



NEXT CLUB MEETINGS

Green Square Community Hall

3 Joynton Avenue Zetland

7pm Tuesday 12 Mar 2019

Special talk on plant nutrition and soil structure and mixes by Rod Donegan.

7pm Tuesday 9 Apr 2019

Australian natives (other than figs) will be the theme for April.

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COMMITTEE

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Vice President	Neville
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MEMBERSHIP

Full Membership	\$40
Concession	\$25
Family	\$55
Pensioner	\$25

SCBC wishes to thank Sydney City Council for their continued support for our club by providing the hall at a reduced rate.

March Meeting

- Special guest Rod Donegan, horticulturist from Ausperl will speak on plant nutrition and soil structure and mixes.
- Members to bring in "Unusual Bonsai" for show and tell.
- Easter Show finalisation – See Chris if you need help with transport of show stand or competition plants or have an extra day to volunteer.



The Olive tree of Vouves is probably one of the oldest olive trees in the world. Whilst scientists cannot agree it is estimated to be between 2,000 to 4,000 years old. The tree remains productive to this day, having been grafted with the cultivar 'Tsounati'. The trunk has a perimeter of 12.5 m and a diameter of 4.6 m.

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Reminders

Rod Donegan from Ausperl will be our special guest this month. He has extensive knowledge on plant nutrition and how soils interact with plants. For those who put their hand up for bags of UXP (unexpanded perlite) and or pumice, you need to bring your money (**CASH ONLY!**)

Costs: UXP (\$26.40); Natural Pumice (\$26.40) per bag

Hyper Grow (\$10) and Native Grow (\$10) per bottle

To manage transport of so many bags that were requested, some of the UXP and Pumice will be located at Roz's place which is 100m from the meeting venue so you can pick them up on your way home.

ROD DONEGAN NOTES – PLANT NUTRITION

Rod Donegan Notes on Plant Nutrition and Soils

Our guest speaker, horticulturist Rod Donegan has supplied me with extensive information on plant nutrition, generally and specific to bonsai. As a pre-read for his talk in March, I have extracted some notes. Rod has a wealth of knowledge and after his talk I will generate several stories from his notes on both plant nutrition and soils which will support his comprehensive talk and serve as reminders.

Plants have a requirement for a range of some 21 very specific elements, some of which we commonly refer to as minerals. Just following the NPK ratios in general fertilisers will not guarantee a healthy tree in the long-term though it may give the plant a short term bounce.

Plants like humans require balanced meals. Some go to considerable effort to supply each of these element in the correct plant available form and in adequate, but not excessive ratios.



A healthy Oak located at the Australian National Arboretum.

These various elements are logically divided into three categories:

Foundations of Life- C H O- carbon, hydrogen and oxygen in the forms of water, carbon dioxide absorbed by the leaves and while oxygen is required by the roots.

The Macro Elements- N P K Ca Mg S- nitrogen, phosphorous, potassium, calcium, magnesium and sulphur.

The Micro Elements - Fe B Cu Mn Mo (plus Ni, Co, Si, Zn, Cl, Al, Vn and Se).

If any element is missing or in levels too low, the plant will lose health and succumb. On the flip side if some elements are oversupplied called “excess” they may have a negative effect on other elements that may be adequately supplied, what is called “antagonism” sometimes giving the impression there is an elemental ‘deficiency’. Each element is required to undertake a specific task and so every element is needed and in the right ratio.



A very unhealthy pomegranate with obvious signs of “element deficiency”

Whilst plants have a narrow window of optimal uptake of nutrients, those nutrients must be in the right form for the plant to be able to take it in. For example it would take an extremely long time for a lump of iron (Fe) to convert to a soluble supply of Fe⁺ ions available to the plant through the roots. Nutrients like iron and nitrogen can be taken in by the leaves directly if in soluble form – but beware they can easily “burn” the leaves when high concentrations are given.

Particularly for the bonsai grower where the soil volume is very restricted, the balance of nutrients must be right for healthy growth. The organic components of the soil through the bacteria and fungi breakdown slowly releasing nutrients to the plant – so soil composition and structure is also critically important in the overall plant health outcome.

ROD'S PLANT NUTRITION NOTES CONTINUED

"The rule of a little occasionally is far better than a lot at once."

Conventional fertilisers given may be single element or a mix of compounds but very rarely complete. Given to bonsai at full strength, they hit the roots like gang busters after only a few days of watering remain too high for typically a shorter period of time, and then there is a tapered reduction of efficacy until fully depleted. This is far from optimal as it generates an environment of over then under supply. Some fertilisers can be applied near optimally (in good hands), which can be beneficial as a pick me up for specific elements where required.

The rule of a little occasionally is far better than a lot at once. Tip and leaf margin burn is common in plants that receive too much fertiliser. This is because the fertiliser makes the soil 'salty' for want of a better description and so the plant cannot uptake sufficient liquid.



Tip and leaf margin burn from too much watering and fertilising. The new growth is good after flushing out the salts and feeding plant with Hyper Grow.

If one remembers a rather simple rule it can help. A litre of water needs only 1 gram of solid fertiliser in solution if applied optimally assuming little or none in the growing media. Very few single element fertilisers e.g. N, P or K are required in ratios much higher than 0.3 grams per litre even at the very peak of growth or flowering phases, so logically a fraction of that amount in bonsai for much of the year.

Control Release fertilisers are typically a mix of soluble elements coated with either an olefin (thin film of plastic) to slow down release or alternatively wax or phenolic compounds. As alkali soluble metals react with phosphorus ions, they rarely contain any calcium and often are very low in magnesium. So you have to adjust for this without upsetting the pH (acid-alkalinity) of the soil.

Liquid fertilisers contain a mix of soluble elements. Most are designed for home use so provide high levels of nitrogen which is not required for bonsai save under very specific conditions. The ratio is biased for early rapid growth and often N is over supplied. As the product must dispense with ease again Ca & Mg are left out as they cause precipitation with S in the form of sulphates and P in the form of phosphates in the bottle, which can make for unhappy customers.

Hyper Grow is a fully balanced liquid fertiliser useful for bonsai.

Painstakingly developed over 27 years for home growers, Hyper Grow contains all key macro and micro elements in carefully balanced ratios. It uses very specific chelating and complexing agents (safe food grade products) that allow Ca and Mg to be supplied in very exacting but never the less at the correct macro ratios to achieve optimum plant nutrition.

Hyper Grow is often used by growers to routinely flush away out of balance elements in the root systems replacing the soil solution (water held in the growing media) with a fully balanced supply of every element the plant needs in the correct ratios.

The compounds are carefully selected, following horticultural world's best practice, using only those trusted highest quality soluble fertilisers by those that presently grow the food we eat daily and mixed in specific ratios to achieve balanced growth at a pH where all elements are readily available for uptake. Compounds present are selected to provide broad pH compatibility for medias where plants prefer may prefer more acid or alkali conditions and will continue to provide in fully soluble form without precipitating (or losing from soil solution) any of the key elements required by the plant. However – Do not use Hyper Grow in Australian Native Bonsai.

Rod has developed a specialised fully balanced native formula that can be safely applied to native bonsai. He will elaborate on his native formula along with soil structure and composition and how this affects plant vitality and growth at his talk. Part 2 of this series which will focus on soil mixes will be available next month. Part 3 of the series will cover specifics of selected nutrients at a more advanced level.

TIDYING A COLLECTED TREE

Tidying a Collected Tree

BY LEE

Collecting from the wild can be brutal. Sometimes there is no way to be gentle in order to cut the tap and stabilising roots under the tree to extract it. Assuming you are not working with a delicate species that does not like its roots disturbed you can get away with a lot as long as the after care is top notch and the roots are always kept moist.

In September 2018 I collected a melaleuca that was overly well endowed with strong roots and while I severed a lot, in the end I had to push the tree back and forth to break the tap root until I could access it. I made sure I kept the roots moist throughout the work and immediately soaked it in Eco-Seaweed when I got it home.



Collected melaleuca with strong roots despite many lost in extraction process.

Now, it is important to do as much tidying as you can before planting it. I wash the old soil off to make the soil removal as gentle as possible for the tree and minimise small root loss. Then I start removing as much of the woody roots as I can. Sometimes it is necessary to plant and wait until the new roots are well established but you could find that it is then harder to cut back around a flock of new roots. I prefer to do it at this stage. Also, at the time of collection the branching and foliage should be minimal and you risk damaging less if you do it just after the tree is collected. I cut off all the woody roots, soaked the tree for several more hours and then sawed more off to get a flat bottom.

I feel that as new roots develop the roots nearer the surface will be removed and the soil level lowered as

the swell of the trunk now below ground is beautiful. But at this stage I want those higher roots to work to the tree's benefit. Caution wins out and I prefer to wait and let the tree recover before I remove more.



While root mass has been tidied up, upper roots have been kept with a view to remove them later when the plant has recovered.

Now the tree has a level base and still plenty of roots on the lower trunk. You have to be sure of the species when you are doing heavy root pruning. Melaleuca are not root fussy and can quickly develop more roots - amazingly fast actually. I have confidence that this tree will recover from its ordeal and the root work done now means the heavy work is done and there will be no surprises at the next repotting.

The apical growth was cut back hard before removal started so there is little foliage to feed and recovery should go okay. I have saturated the soil with Eco-Seaweed, it is positioned to get a couple of hours of morning sun and then shade and I will monitor the tree constantly until new shoots start to sprout.



Five months later and this melaleuca linariifolia has well and truly recovered and is now on its bonsai journey.

I've worked hard to collect this tree. It will be interesting to see its development over the next several years and to do all I can to work it up to a good native bonsai.

AUTUMN PINE DIARY & CHECK NATIVE ROOTS

Jamie's Pine Diary – Now is the time to get rid of unwanted buds!

From Mid February to Mid March

Main task during this period is to complete the removal of unwanted buds. This technique of equalising vigour of growth pays off in spades and bud growth on lower branches is strong, compact and healthy as that of the apex.

You may have noticed that a small number of branches which may not have required candle cutting spring all of a sudden put on an extra spurt and started to grow quite large candles. Simply trim them back to the end of last year's spring growth. If they did not warrant trimming in spring, chances are they only need the candles pruned to maintain shape.

From the beginning of March – no earlier – fertilising should recommence. This is an important time for your pines because they are gearing up for the autumn growing period. Be consistent with your fertilising program because there is only a two-month window to maximise this excellent period of autumn growth. More about that when the time comes.

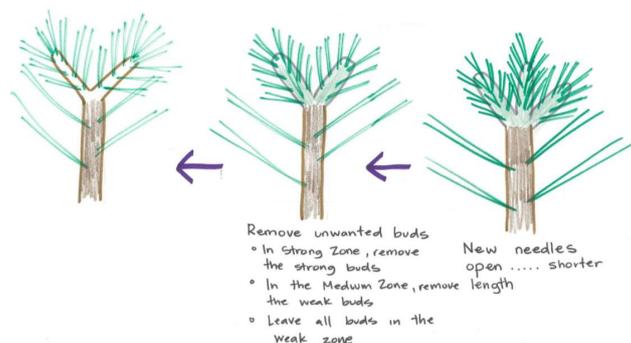
From Mid March to Mid April

Your fertilising regime should have recommenced at the beginning of this month. Ease back on the fertiliser if you notice the new buds are starting to grow too vigorously. If it happens even if fertilising is withdrawn completely, then I have no compunction about cutting them off and starting again. You don't want to ruin the compact growth you've already spent quite some time trying to achieve.

You may have got fairly vigorous growth with the continuation of the warm weather. Try to find that happy medium of giving enough fertiliser to maximise the autumn growth period whilst maintaining a tight, compact growth.

The autumn growth period is quite different from the spring pattern. In spring the tree puts forward new candles, which eventually break into new needles. In autumn, candle growth is evident but no new needles appear. Instead, the tree concentrates on trunk and branch thickening – probably to help it survive the harsh winters of its native Japanese habitat. This is the type of growth we want to maximise.

As branches thicken, pay particular attention to wire that might be biting in. It's not impossible to reduce any severe scarring on Black Pines if it should occur but it is far preferable to avoid the situation in the first place by a little bit of careful observation. The weather is still hot enough to treat any jins or shari with lime sulphur. Be careful you don't use it just prior to rain.



AUTUMN

Check the Roots of Your Natives

With good care natives grow profusely during the summer and many put those in bonsai pots in a water tray during the hot summer period. I generally water a couple of times a day during the summer without the water tray so as not to overswell the roots.

However I have found that some of my natives are "thirsty" all of the time and they tend to rise a little in the pot despite being repotted 5 months ago. So I checked some of them out and yes many really needed a repot.



The rootball of the tea tree on the left were rock hard and I had to cut wedges in the repotting process.

If you do nothing, at this point then you risk the plant losing its vigour and you may even lose whole branches.

FIGS AT SCBC MEETING & EVENTS CALENDAR

Highlights from SCBC Fig Night

Our February “Focus on Figs” was a huge success with more trees than ever before being brought to the SCBC bench for our “show and tell” segment.

The sharing of knowledge and discussions by members not only helps newer members but gives good ideas and reminders to more experienced members. Here are a few photos:



Good selection of figs on show for discussion



Lovely tree and James explained how he adapts old coffee tables that he finds around streets into suitable bonsai stands.



When you have too many plants from cuttings, you can make a little fig forest. Make sure you select different sized figs, never plant them in a straight line and make one large one the focal point.



Lovely little shohin in a perfect pot and on a perfect stand shows just how important the whole presentation is in terms of effect.

Bonsai Events Calendar

Date	Event	Details
25-31 Mar 2019	The 4 th Annual Bonsai Week	National Arboretum, Canberra
18-23 Apr 2019	Sydney City Bonsai RAS Stand	Sydney Royal Easter Show, Sydney Showground
26-28 Apr 2019	Bonsai By The Beach	Wauchope Bonsai Club, Francis Retreat, 2 Thompson Place, Bonny Hills
17-20 May 2019	32 nd AABC Convention	Mantra Bell City, Melbourne. Hosted by Victorian Native Bonsai Club