SRGC ----- Bulb Log Diary ----- ISSN 2514-6114

BULB LOG 36.....2nd September 2020

Crocus scharojanii flavus

The appearance of the beautiful flowers of Crocus scharojanii flavus (cover picture) are a timely reminder that I need to prepare the bulb houses for the first watering of the season - the storm. Before I water the sand beds I remove as much of the dried remains of the old growth as I can to prevent it attracting mould when it gets wet.

Some of the late flowering bulbs, such as this allium, still cling to a few seeds which I will scatter on the sand.

Tools

The most useful tool to use in the sand beds is the small rake I made myself from stainless steel – it has a four pronged end and a single spiked end –it is very useful to help rake the dried debris into piles and to level the surface of the sand prior to watering. I have also made another similar tool from and old kitchen fork.

Sand beds

The beds are now reasonable clear of debris, levelled off and with any hard surfaces broken up so it is ready to receive the first storm.

As I was working the sand I noticed the first signs of the new growth emerging from Tropaeolum tricolorum even before any watering which raises the question how do bulbs know when they should start to grow?

Tropaeolum tricolorum tuber and shoot.

Narcissus bulb

This small Narcissus bulb has been kept completely dry in a paper bag since early July yet when I sectioned it there are clear signs of growth initiating. At the centre of the base are dried remains of old roots this is surrounded by a yellowish section, often referred to as the basal plate, from where the roots emerge. Even before any water the tips of the roots are already starting to swell out from the base and the leaf is growing up from the central bud. It is my informed speculation the growth is not initiated directly by water but by temperature, or more likely a temperature gradient. Our bulbs start into growth earlier in the cool north than they do in warmer areas so depending on your climate you may need to adjust the timings I use for the storms described below.

One regret I have about watering the sand is the garden sparrow population love having dust baths in the dry sand. On a sunny day there can be up to fifteen sparrows sand bathing in the bulb house so to avoid mass panic I have to announce I am going in. The picture above shows one of the many small depressions in the sand this one has also revealed the advanced growth of leaves from a Muscari in the completely dry sand.

I always apply the first storm around the 1st September, this will be followed by a second storm on the 1st October and this applies to the bulbs in pots as well as the sand plunge beds where the bulbs are planted directly into the sand.

It is extremely important to take the time to soak the sand completely - this will take several passes and soakings with the hose to ensure that there are no dry pockets left in the sand.

This water gun allows me to adjust the water from a jet to a fine mist and I use something approaching a heavy shower of rain for the soaking. I can also adjust the rate of flow and to get an idea of how much water I am adding, I time how long it takes to fill a 5 litre watering can – at this setting that took 2 minutes so that gives me an idea of the amount of time I will need to be watering for.

The initial pass of water is just to soak the surface and make it receptive to the water then I continue to water making floods which I leave to drain before going over it yet again.

Our 15cms deep sand beds are filled with a sharp, free-draining sand - the bulbs are growing directly in the sand. 15cms is the minimum depth that I would recommend for the plunges - ideally I would prefer them deeper but then we would need much more sand and they would be a lot heavier especially when well-watered.
It takes time for the water to soak all the way through the plunge so I often leave it for a while before continuing the soaking –the deeper the plunges the longer it will take to soak. The bed on the left is still dry the other two are in the process of soaking.

It is often written that it is the first rains that initiate the bulbs into growth but it is not directly the presence of water that triggers this response. I think the bulbs respond to multiple factors such as the decline temperatures when autumn approaches as well as the increasing gradient between day and night time temperatures.
The cold rain will also rapidly cool down the ground and it is my belief that it is the sudden temperature drop that is the main trigger. The growth initiates when the temperature drops and the presence of water then encourages the first phase of root growth. Above from left to right I show the temperature of first, the dry sand plunge; then that of water; followed by the sand plunge after adding the water.

As I flood the sand particles of fine material get washed to the surface which if left would form hard caps preventing further water penetration as well as attracting the growth of moss in the damper weather, so I always cultivate the surface of the sand with the small rake to roughen it up.

I have cultivated the central area to illustrate the difference raking makes this allows water and air to penetrate the sand making a much better environment for the bulbs below. It is easy to rake the surface when there is almost no growth to be damaged. From now on cultivating the surface will take increasingly more time because I have to be wary of damaging any emerging shoots. I enjoy the slower task which necessitates me examining the surface of the sand in detail allowing me to spot any delicate shoots emerging or seeds germinating on the surface.

Bucket, collecting the surplus water.

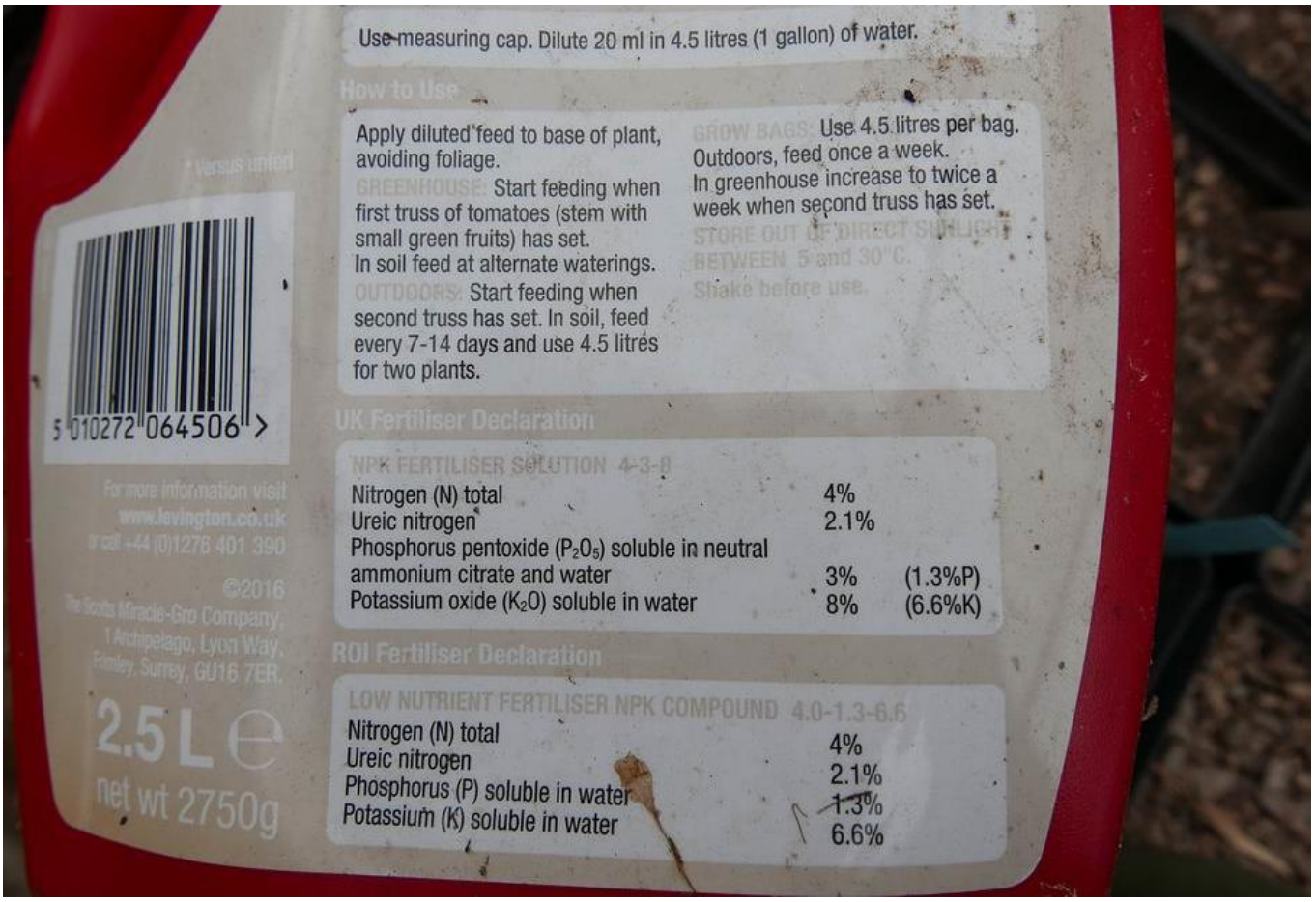
.

As well as using a sharp, free-draining sand you also need to ensure the excess water can drain away from the staging - which I have done by drilling some large holes and installing a gutter system which allows me to collect and recycle the surplus water. If you would like the full details of the plunges click this link to Bulb Log 3113 where I document the construction process.

Immediately after I have soaked the sand for the first time I add a light scatter of a balanced N-P-K 7-7-7 fertiliser. The one I use is Growmore which is a chemical fertiliser in the form of small pellets that will quickly provide the bulbs with the nitrogen and phosphorus essential food they need to fuel the growth of shoots and roots

Growmore

Each of the individual plunges are 1800 x 600 they are conveniently made of three sections of 600x600 which allows me to gauge watering and feeding. I do not want to overfeed the bulbs - I try and get a balance to allow healthy but not excessive growth so I add a small handful of Growmore to each 600x600 section once in the year.



Most of the bulbs we grow here are winter growing so need to be watered and fed through the winter months then when the frost arrives and the outside water is turned off I revert to using watering cans. Into each can I add around 1/3 strength of a liquid tomato type plant food which has a lower nitrogen and higher levels of potassium making it perfect for feeding the bulbs at this stage of growth.

Depending on the season and the stage of growth I switch to a pure potassium feed around late February into March when many of the bulbs will be in flower so have no further need for nitrogen but they do need potassium to help build up the bulb and encourage the formation of the next year's flower buds which start to form at this time.

Whether they are growing in the sand or in pots I add a small sprinkle of the powdered potassium around the bulbs before watering it in – depending on how long they bulbs keep growing I may add a second dose later.

Now for a few pictures as a reminder of the bulbs flowering in the sand beds earlier this year – this is the stage of growth when I add the potassium.

Sand bed

The bulb house where the bulbs are growing in plastic pots

The bulb house prior to watering

All the bulbs have been re-potted into a fresh gritty compost mixture and I no longer top dress the pots with grit until after I water them, largely because the mix I use has around 50% grit and I have found top dressing is not always necessary.

The watering process for the pots is the same as for the sand beds I make several passes flooding the pots, allowing them to drain then repeating the process.

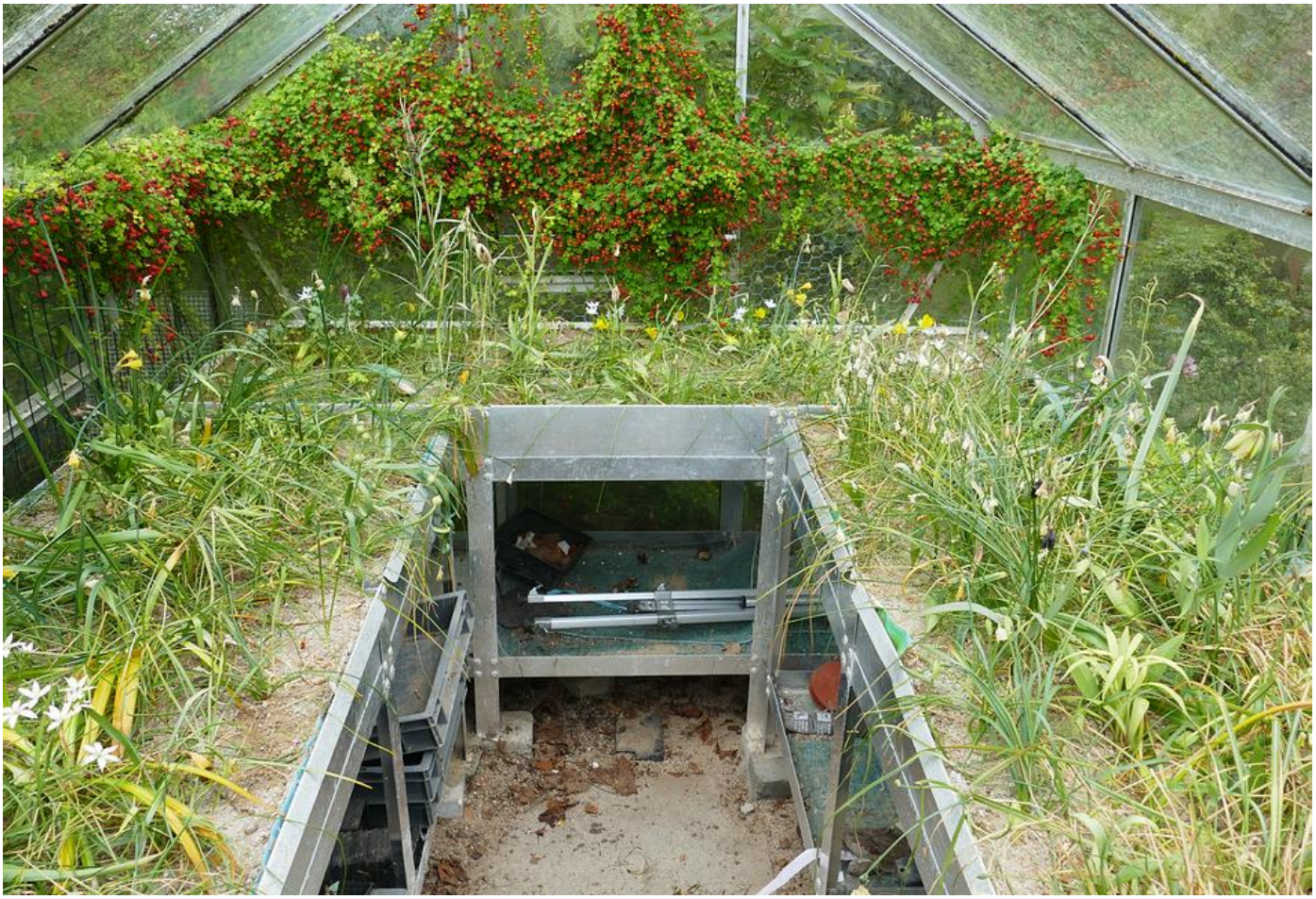
Initially it may take some time for the flood to drain through the dry pots but with subsequent floods they should drain more quickly as the compost settles and becomes wet.

After watering the surface of the compost is largely grit already without the need to add a top dressing.

Also as I water and the compost settles I start to spot some bulbs which have started into slow growth even though they are dry - now with the watering the growth will accelerate.

Just as in the dry sand a Muscari is one of the first bulbs to start showing in anticipation of the watering.

This is the bulb house with pots photographed earlier this year.



Sand beds

I will round off this week with reminders of what we enjoyed earlier this year and can look forward to in the months to come……..