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----- Bulb Log Diary -----

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BULB LOG 8.....25th February 2015

Including Erythroniums in cultivation – The Flower: chapter 3

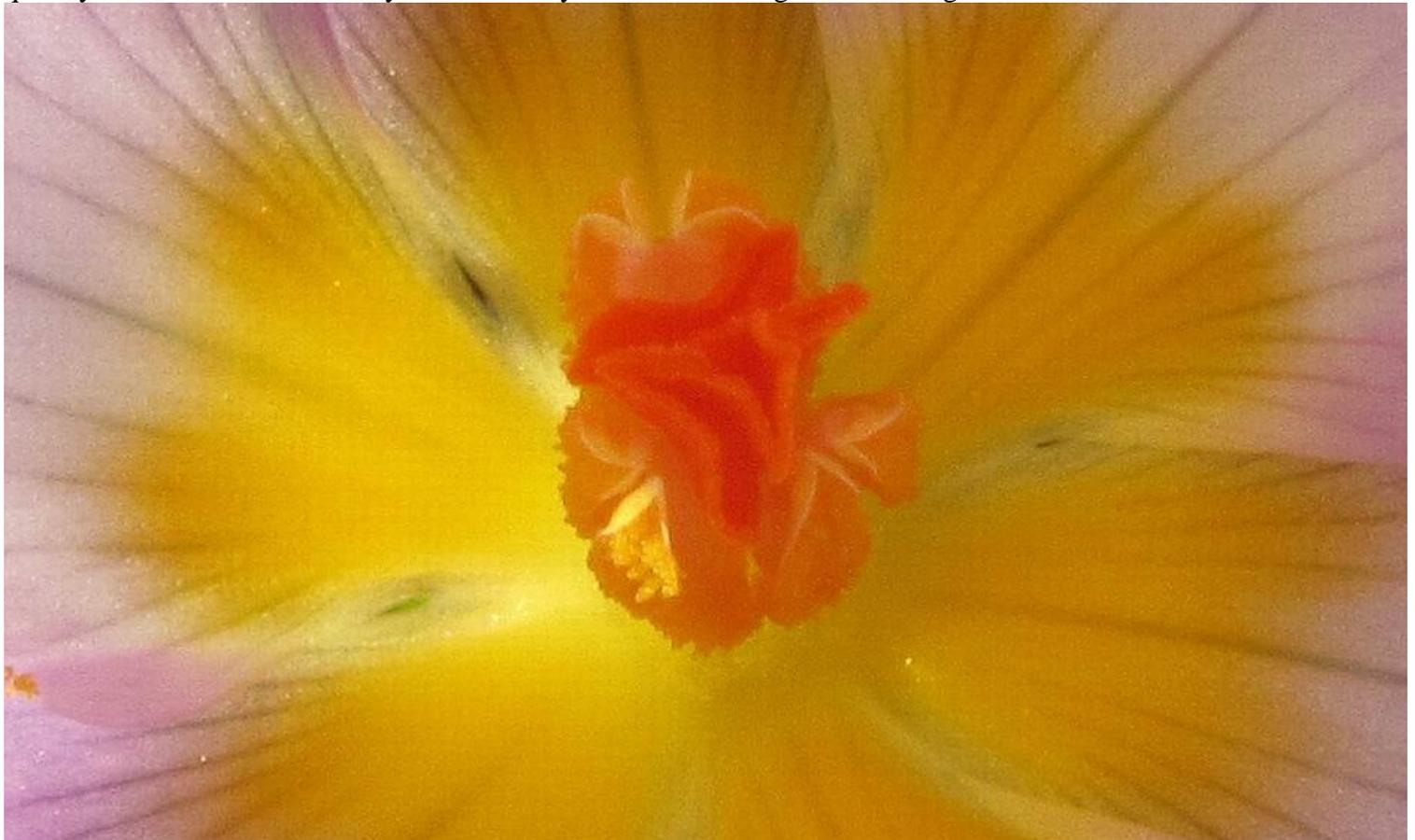


Crocus abantensis

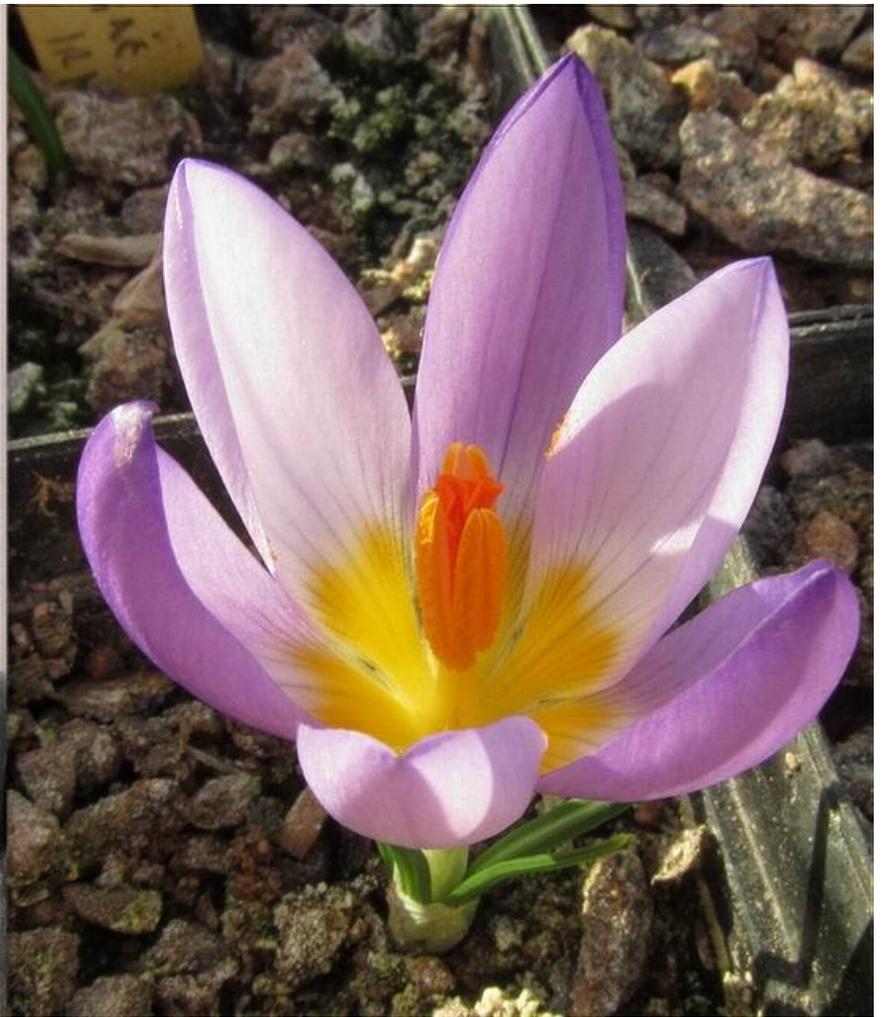


Crocus atticus

The early Crocus are now flowering in the garden – Crocus abantensis, pictured on the cover, is growing in a raised bed where we can appreciate the flowers up close. Crocus atticus is a very good grower for us forming clumps quite quickly so it needs divided every three to five years to maintain good flowering.



The beauty can be expressed in this abstract of a **Crocus biflorus** (?) raised from seed, see also below.



***Crocus biflorus* (?)** grown from seed collected in Turkey. I will need to confirm the identity of this *Crocus* against Janis Ruksans' recent revisions both in his book and the IRG.



Crocus dalmaticus flowering in the bulb house.



Crocus olivieri balansae above and Crocus olivieri olivieri below.





Colchicum trigyna is in flower both in the bulb house, above, and in one of the garden sand beds where the flowers are slightly battered by the wild weather.



Fritillaria chitralensis

Fritillaria chitralensis is among the first of the genus to flower with us. I grow the larger mature bulbs individually in 12cm deep 9cm plastic pots and younger seedlings share 11cm pots.

The reason for this is that I want to standardise the plunges using only 7,9 and 11 cm pots.

Bigger pots that could accommodate a number of mature bulbs would disrupt my layout.

As we no longer take plants to shows we have no need for large pots of flowering stems to attract the judge's eye.



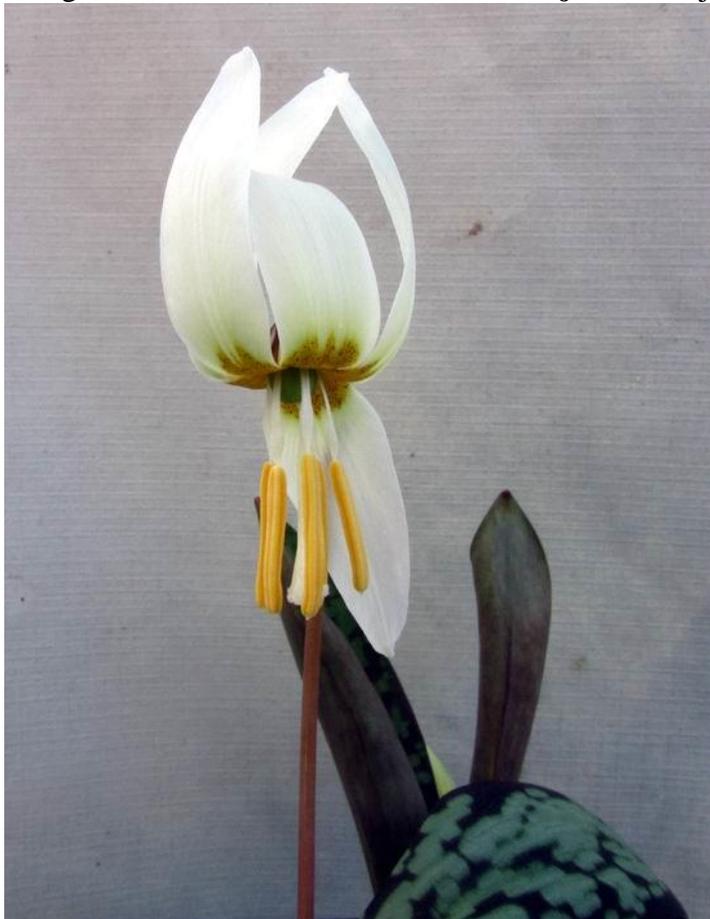
The 7cm plunge in one of the bulb houses shows that using smaller pots does not mean we get fewer flowers but it does allow us to fit in many more pots and so more variations.



Narcissus 'Don Stead', growing in a 7cm pot, is a very distinct hybrid that retains short stems even in our low light conditions.



The garden is in full flower with the **Leucojums** now joining the **Galanthus**, which always come out first.



Erythronium caucasicum is the first of this genus to flower here this one is in a pot, grown all year in an open plunge frame only moved under cold glass so we can enjoy the flowers and hopefully get some seed to set, other plants of this species in the garden are also in bud just waiting for a warm day to open.

On the subject of Erythronium here is the next chapter of my e-book Erythroniums in Cultivation.....

Chapter 3

THE FLOWER



THE FLOWER



Erythronium flowers are very elegant to look at especially when their petals reflex giving them their pagoda-like appearance.

They are instantly recognisable from the way they hang their heads and reflex the tepals in suitable conditions.

In many ways they are similar to tulip flowers and indeed these two genera are closely related.

Erythronium revolutum

Tulipa having evolved and adapted to growing in hot dry climates allowing their flowers to face upwards without the threat of water damage while Erythronium populate regions that are cooler and wetter during the flowering season so they have evolved to protect their reproductive parts, like an umbrella, by holding their flowers in a downward facing manner when it is cold and wet.

**Erythronium californicum**

Erythronium flowers have evolved to respond to the changing weather conditions by opening when it is warm and dry then quickly closing when the temperatures fall and or rain comes.



Erythronium oregonum

Occasionally you may find an Erythronium that has not inherited the nodding flowers but looks upward like a tulip – we have one Erythronium oregonum that does that every year (left).



The flowers are borne singly or in multiples on a leafless stem - the maximum count of eleven flowers on a single stem of a hybrid in our garden was quite exceptional. The size of the flowers varies from quite small flowers, 2-3cms across in a few species, to large flowers of some 15cms across in others.

The flowers were fully formed in miniature within the bulb before it went into the summer rest.

In the spring when the stem first pushes through the ground the buds are still quite small and usually have a greenish tint but they quickly expand taking on their true colour by the time the flower opens.



Erythronium elegans



Erythronium grandiflorum

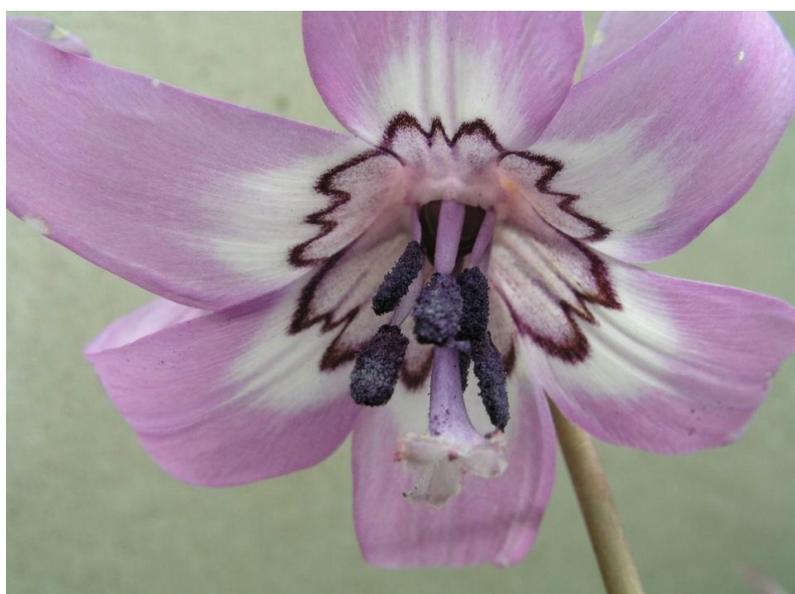


Erythronium revolutum

The flower colour is the first indicator to guide us in the identification of the species and there is a range of colours from white through yellow to pink and purple.



Erythronium hendersonii



Erythronium japonicum

Many Erythronium flowers also have contrasting colours towards the throat, including dark attractive zig-zag patterns in some species, all contributing to their alluring attraction. These markings have obviously developed to help attract and guide insects to visit and pollinate the flowers.



Erythronium oregonum



Erythronium elegans



The flowers of some white/ cream, species can take on a pink tinge as the flower ages – this is due to the development of anthocyanins, which are red in colour, as the flower matures.

Tepals is the botanical term applied to the floral segments of a flower and Erythronium, being in the family Liliaceae, has flowers made up of six tepals - the outer three are sepals, these wrap around and protect the inner three, which are true petals, while the bud is closed.

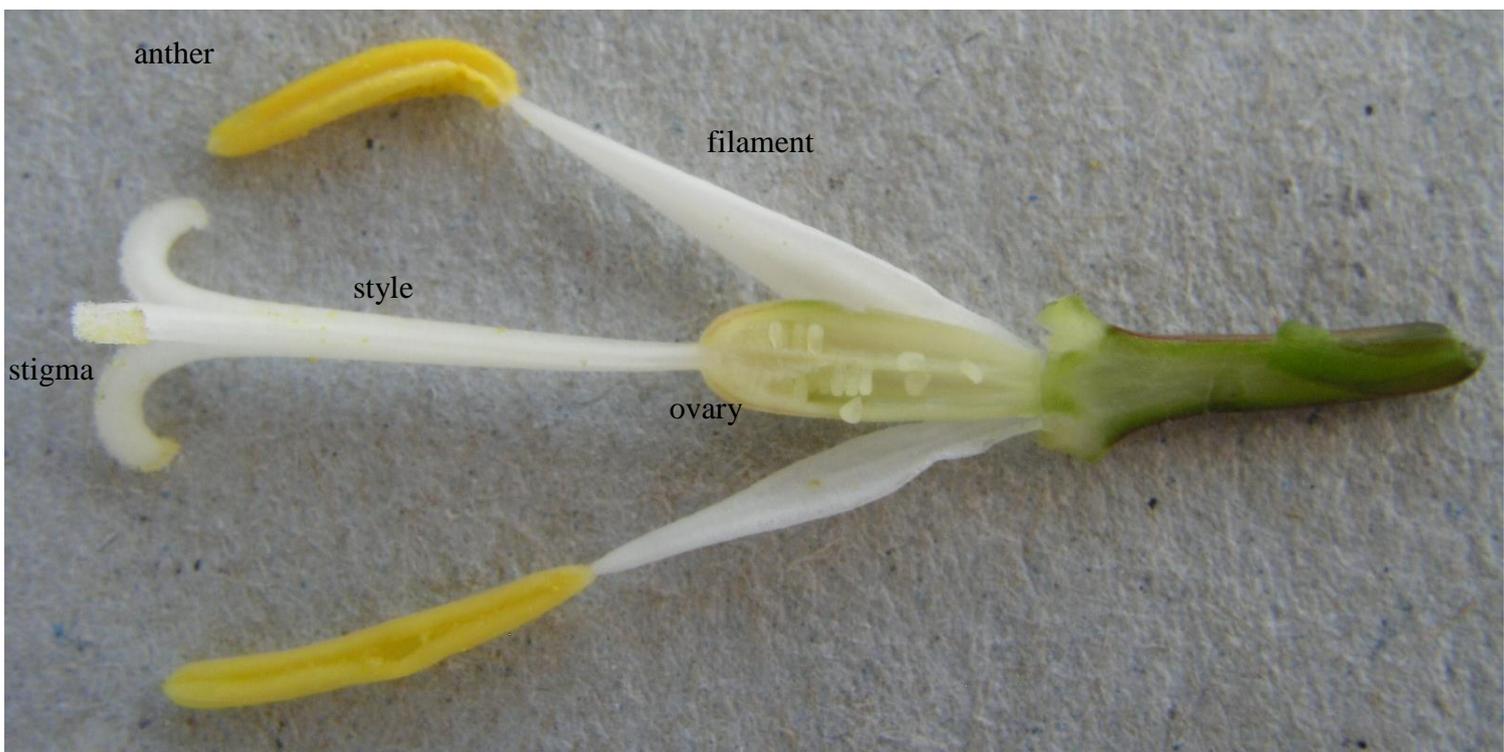
In Erythronium all the sepals and petals look similar and in general gardening terms all these parts are usually simply known as the petals.

Erythronium revolutum



Erythronium revolutum

Along with colour the main features of the flower that are used as diagnostic for the identification of the species are the presence and shape of sac-like appendages found at the base of the inner three petals which are present in some species, the shape of the filaments that connect the anthers to the flower, the shape of the tip of the style. The colour of the pollen on the anthers is used in distinguishing species in the Eurasian plants but less so in the North American species where it is only used at a varietal level. Ridges run from the base to the tip of the outer three petals arising from the sac-like appendages - the purpose of these is not fully understood.



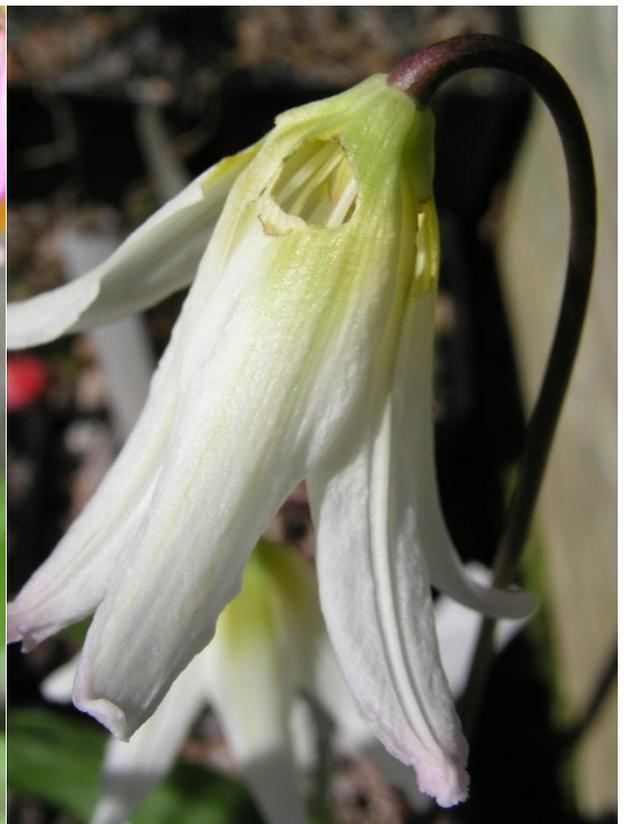
The ovary and style, with the stigmatic surfaces at the tips, make up the female part of the plant while the male part, the stamens, consists of the filaments holding the pollen bearing anther. The immature seeds, gametes, are already partially formed in the ovary just awaiting the pollen to grow down from the stigma through the style to fertilise them.

**Erythronium helenae**

The main purpose of a flower is to both protect the pollen and stigma from wet weather and to attract pollinators in to fertilise the plant.

The main pollinator of Erythronium in our garden (apart from me!) seems to be smaller flies and other insects.

The bumble bee is not aerodynamically designed to get inside a downward pointing Erythronium flower; this does not stop them being attracted to the sweet nectar reward so it breaks in through the back of the flower leaving a series of holes as evidence of its raid.



Bumble bee “breaking and entering” and a resulting hole.