



## **REDDITCH BONSAI**

### **EDITION OF FEBRUARY 2023.**

### **EDITOR'S REMARKS.**

During the Members' Forum some issues were raised about Vitamin B1 and Epsom Salts as possible plant stimulants.

As promised I print here the article about B1 which I quoted from during the meeting, which article tends to debunk what I think was a fairly widely held view that this element was a useful tool in the gardener's armoury:-

Linda Chalker-Scott, Ph.D., Extension Horticulturist and Associate Professor, Puyallup Research and Extension Center, Washington State University  
The Myth of Vitamin Stimulants:

"Vitamin B-1 reduces transplant shock by stimulating new root growth"

Ever seen this advertisement? "[Product X, which contains vitamin B-1] stimulates the quick formation of new root hairs and revitalizes the delicate feeder roots that are often damaged in transplanting. [Product X] is especially designed to hasten the development of bareroot roses, shrubs, shade trees and bedding plants that have been moved to new locations. It helps plants become established quickly and ensures vigorous growth." Another adds a little scientific terminology to convince you: "Vitamin B-1 (plus minor elements and chelating agents) is great for root growth and helps reduce transplant shock." Or how about this one? "The combination of Vitamin B-1 with essential micro nutrients forms a highly effective mixture...and lessens the chances of transplant shock and plant stress." Aren't you convinced that if you don't use products with Vitamin B-1 your transplants will suffer? Apparently administrators at one large university are. Under their "Typical Tree Protection and Relocation Specifications" is the following: "48 hours prior to cutting, an application of vitamin B-1 shall be administered to the rootball of the tree." If a university requires this practice, it must be legitimate, right? The Reality Applying vitamin B-1, or thiamine, to root systems of whole plants does not stimulate root growth. This is a myth that refuses to die, though it has been repeatedly refuted in the scientific literature. To understand why, it helps to think about this in a historical perspective. Many decades ago the plant growth regulators called auxins were isolated and characterized. Auxins were found to stimulate cell elongation in both root and shoot tissues. Commercial preparations were developed that contained auxin and vitamin B-1 among other ingredients. Research in 1949 found improved root development in plants treated with one of these preparations (Transplantone, which contains both auxin and thiamine), but noted the importance of auxins in this response. Further research throughout the last half of the 20th century investigating the application of auxins to root systems suggested that auxins may stimulate root growth, but that vitamin B-1 on its own does not. So what does work for stimulating root growth and reducing transplant shock? A review of the historical and current literature suggests the following: Indole butyric acid (IBA) is one of the most common auxin formulations especially in tissue culture. In cuttings, it has been found to increase the number of roots, to increase rooting percentage, to increase both parameters, or to do neither. IBA has had some success in root regeneration in transplanted trees; it may help redirect resources to the roots by suppressing crown growth. Naphthylacetic acid (NAA) is also a commonly used auxin and often the active ingredient in commercial preparations. NAA tends to be toxic to seedling root development, as it inhibits primary root growth and enhances lateral root growth. This latter activity may account for NAA's success in regenerating roots of transplanted and root-pruned trees. Like IBA, NAA apparently suppresses crown growth, which

also may redirect resources to the roots. Paclobutrazol (PBZ) is another plant growth regulator that seems to stimulate root growth in containerized as well as established tree species. Like the auxins, PBZ reduces crown growth which may assist with root resources. Fungicides may increase root growth, but overall this is not beneficial to the plant. Fungicides kill beneficial mycorrhizal species, and the lack of mycorrhizal colonization means that plants must put more resources into root growth than they would if mycorrhizae were present. Furthermore, there are beneficial fungi and bacteria that control pathogenic microbes and roots colonized by beneficial microbes have been shown to grow more than those without. Nitrogen supplements can improve root growth, and conversely the absence of nitrogen will depress root growth. Uptake competition from bacteria, fungi, and other plants can be intense and so nitrogen is often limiting. Vitamin B-1 (thiamine) is an important component of tissue culture media, in which isolated plant tissues can be propagated. Its use for stimulating root growth in whole plants is not supported in the literature and one study reported that root growth was greater in the control treatment (water) than with thiamine. Plants in the field manufacture their own source of thiamine and it is therefore unnecessary to add any additional levels. Many fungi and bacteria associated with plant roots also produce thiamine, so it's likely that healthy soils will contain adequate levels of this vitamin without amendment. Why does the mystique of vitamin B-1 transplant tonics still persist after decades of scientific debunking? The Bottom Line • Vitamin B-1, aka thiamine, does not reduce transplant shock or stimulate new root growth on plants outside the laboratory • A nitrogen fertilizer is adequate for transplanting landscape plants; avoid use of "transplant fertilizers" that contain phosphate • Healthy plants will synthesize their own thiamine supply • Healthy soils contain beneficial microbes that synthesize thiamine as well • Difficult-to-transplant species may be aided by application of auxin-containing products in addition to nitrogen, but read the label and don't add unnecessary and potentially harmful chemicals (this includes organics!) • Adequate soil moisture is crucial for new root growth; be sure to irrigate new transplants frequently and use mulch to reduce evaporation For more information, please visit Dr. Chalker-Scott's web page at <http://www.theinformedgardener.com>

On the question of Epsom Salts there also appears to be a good deal of controversy and disagreement as to whether it has any worthwhile use in gardening. Having read quite a bit about the subject I think we could just about say that Epsom Salts would be useful in curing a magnesium sulphate deficiency in plants (usually identified by a yellowing of leaves) Other supposed benefits such as its use as a garden weed killer or its application on planting out young plants in to the garden are now generally given short shrift.

One interesting aspect is the origin of the name itself. This comes apparently from events occurring in Epsom, Surrey many years ago – worth a little investigation if you have the time and inclination.

The generally recommended dilution rate is 1 tablespoon to a gallon of water applied monthly whilst the observed deficiency is seen to persist.

We also had a question about plants for shady environments. Here is my list of suggestions for what it's worth:-

Lantern Tree (wet soil)  
Euonymous  
Lace cap hydrangea (wet soil)  
Cherry Laurel  
Mahonia nervosa (yellow flowers)  
Rodgersia  
Lily Turf.  
Dry soil  
Geranium phaeum "Alba"  
Geranium generally  
White Comfrey  
Epimedium  
Moist soil  
Corydalis  
Dactylorhiza foliosa (terrestrial orchid)  
Lily of the Valley.  
Trillium  
Bulbs (moist)

Golden garlic  
Erythronium “pagoda”  
Erythronium “revolute”  
Snowdrops  
Some scillas  
Leucojum vernum (Spring snowflake)

We hope that all those in attendance at the MBS January meeting enjoyed their evening and that something positive will have been taken away from the event. As I write this a repeat is scheduled for the Redditch meeting on 19<sup>th</sup> January.

### **BOOK SUGGESTION.**

Chad Griffin has kindly recommended the following book (available on Amazon) as an excellent read:-

“Be More Bonsai” by Mark Akins.

### **COMING UP AT THE MBS.**

Having played a significant part in the Members’ Forum it was intended that David Cheshire should return in February, but, unfortunately work has got in the way! He has to go to Japan again! What a life – no vacancies I’m afraid! So, Mark Skan and possibly his friend Mark Hughes and/or Jeremy Haddleton will be on hand in **February** for an Assisted Workshop, so the Table Display will have to be that intended for the workshop namely any interesting tools that you have in your collection, plus, of course, all the trees that you want to work on or get advice about. David Cheshire will then be present at the **March** meeting and will give a presentation. The display table will then be “Your most recent addition”.

### **COMING UP AT REDDITCH BONSAI.**

Depending upon the publication date there will be either:-

1. A members’ Forum on 19<sup>th</sup> January or
2. An “assisted workshop” with Mark Skan on 16<sup>th</sup> February.

### **DAVID CHESHIRE’S SHOP.**

Don’t forget that, if he can, David Cheshire will bring any soil ordered to any meeting he attends, although we understand that his van was recently written off when it was shunted by some lunatic when parked at the roadside! Fortunately he wasn’t in the vehicle at the time! We publish here dates when he can attend meetings with his “shop”:-

March.

April.

June.

September, and

December.

Given the weight of bags of soil/substrate these will only be brought if pre-ordered. Prices will be confirmed upon placing an order. Currently 14 litre bags of substrate etc are retailing at £28-£30 a bag.

We are all extremely grateful to David for his commitment.

### **BONSAI TIP OF THE MONTH.**

If you have any trees to re-pot then start planning now.

We had quite a discussion about the subject of re-potting at the Forum so I don't intend to rehash all the advice here! However I think that you should be aware that simply because "it's that time of the year" you don't necessarily have to re-pot. There has to be a reason for the exercise, which might be:-

1. The tree is pot bound, or
2. You want to change the position of the tree in the pot, or
3. The growing medium is "exhausted", or
4. You want to encourage fine root growth.

It's said that the older the tree the less often it needs re-potting, but it seems to us that every tree is different and the individual circumstances will dictate the need for the exercise. Some enthusiasts keep meticulous records about the development of their trees. If you don't do this there is one thing that we think you should do and that is keep a record of trees re-potted each year. Can you otherwise remember which trees you attended to last Spring, or was it perhaps the year before, or the year before that???

### **GARDENING TIP OF THE MONTH.**

It could be time to think about sowing some seeds indoors now to give them a head start. Try antirrhinums, rudbeckia, sweet peas, annual salvias, cosmos and erigeron. In the vegetable garden broad beans, cauliflower chillies and aubergines are a good bet. Use a heat mat or propagator if you have one and give the seedlings plenty of light. Be sure NOT to overwater at this time of the year.

### **FOR SALE.**

Why not take the opportunity to advertise anything you want to get rid of here? Free of charge of course!

### **THE EDITION.**

Has no one noticed the subtle change in the newsletter last month and again in this one?

## **MUSINGS ON RE-POTTING.**

As you know, most of my repotting is done in October and November, but my pines I do now. I have found out over the years that pines benefit from a loose gravel mix, of Akadama and a very fine gravel like Kiadama. I always put a handful of bone meal in the mix. Mungo pines really benefit from this. You have to watch the watering with this mix. Trees can dry very quickly.

Wes Pinfield.

I've been watching videos by "Tony's Bonsai" and "Bonsai by Jelle" lately. I find myself getting a bit jealous of some of the better material they get to work on. They're both informative, and while I find some of Tony's conclusions questionable, they explain why they're making a particular cut.

The latest Mirai video on nursery stock was cool. A big transformation in a short time on a young tree. Pretty rare to see that. <https://www.youtube.com/watch?v=YJlreX0ePdk>

Repotting:

Looks like it's about time to start. An early spring like last year seems on the cards and some trees have started pushing leaves already. Having about 60 trees in development and not much that's more mature, nearly all of those will be in a new pot in a few months time for some more bulking.

I'll be looking for a couple of mature pieces to add to my collection this year.

Dave How (Redditch)

## **Japanese White Pines, Goyo matsu, Pinus parviflora and its cultivars and varieties.**

**By David Cheshire.**

This species is considered difficult and troublesome in the U.K. with people worrying about the loss of branches and foliage colour changes through the seasons. The White Pine does have its challenges. You must remember that it is normally a high mountain species growing in volcanic gritty soils with lots of available moisture during the growing season and high humidity followed by relatively dry bright winters. At high mountain levels the moisture is often frozen for long periods so essentially is a very dry environment in the winter.

Branch and foliage death in patches on a tree can be caused by stress, this could be due to a lack of light penetrating overgrown branches, shading from near by plants and other trees or shaded by buildings. It can also be caused by root damaged caused by a lack of oxygen and too much moisture. Winter protection from wet is advisable but these trees do need the cold for good bud development and overall health.

White Pines require as much light as possible especially during the winter months and developing a balance between high light levels and your tree drying out quickly in direct sunlight is something you have to work with until you get it right.

Branch death and small areas of foliage death is common on this species, in fact it is completely normal and not something to be concerned about, you will see branches that have died on the best trees in Japan and over time the loss of branches will add to the character and aged look of your tree.

White pine foliage can vary massively in colour from a bright blue through various shades of green yellow to almost a purple hue especially during winter months.

Repotting is also something you need to be very careful with, mature specimens may only be repotted once every 10 years and possibly longer while younger trees may be once every 3 years. A good free draining soil mix is advisable and one of volcanic grit and pumice will

work exceptionally well, if the tree is healthy then the presence of white mycorrhiza on the roots will help keep your tree healthy. Mycorrhizal fungi should not need introducing to you pot but you can from another pine, the spores of these fungi are all around the environment and if the condition of the growing medium and tree is good then it will appear on its own.

Fertilisers are something you should be very careful with, high nitrogen feeds will encourage soft growth and with our wetter winters can increase the risk of foliage being attacked by fungi and aphid. A seaweed based foliage feed is beneficial throughout the year and a light feeding with low nitrogen or balanced feed is advised.

The biggest thing that I see being a problem is when people panic when a tree looks unwell, then start repotting and disturbing the tree. If a tree is already stressed this action will inevitably lead to the death of the tree. Take your time, adjust your watering, make sure that drainage holes are clear and water can drain freely and above all get the watering correct, is it too dry? Is it too wet? Or has it been either of these in the fairly recent past. But above all don't panic, think and make adjustments to your growing techniques.

Remember trees will not live for ever, every tree will eventually die but if we look after our trees they can give generations of pleasure. But the death of a tree is not necessarily anything you have done, you will see dead trees in every nursery. It was just the time for that tree. Take pleasure from learning and your next tree will reward you even more.

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### **The saga of my greenhouse continues! By Judith Davison.**

Those of you who read the last newsletter may remember that it was scheduled to arrive on Friday 13<sup>th</sup> and so it did. Two men rolled up with it on the back of a flat-bed truck and proceeded to unload it and carry all the bits and pieces down the garden together with all their tools etc.

The site was ready and waiting. A lot of hard work had been involved in removing the old greenhouse/shed. Apart

from the building itself, there were my trees which had to come out, most of which ended up in my utility room, also the lawn mower and all the tools that I keep in the shed had to be moved and I have two large water butts which collect rainwater from the roof which had to be drained so they could be moved out of the way.

It was a nice dry day, and all went well as the men started to erect it. They put up the back of the shed and attached the two sides of the shed cum greenhouse and then disappeared, whereupon the wind blew down one of the side pieces which got damaged and if I hadn't been there holding the other side, that would probably have suffered the same fate.

They then decided that it was too windy to complete the job and ended up taking the whole lot away again as the damaged panel would have to be replaced. As you can imagine, I was not very happy – to put it mildly! I now have to wait till tomorrow, Monday, to find out how long I must wait for them to reschedule. So, Friday 13<sup>th</sup> turned out to be most unlucky for me.

I had intended to do most of my repotting in the autumn but I delayed it because of the greenhouse problem, and I normally do most of my repotting in my utility room but as it is now full of trees, there is not a lot of space left so I am limited in what I can do. So far, I have only managed to do 4 small ones. I suppose I will have to put those that don't need repotting outside again and let them take their chances in the rain so, as the old saying goes – the best laid plans of mice and men .....

I sincerely hope that by the time the next newsletter comes out I will have some better news.

PS. I still have most of the glass panels of the old greenhouse to get rid of somehow so, if anyone knows anyone who can make use of them, then please, please let me know.

## **AND FINALLY.**



### **Now I know trees can talk to each other!**

This picture sent in by Robert Walton shows a process known as inosculation.

**Inosculation** is a natural phenomenon in which trunks, branches or roots of two **trees** grow together in a manner biologically similar to the artificial process of **grafting**. The term is derived from the Latin roots *in* + *ōsculārī*, "to kiss into/inward/against" or etymologically and more illustratively "to make a small mouth inward/into/against"; trees having undergone the process are referred to in forestry as **gemels**, from the Latin word meaning "a pair".<sup>[1]</sup>

It is most common for branches of two trees of the same [species](#) to grow together, though inosculation may be noted across related species. The branches first grow separately in proximity to each other until they touch. At this point, the bark on the touching surfaces is gradually abraded away as the trees move in the wind. Once the [cambium](#) of two trees touches, they sometimes self-graft and grow together as they expand in diameter. Inosculation customarily results when tree limbs are braided or [pleached](#).

(With appropriate acknowledgement to Wikipedia)

We hope that you enjoy this edition, which has been improved, if we may say so, by various individual members' contributions. So, if that is the case why not try submitting an item for publication next time? For example someone might care to investigate the origins of Epsom Salts?

Richard Gilkes, Editor. January 2023.