



Fieldfare and Redwing

Picture this scene of Maggi and I both looking with binoculars up at the birds in the same tree– Maggi saying they are Fieldfares, I was saying no, they are Redwings. Much discussion and looking at photographs in the books and on the internet followed as we tried to confirm which of us was correct until I decided to look through all the pictures I took. Then all was revealed – we were both right because it was a mixed flock as the picture above illustrates.



Natural Fertiliser

The snow underneath the tree is stained yellow ochre by all the droppings from the flocks of birds feeding on the berries.

I do not think I will have to add any fertiliser to this bulb bed next year.

As this is the final bulb log of 2009 I have decided to share a few thoughts - first the issue of feeding your bulbs, when to do it and what to feed them with.

When the bulbs come out of their summer rest they will require some Nitrogen and phosphorous to help build the roots, stems and the leaves that will slowly extend. I add bone meal to the potting mix which contains both of these elements but for me the best factor about it is that the elements are released slowly in small quantities over a long time as the bone meal breaks down in the compost. Chemical fertilisers are fine but for me the problem when using them with bulbs lies in the way they deliver a rush of the nutrients often in excessive doses and often at the wrong time of the year for the plants. Too much nitrogen will cause the leaves to grow excessively long and soft making them much more susceptible to fungal attacks.

Healthy soil or compost should also have masses of microbes, bacteria and fungus that help break down the bone meal releasing the Nitrogen and Phosphorus slowly and organically and never overdosing the bulbs. To keep my compost mix organic I always add some of our home produced leaf mould which I hope is full of the beneficial micro organisms - it is also my belief that strong chemical fertilisers can harm these organisms. Once the bulbs have reached the flowering stage they no longer require Nitrogen and Phosphorus but they do require Potassium to lay down a store of starch in the bulb/corm/tuber as well as building the flowering bud for the following year. I have always added this as a chemical fertiliser in my case it is Potassium sulphate that is sold as a fertiliser to stimulate flowers and fruits.

Wood ash has been traditionally used to provide this nutrient but there are a number of factors that you need to be aware of. Wood ash from your log fire will contain very little potassium: the richest source of potassium is from the ash of youngest twigs on the trees or shrubs. Historically the most valued source of potassium was from the prunings from grape vines apparently these were burnt, the ash was collected and mixed with water in large clay pots like a traditional flower pot with no drainage hole in the bottom. This mixture was stirred well then allowed to stand until the water had evaporated away then the remains of the ash were removed from the bottom of the pot but the valuable product they were after was white residue that crystallised to the sides of the pot as the water evaporated - hence the common name 'pot ash'. This residue was a compound rich in potassium and because it was soluble it could be easily absorbed by the plants. So if you want to try and make your own Potassium fertiliser collect all the young growth prunings and follow the ancient process! Adding Potassium at and after the flowering period will give you better flowering bulbs and I have never had any problems that I can ascribe to using the chemical form.

On a related subject there was an interesting topic on the problem of root rots in the Forum pages. I believe that excessive use of chemical fertilisers, especially the nitrogen based ones, contributes to these rot and fungal problems in two ways.

Firstly by encouraging large soft growth and secondly I think they are harmful to the beneficial micro organisms in healthy organic soils. We are all very familiar with the symbiotic relationship between many orchids and a fungus that breaks down the organic matter to release the nutrients to the orchid. This relationship can also be observed on many other plants - tree roots for instance often have a white thread like structure growing in association with them. I believe that all bulbs also benefit from this type of relationship. If you use sterilised potting mixes or apply strong nitrogen rich chemical fertilisers you poison these beneficial organisms that help the plants grow and stay healthy. It is for this very same reason that I do not like to use any fungicide.

Root rots are most often encountered in large mono-cultures where bulbs are grown for the commercial markets. Here they have to heavily fertilise the crop and apply fungicides to control the problems of rots and so also kill off all the beneficial pathogens. In our own smaller way we also have mono cultures with hundreds of pots of bulbs crammed into a small space making it too easy for any harmful disease problems to spread quickly. Again it is my belief that the solution lies with nature where the beneficial fungus and bacteria can help protect the plants from the harmful ones and that is the reason that I do not use these powerful chemicals and always add a generous portion of leaf mould (about 20 - 25%) to my potting compost.



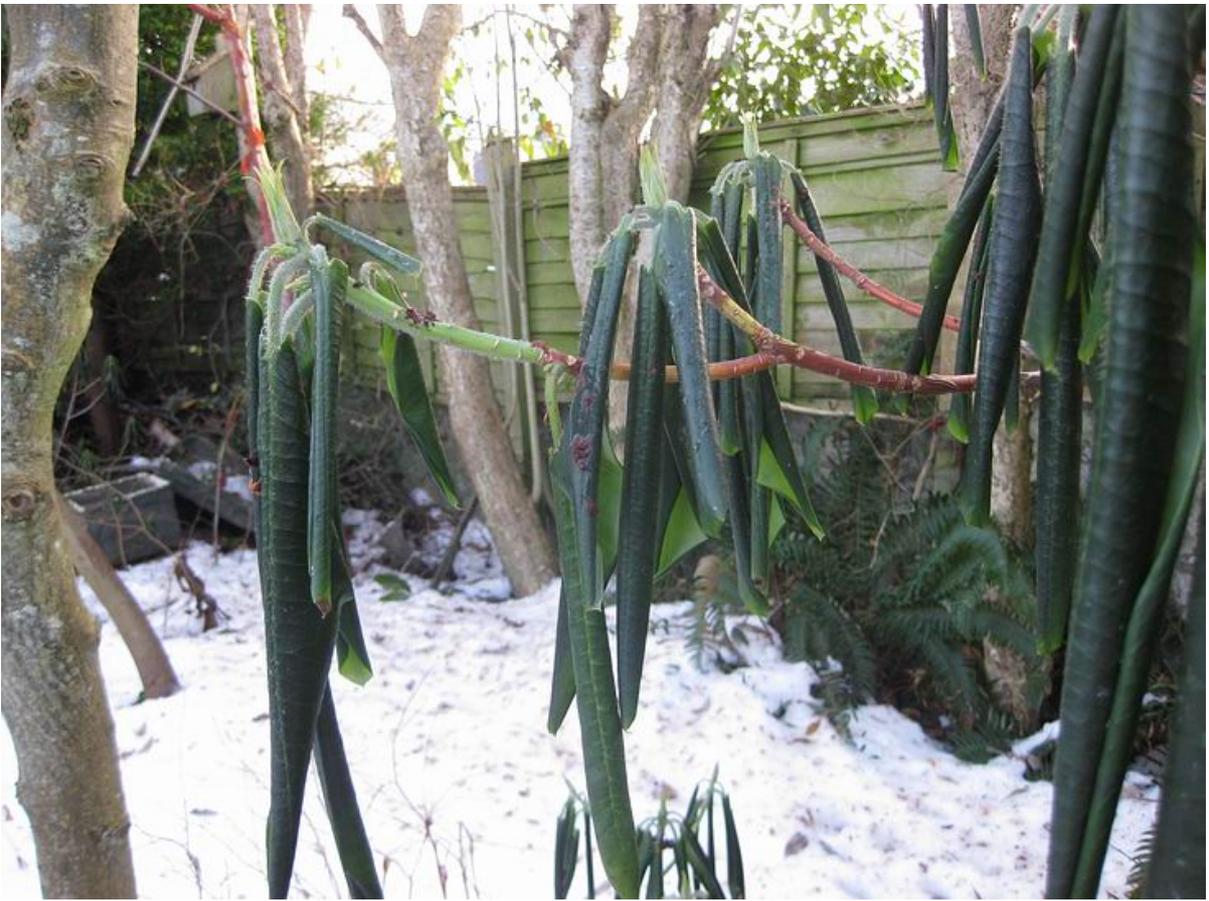
Rhododendron elegantulum

It is fascinating to watch the way many Rhododendron leaves react to the cold by hanging down and roll in on themselves even those with a furry coating like Rhododendron elegantulum.



Rhododendron thomsonii

Different species seem to react to different degrees of frost and with a bit of careful record keeping I am sure that you could work out a scale so you could tell the approximate temperature depending which species had reacted.



Rhododendron auriculatum

Rhododendron auriculatum does not like the cold at all and its large leaves are rolled up like a cigar.



Bulb house doors closed

Last week I said I rarely shut the glass house doors even in the winter; the reason for this is if I forget to open them before the sun comes round the heat can build up pretty quickly and that is likely to do more harm than a bit of cold at night. However we are in the middle of a deep freeze at the moment so I am shutting the doors - anything that I can do to prevent the night time temperature falling will help the bulbs.



Ice Crystals

The ice crystals look very pretty on the glass but they can be fatal to the bulbs as they rupture the cell walls and destroy the tissue.



Flopping Narcissus

These Narcissus are flopping over as the water in the pots is locked up as ice so the flower stems behave just the same as they do when they are needing watering. Needless to say it would be fatal to water them now. I just hope that the freezing will not cause too much damage to the bulbs.



Temperature

Next day (Tuesday 29th) was even worse with the mid day temperature in the bulb house only climbing as far as -7C.



Iced up Narcissus

These Narcissus are now seriously frozen up – you can see that ice crystals have formed on the leaves as the cold sucks the moisture from the plant.



Frozen Narcissus

I have some concerns for the bulbs in this part of the bulb house as they have no protection at all from freezing. Most of the plunges have a soil warming cable that helps to minimise the risk of the compost freezing solid all the way through and so freezing the bulbs. It has been many years since we have had such a prolonged period of sub-zero temperatures and it is very easy to forget the dangers that there are in these conditions. The last time we had such conditions I lost a lot of bulbs, the Narcissus were especially susceptible. I am afraid that I have become lackadaisical as my collection has increased and as a result I am at risk of losing many of these bulbs.



Ornithogalum

These ornithogalum are in the same position and I have no previous experience to know how hardy they are in these extreme conditions.

You have always to be philosophical in these situations and see it as a learning experience. Firstly I will learn if they can take such cold conditions and more importantly I have been shown again how important it is to provide some protection against prolonged periods of frost even if they only

happen every ten years or so. It will be some time before I know the fate of these bulbs as it can take some weeks before any damage becomes evident.



Bulb House with protection



Thermostat

By comparison the plunges in this bulb house have a soil warming cable below the pots which is controlled by a thermostat with a sensor placed in the plunge.

I have them regulated to come on when the temperature falls to 0C and they switch back off at 2C.

The cables do not heat the bulbs only protect them from freezing. You can see the result of this protection is that these flowers have not flopped over.

The surface of the compost is frozen and the air temperature is exactly the same as in the other houses it is just that wee bit of heat underneath the pots that prevents the compost freezing completely.



Plunge seedlings

These narcissus seedlings that are growing at the edge of the plunge look very happy – I suspect that their bulbs are very close to one of the warming cables.



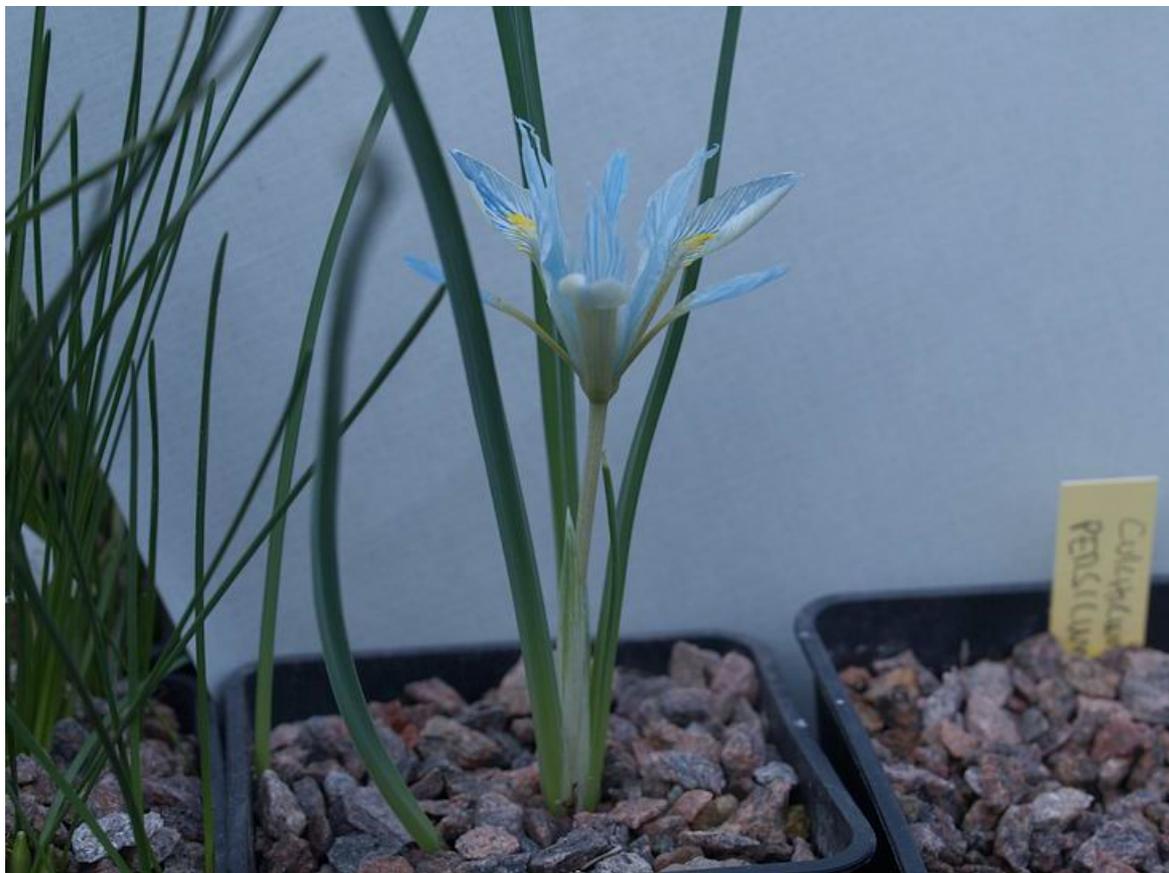
Crocus laevigatus

Even in these cold conditions *Crocus laevigatus* continues to produce its beautiful flowers which are almost encouraged to open in the brief glimpse of low winter sun that falls on the plunge. I think we can surmise that it is light more than heat that triggers these flowers to open.



Crocus imperati suaveolens

I suspect it will take quite a temperature rise before the flowers of *Crocus imperati suaveolens* are encouraged to open.



Iris vartanii

I ran a fan heater for a short while while I was in the bulb house checking on the bulbs and that was just enough to open the flower on *Iris vartanii*.



Iris vartanii

For this, the last Bulb log for 2009, I will leave you with this abstract image of the ice crystals forming on the glass.

Thank you for reading this far and I wish you all good health and good growing in 2010

