



BULB LOG 36.....9<sup>th</sup> September 2009



**Sternbergia sicula buds**

Only one week after applying the first storm some of the bulbs have responded with rapid growth. As regular readers of the bulb log will know I have been trying to achieve good regular flowering on my Sternbergias for years - in an attempt to achieve this I have been collecting as many forms as I can get hold of. Last year I decided to try planting some of them with the nose of the bulb just below the surface gravel to see if this would give them more heat to help the bud ripening process. It is perhaps too early to say it is a success but these early signs of plenty flower buds are encouraging. Typically for different clones not all the Sternbergia sicula pots have come into growth but there are some more leaves showing in other pots. Some flower with the first signs of leaf growth, as above, while others produce the flower before there is any signs of leaves appearing.



**Rhodophiala bifida**

This is a first time I have flowered Rhodophiala bifida. I received a few small bulbs from a friend in 2006 who said ‘see if you can flower it’ and I am now pleased to be able to answer yes.

As most of you will know I swear by regular feeds of the white powder –potassium sulphate- from early spring for non-flowering bulbs and from when the flowers fade in flowering bulbs. With some of the bulbs that put up autumn growth, like this Rhodophiala and the Sternbergia, I have been applying the powder in the autumn as well.

Is it purely the water that stimulates the surge of growth or is it combined with the secondary effect of applying lots of cold water – suddenly lowering the temperature of the compost that triggers the bulbs?



### **Fritillaria bulbs and seed**

Having given the two bulb houses the first storm I am now working my way through tidying up the Fritillaria house so it can get its first storm on the 1<sup>st</sup> October. As many of them were repotted last year I am just tidying up most of the pots and applying a small amount of bone meal to the surface. However I cannot resist going in to check on the health of the bulbs; an important thing to do. This is a bulb seedling that came from the plunge sand and although it obviously flowered in spring I failed to mark the correct name on the label but it has grown well producing a flowering sized bulb, an offset and a good pod of seed.



### **Sowing seed**

My space saving way with small quantities of seeds is to sow them back into the same pot as the parent bulbs and this is precisely what I have done with these seeds I will now top dress with some grit.



### ***Fritillaria pudica* bulbs**

Checking my bulbs every year gives me an indication if I am getting the watering regime correct as the most common problem to befall bulbs in pots is too much or too little water at the wrong stage of growth. Too much water when the bulbs are slowing down in growth or are dormant can cause rot and too little water when the bulbs are putting on rapid growth can cause the bulbs to break up into masses of small bulbs. *Fritillaria pudica* is one of the bulbs shaped like a flat disk which is covered with masses of rice grains. This is a very good survival development as so often when the parent bulb fails some rice will be left to carry on the genes. In the pot on the left two bulbs towards the top have rotted away completely – you can just see the dark remains where I placed them. The most likely cause of this is rot before the bulbs got into growth last year. The pot on the right has lots of 1<sup>st</sup> sized bulbs- that is bulbs that will need one more year of growth to reach flowering size – it is just possible that the biggest few may flower next spring. This was a pot of rice grains removed from the parent bulb three years ago so on average it will take four years for rice grains to reach flowering size.



### ***Fritillaria pudica* rice grains**

If you look closely at these *Fritillaria pudica* rice grains you can see that some of them have already started into growth in the form of small shoots which have appeared towards the base. Rice grains are just like full size *Fritillaria* bulbs and they replace themselves completely every year. It is from this small shoot that the roots and the leaf will appear these in turn will supply the food that will enable the shoot to grow into a bigger bulb before the dormancy. In the meantime, until water becomes available, the shoot will draw from the store of food laid down in the bulbils last season.



### ***Fritillaria camschatensis* bulbs**

I grow all my *Fritillaria camschatensis* outside; some in the garden and some in baskets in the sand plunge beds. I have found that if they are left undisturbed for a few years the bulbs have worked their way up to very near the surface. The purple tinged bulb on the right was so near the surface that it became exposed to light which caused the anthocyanins to develop the colourful pigment. The rice grains that you can see on these bulbs differ from those on the likes of *Fritillaria pudica* in that they are more firmly attached like scales forming part of the bulb. You can remove them if you want to increase your stock but they have not evolved to fall away so readily as true rice grain species. I would love to know if this type of intermediate bulb evolved into the rice grain type or was it the other way around?



### ***Fritillaria persica* bulbs**

At the other end of the size scale from the tiny rice grains are these large bulbs of *Fritillaria persica* which increase every year as each bulb forms two. In our cool climate I need to grow it in pots under glass to achieve flowers.



### Insects pollinating

It is always a pleasure to see the insects pollinating the flowers in the garden and also to notice that they are mostly active when the air is warmed by the sunshine. I can therefore conclude that a successful pollination is dependent on warm sunny conditions. As bright sunny conditions cannot be relied on anywhere the plants have evolved a strategy to ensure the best chance of pollination. That strategy is two fold and is very clear in the many seed raised bulbs of *Crocus vallicola* that we grow. All corms will produce two flowers – the second appears some time after the first has withered – they may be a few days or a few weeks apart. The second part of the strategy is that individual clones flower at different times – we can have *Crocus vallicola* flowers appearing over a six week period so increasing the odds that some of them will come into bloom in conditions favourable for pollination.



Different bulbs also attract different pollinators such as this **Allium** which attracts only **wasps**.



### **Shield Bug**

Continuing on the buggy theme I spotted this shield bug resting on the windscreen of our car. It interests me to see that there are two reflections of the bug one from the top surface of the windscreen and another from the inside surface.



### **Cyclamen hederifolium album**

There is a huge diversity in *Cyclamen hederifolium* both in flowers and leaves. Some flower with the leaves, some flower before the leaves emerge and some produce the leaves first then the flowers.



**Cyclamen hederifolium**

This form has variable dark colour streaks which I am sure are not a sign of disease but just part of the instability within this species that drives its wonderful diversity.



Here two stems have fused together, **fasciated**, giving the appearance of a **twin flowered stem**. I can understand why flower colour can be an advantage in attracting insect pollinators but it is less easy to understand the incredible range of leaf variation. They say a picture is worth a thousand words so I will just show you a few pictures of the leaf range that we have in our small collection.





**Cyclamen hederifolium album**

Cyclamen hederifolium album seems to be particularly robust in our garden where it grows very well always coming into flower before the pink flowered forms.



**Colchicum**

I will finish this week with a true picture of autumn where these tessellated Colchicum flowers have fallen over and lie with the coloured leaves.