

I remember opening one of my talks on growing bulbs with the words that 'we do not grow bulbs - the bulbs grow themselves – we have to provide the conditions to enable them to flourish'. As gardeners we create environments that plants can grow in. These environments are of course strongly influenced by many parameters including our climate and local weather conditions. Over the years I have come to understand gardening as a journey not a destination – gardening for me is all about studying and enjoying each phase of growth not about achieving an instant good look by planting mature plants.





The trough above is a good example of one of my experiments – or just a good excuse for having a trough that looks a long way short of perfect.

When it was first planted with young saxifrages it looked clean and tidy for the first year or two then liverworts and mosses started to grow. Normally I would have tried to remove or at least limit the growth of these primitive plant forms but I decided to let nature take over and watch how the plants developed. In the cool damp months the liverworts dominated even growing into the saxifrage cushions but then in spring the saxifrages fought back as their new growth pushed the liverworts into retreat. The deep penetrating

roots of the saxifrages allowed them to grow even when the surface became hot and dry - conditions which killed some of the liverwort so some form of natural balance was achieved. I was not adding any form of fertiliser so not surprisingly the plants did not grow so well in subsequent years. The second picture shows one plant on the left hand corner had initially grown well covering a large area but then it succumbed and has all but died - the plants that grew much slower have fared better. There are various speculations I can make such as to this plant's demise; was it that it grew well when there was a reasonable supply of nutrients but as time went on it could not survive on the lower nutrient levels, was it the position/aspect of the plant in the trough, was it that it could not cope with periods of drought as well as the smaller tighter cushions? It has been an interesting experiment and while I have learned from observing its progress there are too many variables for me to draw clear conclusions. Now some 'weed' species have seeded in I have taken cuttings from all the plants



and later I will rework this trough saving and replanting the best of the plants. What it has shown me is that if you create an equitable environment plants will grow.

Another trough, right, contains a single lump of limestone bedded into sharp sand. I seeded it with Erinus alpinus then waited and watched. Some of the seeds landed around the edge of the rock and grew in the sand - they flowered in the second year, others found cracks and holes in the rock where they could get a hold and these took at least three years to reach flowering size - I allow these plants to self-seed. Over the years moss has grown on parts of the rock and Erinus has seeded into the moss taking advantage of the extra moisture retained in the moss. If left to nature this colonisation would continue and the moss and plants would eventually cover the entire rock.





An interesting seedling of the fern, **Asplenium scolopendrium** with very nice crinkly edges has appeared in a similar trough.



Lichens and mosses are the pioneering forms of vegetation that first colonise rocks, they in turn modify the environment so it holds more moisture allowing other plants to seed in. This trough had a single pine tree with an upright rock – at first the moss grew only on the flat soil surface, then over the edges of the granite trough, up the base of the trunk of the pine and now it has a good hold on the vertical piece of volcanic rock.



In these troughs we can create micro habitats for specific groups of plants but they in turn have an effect on the larger environment. Look at the moss growth around the bases of the troughs.



The moss first gets a hold under the trough where moisture lingers then gradually that boundary extends until it reaches a sharp line that defines the area of shade cast by the trough. Beyond this line it gets too hot and dry for the plant to survive. You will often see such sharp boundaries in natural habitats where the vegetation suddenly changes form lush to sparse – these boundaries are most commonly the result of sun and shade or dry and wet but other factors like underlying geology can also be a factor. The lesson gardeners can take from this is that even in a small area a slight change in conditions can mean the difference between plants being able to grow or not – sometimes moving a plant 30cms could make the difference.



Cyananthus lobatus spreads out covering a large area and cascading down the sides of one of the slab beds.



Hypericum reptans enjoys the same environment.

On another slab bed Campanula garganica and Hypericum reptans share an environment.

Another lesson I have picked up from seeing plants growing in the mountains is that they rarely grow as an isolated specimen neatly spaced out from its neighbours - more often I have seen large rocky gravel areas bare of plants then a whole community of plants growing together and through each other in one spot.





Plant community where Edrianthus and Aquligea have seeded into Saxifraga. Generally it is in a hollow, or the shelter of a rock, where the harsh environment of the mountains has been modified enough to allow a plant to get a hold, this plant in turn creates further shelter, holds moisture, builds humus then other plants join in the mutually supportive community. When I first started gardening I spaced the alpines out surrounding them with gravel now I am happy to let them form such communities as I have observed in the wild.



Another way I try and recreate or mimic what I have observed in nature is shown above where I opened a natural crack that started to form in this rock, filled it with sand and planted a seedling of **Potentilla pulvinaris**. The plant grew well enough to flower and shed seed – one of these seeds has found its own way into a tiny crack that is forming in the same rock. I look forward to following its progress through the years.





An Erigeron has grown from seed that I scattered in the slab bed that I reworked a few years ago adding broken concrete to the pink granite rocks that formed the original landscape. Although small this area has many microenvironments.



Because they found the conditions favourable individual saxifrage rosettes that I inserted as un-rooted cuttings have now grown filling the cracks, just as they would in their native mountain habitat, between the broken concrete showing that if we provide the right conditions the plants will grow.

We can take this a stage further by understanding the needs of plants soft cuttings supported in a mist unit so they do not dehydrate will survive and form roots. Cuttings can also be taken in the autumn to root over the winter when they are less likely to dehydrate. In the cold winter months they take a lot longer to root but soft wood cuttings are growing fast and in the summer heat they will root quickly if we can keep them alive.





Potentilla nitida cuttings rooted in the mist unit in three weeks and are now ready to be potted on.



Salix, Hebe and Celmisia cuttings after three weeks under mist.



Once potted up the cuttings spend a week on a bed of moist sand in the next section of the lower staging in the glasshouse and get occasional mistings from a hand held spray to wean them off the intensive support - after a week they can go into a shaded outside frame for a further few weeks before they are ready for planting.

Which plants will grow in our gardens will largely depend on the climate and our local weather but within our gardens we can take advantage of light and shade, dry and wet areas to allow us to grow a wide range of plants. We can create further micro environments in troughs and raised beds and allow plants to form supportive comunities.

I have learnt over the years that plants want to grow all we need to do is provide conditions that they can tolerate. While we can fine tune some of those conditions there will always be plants that we cannot grow in our area so the message is to grow to your strengths and work with your climate, not against it.





Create the right conditions, sunny hot dry bed, Molly and Megan will join the plants.....