environment than they would have if sown on the surface. I find that by sowing them deep I get the corms to flowering size at least one year quicker than surface sown seeds that are only covered with a layer of gravel and which are not only exposed to the more rapidly changing conditions on the surface but also have to expend the energy to take themselves down into the compost. Wind distributed seeds like the *Nomocharis* above should only be sown on the surface as they will not germinate if planted at any depth.



Tropaeolum azureum seedlings germinating

Above is a pot of *Tropaeolum azureum* seedlings with the tangle of growth coming from seeds that germinated last year while the ones going straight up are germinating now – as I have mentioned many times the germination process of *Tropaeolum* is a complete mystery to me.



Two shots of my original pot of **Tropaeolum azureum** sown in 1989 and still going strong.

The one on the left is in natural light and the one on the right is illuminated with the flash.





Pots full of Narcissus

It is very important to ensure that these winter flowering bulbs, especially the Narcissus and Crocus, get plenty water during this, their time of maximum growth. You can see how much growth and flower buds I have coming in in each of these 7cm pots and they are all reliant on me to provide the water they need. I am taking advantage of this mild spell to give them a good soak.

The same is true for this pot of **Narcissus 'Camoro'**.

If there is insufficient water available the bulbs will start to break down into many small non-flowering sized bulbs. This is a reaction to lack of water and nutrients. The bulbs can only take up nutrients with water so a shortage of water also leads to low nutrient levels.

The bulbs react to this shortage by going into a survival mode and start to break down into many smaller bulbs – this is especially noticed in Narcissus and Crocus.

When you understand this reaction you can take advantage of it to help speed up the propagation of a clone.

By purposely allowing the bulbs to get a bit dry they break down into many small bulbs which can then be grown on normally next year to build them back up to flowering size. The break down is also helped by planting the bulbs nearer the surface than the normal planting depth.



Watering Narcissus

This method is used by specialists on a regular basis to speed up the rate of increase of a new clone - it is also the commonest problem most people have when trying to grow these bulbs for the first time.



Watering Control

I have shown my home made watering control before but it was a few years ago so here it is again. I made it from salvaged parts but it is basically a small tap with which I am able to control the flow rate and a bent nozzle that allows me to accurately direct the water avoiding getting the foliage too wet.

The spores of many of the fungal problems that infect the leaves of bulbs are water borne so avoiding the splashing of water around the leaves minimises the spread of any such pathogen.



Flood the Pots

The best way to water is by flooding the pots- this not only supplies plenty of water but the flow of water, as it drains down through the compost, flushes out any harmful salts that may build up and it also draws air down into the compost helping to keep the root system healthy. It is much better to give the pots a good flood like this and then let them almost dry out. If you water by adding a wee trickle of water on a regular basis – little and often - you can end up with a pot of stagnant compost that has no air and possible high levels of harmful salts that are not desirable for the health of your bulbs.



Growth just appearing

The basic rule of thumb I apply is to **water in proportion to the amount of leaves showing** so if growth is just appearing as in these pots above they require a smaller amount of water. The danger for these bulbs is that they are not yet in rapid growth so they cannot take up too much water and there is a danger of wet root if the compost stays soaked.

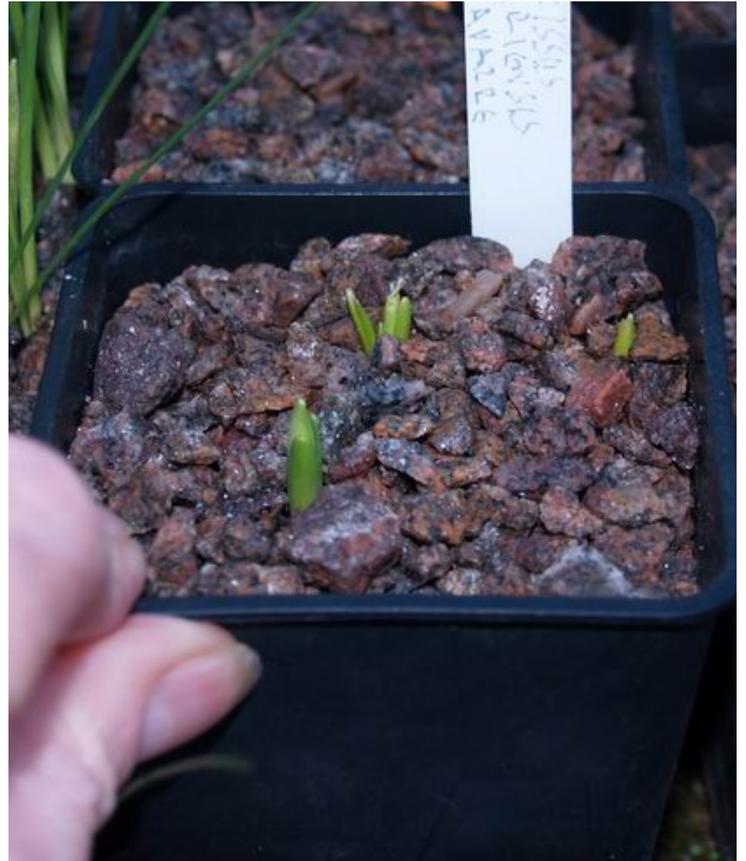


Small amount of leaves showing

When there is only a small amount of leaves showing or you only have one or two bulbs in a pot you still have to give these pots a good flooding but you then allow a longer period between floods to allow the compost to dry out a bit.



One shoot showing



Shoogle the pot

I really enjoy watering the pots, especially at this time, because you see the new growth as it first appears poking its way through the gravel and often what looks like just one shoot can be greatly improved by giving the pot a gentle shoogle (a Scottish word for 'shake') to settle the gravel to reveal more promising growth.



Crocus with spent flowers



Crocus with dead flowers removed

I use the same watering rule for Crocus, that is water in proportion to the amount of leaves showing but it is important to first remove any dead flowers from the plants. If you do not remove these faded flowers before watering you greatly increase the risk of getting a grey mould (Botrytis) infection. Some of the autumn crocus flower long before their leaves appear and it is important that you only keep them moist and do not water them excessively until the leaves are in growth. The appearance of the leaves indicates a period of rapid growth for the plant and so that is when to supply a plentiful amount of water.

TIPS FOR WINTER WATERING

- Once the pots of bulbs have been watered in the autumn they must not be allowed to completely dry out nor should they sit saturated for long periods.
- Do not water in freezing conditions.
- It is best to water by flooding the pots and allowing them to drain.
- Watering is best done in the morning of a bright day to allow surplus moisture to evaporate or drain away.
- Give water in proportion to the amount of leaf showing.
- Pots showing no growth or with just the green tips showing need only to remain moist, if they do need watering flood the pot but then leave them to almost dry out again.
- Pots where rapid growth is starting need plenty water - allow them to almost dry out before the next flood.
- Bulbs in full rapid growth need plenty water.
- Full pots with many bulbs will require more frequent flooding than a pot with only a few bulbs in.



Surprise for pollinator

I will finish off this week with what I noticed when I was taking some close up pictures of the Narcissus flowers - this spider will be a real surprise for any pollinator that may be attracted to this flower. What an ingenious place to build a web you have a nice attractive and sheltered place to live, fairly safe from the Coal Tits (*Periparus ater*) that regularly search the bulb house for tasty spider snacks, and the flower entices your pray into the trap.