



Chafer Grub

I found this chafer grub in a pot of Crocus corms, some of which have been severely chewed as the picture above shows. These grubs are the early life form of garden beetles many of which are predatory and beneficial in the garden so I suppose I will have to put up with the odd damage that they cause. With a bit of luck and some good cultivation I hope this corm, complete with well extended flowering shoot, will continue to flower and grow. Finding and dealing with problems such as this is just one very good reason to repot your bulbs every year.



Weeds

This is the growth that I removed from a seed pot that was long overdue to be repotted – well, it has been neglected for some years.

It fascinated me to see these pioneering plant forms taking advantage of my neglect and showing just why they are so successful in both nature and the garden. The liverwort usually comes first then the moss closely followed by the fern.

They actually make a very nice little garden that I should probably be pleased with instead of which they were dispatched for composting.

Codonopsis grey wilsonii

The contents of the pot above that have survived years of neglect and survived are these tubers of *Codonopsis grey wilsonii*. They were sown way back in 1999 and have languished at the back of the seed frame area until this week when I decided to have a major “rationalisation” of the beds and check every single pot. The seed frames have been full to overflowing for a number of years and most of the recent seed



pots have had to be accommodated in polystyrene fish boxes beside the glass houses. As part of my tidy up I want to get rid of these over-flow boxes and have been planting out many of the bulbs that were growing in pots in them and, now I have cleared the seed frames, all the seed pots can be moved there and I hope to get rid of the boxes. I do want to reduce the number of bulbs that I grow in pots to a more manageable level - but I make no promises.



Trillium chloropetalum seedlings

Quite a number of the pots from the seed frames that I am going through have *Trillium* seedlings at various stages of growth. These small *Trillium chloropetalum* seedlings are some four years old and have never been repotted so it is time they were moved on into less cramped conditions and fresh compost. The biggest of them are just big enough to plant directly into the garden but the majority are still quite small, because of my neglect, and need to be potted on. Below is my method of repotting trilliums and their like, which have living and growing roots.



I place a small amount of compost into the bottom of a pot which I lay almost on its side - then I add a thin layer of compost on the flat side right up to the rim of the pot. Now I can lay out the small Trillium rhizomes at the correct level a few centimetres below the surface with their roots extending down towards the bottom of the pot. Having completed one line I add a thin layer of compost – just enough to cover them over.



Next I gently firm the compost and add another layer of five to seven seedling Trilliums.



Repeat this process until the pot is nearly full and there is just enough room to squeeze in another layer of seedlings.



Finally I add the last layer of compost as I tilt the pot back upright then top off the pot with compost.



A pot of **Trillium ovatum** seedlings knocked out of its pot with most of the compost shaken off.



Most of these **Trillium ovatum** seedlings are big enough to be planted out into the new space we created by removing some shrubs a few weeks ago.



Trillium seedling

This is how a healthy young Trillium rhizome should look- with plenty of roots both the newly emerged roots and those from the last two or three years growth.



Looking closer you can see the **new roots** are the ones that emerge just by next year's shoot which has already formed. These roots are essential to the growth of the plant and if they are damaged or removed the plant will not be able to grow normally next year. It annoys me when some bulb sellers offer for sale nothing more than a bit of broken off rhizome with a growing shoot and no roots. These offerings are usually made through the autumn and winter and some are offered at considerable cost. To me such offerings are no more than cuttings and will not put on any growth above ground until new roots are formed next summer- if you can keep them alive. I would avoid purchasing such offerings, even if they *were* reasonably priced, and look for nurseries offering growing plants in the spring or seed raised stock which have a healthy root system such as I am showing here.

These roots are fat and wrinkled because they are contractile: they have formed because the plant wants to be growing deeper in the soil and these fat roots will in due course contract pulling the rhizome deeper into the ground.



Trillium rivale rhizome

You can also see very clearly the different kinds of roots on this *Trillium rivale* rhizome. The most recent roots nearest the growth bud, bottom in this picture, are the fat contractile ones that have formed as the plant matures and wants to be deeper in the soil.



Trillium rivale rhizome

The nobby bits just back from the growth shoot on this *Trillium rivale* rhizome are secondary growth points which in this species will grow on even as the main dominant shoot also grows. In some other species these secondary growths will only come into growth if the main shoot is damaged in some way.



Scoliopus bigelowii seedlings

Here are a group of three year old *Scoliopus bigelowii* seedlings which also have permanent roots that need protection



Scoliopus bigelovei seedlings

Taking a closer look you can see the tiny brown growth point from which emerge a number of fat storage roots. These fat roots are not contractile but are storage roots that are essential for the plant's survival. Even in mature plants the shoot itself is useless and will not survive without its mass of fat storage roots. The secret to growing these plants is to ensure that these roots never dry out for any length of time and so remain alive.



Erythronium bulb

To further illustrate the power of some bulbs to take themselves ever deeper this is an Erythronium bulb that has been grown in a polystyrene box since seed. It has grown down into the polystyrene requiring some excavating of the box to remove the bulb undamaged. I have experienced this often before and if left for another season the bulb would be growing below the box. Plants like Scoliopus with perennial roots can also penetrate the walls and base of these boxes.



Crocus nudiflorus corms

Here is a sequence of Crocus nudiflorus corms showing the new corm along side some of the stolons formed last season as well as the small cormlets, into which the stolons gradually transform.



Crocus nudiflorus

The first Crocus to flower in the garden this season.



I have also just discovered this **Crocus vallicola** flower in the bulb frame – one of the ones I repotted last week.