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BULB LOG 36.....5th September 2018

Crocus xantholaimos

Formally classified as a subspecies of Crocus speciosus, Crocus xantholaimos has been elevated and given specific status – the reasons are fully explained by Janis Ruksans in his latest book ‘The World Of Crocuses’.
It grows well for us in the garden where it increases by division of the corm as well as by seed. Here it is among the first of the autumn flowering Crocus come into flower – you will note that I use the term ‘Autumn Crocus’ correctly.

Colchicum ‘The Giant’

I get so frustrated when Colchicums are referred to as ‘Autumn Crocus’ when they are not even in the same plant family: these are autumn flowering Colchicum. Both the autumn flowering Colchicum and Crocus are also often referred to as late flowering bulbs but as the majority of bulbs form their flowers before they retreat underground for the summer these are the early flowering ones. The flowers of the others are held in miniature protected inside the bud through the winter until they emerge much later next spring.

Three to four weeks later than recent years autumn flowering Colchicum are now starting to make their appearance all around the garden. These are some in the corner of the bed where I removed a rhododendron and thinned the Dicentra - the colchicum bulbs, lying deeper in the ground, were undisturbed.

The dried Erythronium stems having shed their seed stand to remind me of the spring flowers as the autumn flowering Colchicum and Cyclamen are starting to bring their colourful display to the garden.

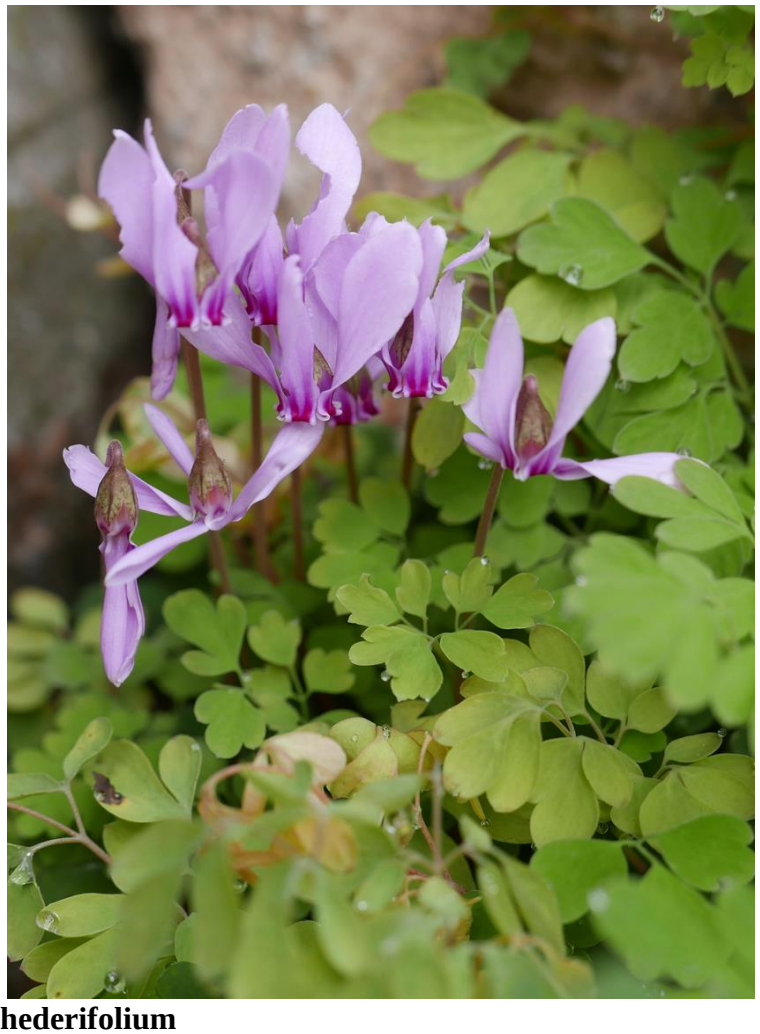
There is a change in light in autumn as the sun sinks down in the sky casting longer shadows with deeper contrast between light and shade – the details of the white flowered Cyclamen hederifolium are burnt out as the camera tries to balance the light and darks of this scene.

Moving in close I am able to adjust the exposure for the white flowers.

This was one of the first sand beds I built for bulbs in the garden and I continue to use it as an area to experiment in. For many years I spent hours carefully cleaning away all the moss and other plants from the sand until a few years ago I decided I could save myself a lot of effort by leaving the low growth of moss and Sagina (Pearlwort) and the bulbs have continued growing well - just as they do in the wild in harmony with these other plants. I do remove any larger growing plants that seed in which could out-compete the bulbs.

Cyclamen coum leaves in the foreground with Cyclamen hederifolium flowers.

In nature most bulbs grow perfectly happily along with and through other plants as these **Cyclamen hederifolium** which seeded themselves in with the Oxalis and Saxifraga - self-seeded Crocus and Erythronium also grow here.



Cyclamen hederifolium

The succession of blue flowers continues to open on the Cyananthus and will only stop when the frosts start to bite.

Cyananthus lobatus (hybrid)

Cyananthus microphyllus

Similarly the yellow flowers of **Hypericum reptans** which trail over the edges of the slab beds have added their colour through the summer which they will continue to do for some months to come.

The first of September is an important date not only as the Meteorological start to autumn but also the day I deliver the first storm to the bulbs growing in the bulb houses. Here all the bulbs growing in the sand beds are about to get a thorough soaking to start them off into growth but before I do that let me show you a few that could not wait.

I am not sure which **Colchicum** this is I will need to check back my photographic record from the days when I grew it in a pot with a label. Also some more flowers have appeared on these newcomers to us, **Strumaria karooica**.

Cyclamen mirabile flowers supported by their corms'store of energy rise from the completely dry sand.

Ornithogalum leaves

As you see some plants did not wait for the storm before the started to flower or grow leaves so what triggers do the plants react to? It cannot just be the presence of water.

Delivering the storm.

Before I start I scatter a light application of an N-P-K, 7-7-7 Growmore fertiliser – the amount in my hand covers one bench which is 600 x 1800mm – this will provide some nitrogen and phosphorus for the early root and leaf growth.

Then I spend the best part of an hour using the shower setting on the hose going back and forward across the sand to make sure that it is soaked all the way through.

It is very easy after a few passes of water to assume that the sand is soaked.
After spraying water for some time I stopped for a break and to give the water time to work its way through the sand however digging a small test hole I find that the water has penetrated down less than 5cms as shown below.

Below the wet zone of around 5cms the sand is still dry.

I continue to spray water flooding the sand then allowing it to drain until I am sure that it is wet through - because of my drainage system (see Bulb Log 3113 for details) I was able to see when water was draining out below.

Flooding with water washes fine particles onto the surface which if left would dry out and form a crust preventing water getting down to the bulbs so I always use a small rake or fork to rough up the surface after watering.

It is often said that it is the application of water that stimulates the bulbs into growth but I know from my experiences and trials that is only a part of the reason. As I have illustrated many times root activity on bulbs can be initiated even when they are completely dry so they must be responding to some other trigger and I believe that to be changes in temperature. Just like many seeds need to go through a number cycles of freezing and thawing to break dormancy I think bulbs need to go through a sequence of temperature gradients to wake them from their summer rest. The autumn rains that soak the natural habitats of these bulbs will also cause a sudden drop in ground temperature and when I checked the temperature of the sand bed immediately before and after the watering I recorded a significant fall in temperature. My hypothesis is that changes in temperatures stimulate the root tips to emerge and if there is water present they will grow out into the moist ground, if it is still dry they wait or extend very slowly until water is available.

As I water some of the smaller bulbs get washed to the surface so I go around poking them back into the sand.

The bulbs growing in pots require the same attention to ensure they get a complete soaking not just to the mixture in the pots but also of the sand below.

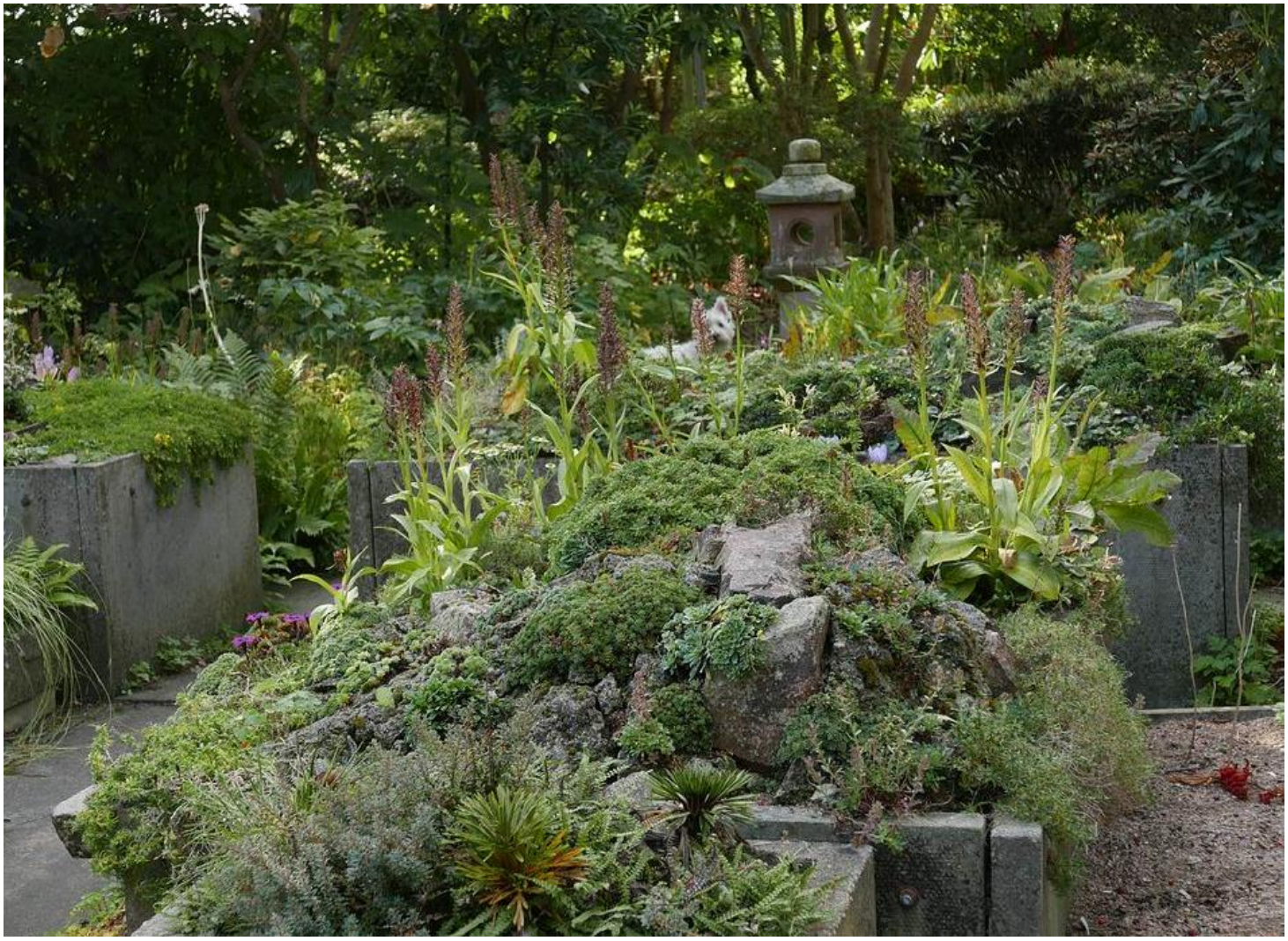
It takes several phases of flooding then allowing the pots to drain before they are watered sufficiently. If you have a test pot filled with your mix but without bulbs you can tip that out to check whether it is soaked all the way through. If you have a well-drained potting mixture the flooded pots should drain in around 30 secs on the first pass getting quicker as they become evenly soaked.

The water forms a drainage course as it makes its way through the dry mix washing the fine materials down leaving a surface of mostly the gravel which makes up fifty percent by volume of my mix.

Watered and waiting for growth.

Some of our Dactylorhiza flower stems have developed ripe seed heads and this is the time of year that I will assist in the dispersal by collecting some and spreading it around the other troughs and raised beds where I would like them to grow.
The seed is like dust, containing little if any food reserve, so the emerging seeds are immediately reliant on the environment where they land for all nutrients which is why they like to grow in association with other plants where there is likely to be some symbiotic fungi .

Dactylorhiza seed



Whether the Dactylroza set seed or not is mainly due to the weather conditions at the time the flowers were fertile and this year there are only a small percentage of ripe capsules on the plants growing on the slab beds.

The leaves are now emerging on this large white Cyclamen hederifolium.

Rhododendron saluense

The return of the rains have stimulated these Rhododendrons to produce their second flowering of the year around three weeks later than in recent years.

Rhododendron ‘Curlew’

Rhododendron ‘Curlew’

Due to the hot dry summer the beautifully scented **Rhododendron auriculatum** is also later to come into flower however this is not a secondary flowering this is a late summer flowering species. Until next week……